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A Report Prepared For

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WATER QUALITY AT RECOMP ASH MONOFILL

by

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INTRODUCTION

This report describes ground water, surface water and leachate characteristics at Recomp landfill. Data obtained since 1988 are presented in the appendix, with selected data evaluated in detail to display spacial and temporal trends. The objectives of the analysis are to determine if leachate contamination of ground and surface waters has occurred and to evaluate the adequacy of the monitoring program.

The report recognizes that saline waters naturally exist at the site. The naturally elevated salinity can mask some of the early warning constituents of leachate migration (i.e. chloride and sulfate). However, monitoring has been sufficiently intensive to make the conclusion that leachate migration is not causing deterioration of vicinity water quality. Ground water head increased two feet over the period of record, likely as a result of soil settlement. A continuation of the present monitoring plan is endorsed for the near future, although it is recommended that certain cations and gamma radioactivity monitoring be discontinued.

THE RECOMP FACILITY

Recomp, formerly known as Thermal Reduction Company, is a 20 acre recycling and waste reduction-energy recovery facility located in Ferndale, WA (Figure 1). Mixed municipal solid waste plus hospital waste are weighed and delivered to the tipping floor for inspection and sorting. Sorted waste is either recycled, incinerated, manufactured into compost or hauled to another waste receiving facility. Electricity is generated as part of the incineration process and is sold back into the grid. Incinerator ash is stored on impermeable double-lined polymer-treated asphalt storage pads, with leachate collected in a flow equalization lagoon. Market ready compost is not currently produced. Approximately 350 tons per day of municipal refuse, 5 to 6 tons per day of hospital waste, 1 ton per day of recyclable glass, metal, cardboard and plastic, and 4 tons per day of yard waste are currently received. As a result, approximately 30 tons of ash, 80,000 gallons of leachate and 200 kW of electricity are generated each day.

Natural and constructed features exist that protect vicinity water quality. Naturally occurring, thick deposits of dense clay underlie the site. The clay is at least 100 feet thick and has a low hydraulic conductivity of approximately 10^{-8} cm/sec. Landfill material that was disposed of on the site prior to 1989 has been graded smooth and covered with an engineered clay cap. This closed landfill area was further contained with a slurry wall that was constructed three quarters of the way around the fill and an underground leachate collection system that was installed along the remaining edge (Figure 2). A new ash storage facility has been constructed on top of the closed fill. A collection system routes stormwater and leachate to an equalization lagoon and then to the Ferndale WWTP. This system collects stormwater from 7.8 acres and leachate from 12.2 acres, including all ash handling and storage areas. The tight native clays and these engineered improvements are good features for water quality control.

PREVIOUS REPORTS

Aspects of facility design and environmental conditions have been described in several reports that are listed in the Bibliography. This report does not attempt to present all information provided in these earlier reports, but the site history and site hydrogeology are briefly described below as they relate to water quality.

SITE HISTORY

Dumping apparently began in the early 1970s with municipal refuse, incinerated refuse, and demolition debris. Starting in 1974, ash from the Thermal Reduction Company (TRC) municipal refuse incinerators was disposed on site. During 1989, the landfill was graded and capped with a low permeability clay cover in accordance with closure requirements of Minimum Functional Standards (WAC 173-304). As part of the closure, a perforated leachate collection pipe was installed in a gravel trench located west (downgradient) of the closed fill and a slurry wall was constructed on the northern, eastern, and southern boundaries (Figure 2). This pipe conveys any collected leachate to a leachate storage lagoon and the slurry well minimizes ground water flow underneath the closed facility. A new ash storage facility was constructed during 1990 on top of a portion of the closed facility. This facility consists of 80 mil HPDE liner, 14" of drain material, 4" of crushed surfacing material and a 4" low permeability asphalt concrete working surface. The facility is positively drained to prevent runon, and to route leachate to the storage lagoon. By 1990, the Recomp incinerators had been upgraded and acid gas scrubbers were installed for the Recomp incinerators.

Monitoring at the facility began with the installation of three monitoring wells in 1987. Eight additional wells were constructed during 1988. One of the 11 wells has been abandoned due to construction activities and one other is no longer monitored, so that nine wells are currently part of the sampling program. Quarterly monitoring began in 1988 with samples collected from the wells, from up to five surface water locations and from the leachate lagoon.

An important milestone in the monitoring occurred during 1989 when an EPA contractor, Ecology and Environment, performed a site assessment that produced false positive detections of cadmium in all samples. Reported cadmium concentrations were in excess of the possible solubility, and cadmium had not before been detected in the ground water. In addition, field notes revealed that EPA's contractor had not followed EPA's guidance for well purging prior to sampling. Each of these factors cast doubt on the data validity. However, since the data passed QA/QC, EPA proceeded with a RCRA type site investigation and published in the Federal Register that "egregious ground water contamination" existed. It was later revealed that the contract laboratory had mistakenly reported sodium measurements as cadmium. The subsequent EPA site investigation demonstrated that cadmium was not detectable and that ground water quality was acceptable. EPA then withdrew from the site, issuing a letter November, 1990, stating that "no further action is required." In summary, cadmium was not and is not a problem at the Recomp facilities.

SITE GEOLOGY AND HYDROGEOLOGY

Soils profiles and hydrogeology are well understood at Recomp due to extensive boring that has occurred. These borings include, eleven monitoring wells to depths of 95 feet (well logs in Golder 1988), five test borings to depths of 79.5 feet (boring logs in Golder 1989), thirty test pits and trenches to depths of 22 feet (pit logs in Golder 1989), plus an approximate 1000 foot deep well to explore possibilities of thermal energy resources (Battelle 1980).

The results of these investigations indicate that three soil layers exist (Figure 3). The two deepest layers are glaciomarine drift deposits, apparently successively created during Pleistocene glacial events and sea level changes. The drift deposits were formed on the seabed 18,000 to 10,000 years before present. These two deposits were created from similar parent materials and during similar environmental conditions, so they look alike (which makes identification from boring logs difficult) and exhibit very similar geohydrologic characteristics. Kulshan Drift is the deepest layer. Easterbrook (1963) describes the Kulshan Drift as a till-like deposit of unstratified silt, clay, sand and pebbles with occasional marine shells. At the Recomp site, the Kulshan Drift is characterized as a stiff, olive gray, silty clay with traces of fine sand and fine gravel.

Bellingham Drift is also a glaciomarine sediment, and overlies the Kulshan Drift. The exact contact plane is difficult to determine because the two Drift soils are similar in appearance and in hydraulic characteristics, but has been estimated to occur at a depth of about 50 feet based upon an increase in stiffness as determined by vane shear tests (Golder 1989). Bellingham Drift is described as a soft to firm, olive gray, silty clay with trace of fine sand. Because of the depositional environment that existed, the Drifts are nonstratified; sand lenses, tree roots and other features that would increase hydraulic conductivity are not expected to be prevalent.

A thin layer of coarser grained soil mantles the Bellingham Drift on the eastern portion of the site. This interbedded deposit of compact coarse to fine sands and silts originated as an outwash deposit from the Sumas Stade ice front that approached, but did not override the property. The Sumas Outwash deposit can be seen as a 10 to 15 foot high bench at locations north and south of the Recomp property.

Two water bearing zones are indicated to exist within these three geologic units. A shallow water table exists in the Sumas Outwash. This water is perched on top of the low permeability Bellingham Drift soils. Based upon site topography, the flow is generally westward, and springs occur at some locations north and south of Recomp along the edge of Outwash deposit.

The lower water bearing zone exists in the Kulshan and Bellingham Drift. This deep, pressurized system is monitored by every well except MW-7. No aquitard exists over the Drift to confine the aquifer; rather the soil has sufficiently low permeability to maintain pressure.

The hydraulic gradient on the west side of the Recomp site is upward, based on quarterly piezometric head measurements. Thus the ground water flow is directed upward and westward, instead of downward.

Vertical hydraulic conductivity of the drift soils has been measured in the laboratory to range from 1 x 10^{-8} to 4 to 10^{-8} cm/sec (Golder 1988, 1989). The drift was deposited in sea water, so that the original formation water was salty. Due to the extremely low hydraulic conductivity of the drift, the slow rate of ground water recharge in the vicinity, and the upward hydraulic gradient that appears to maintain a supply of saline water from depth, salty ground water remains at the Recomp site.

DATA EVALUATION METHOD

Monitoring data has been obtained from quarterly reports and compiled into spreadsheets (Quattro Pro version 5.0) that are presented in the Appendix. The raw laboratory data sheets are not presented here, but are included in the quarterly monitoring reports that have been produced since 1988. Proofreading was performed and suspect values were verified by rechecking original laboratory and field data sheets. The compiled data includes results from ten monitoring wells, four surface water stations, leachate, ash and soil that had been monitored since 1988. Box plots and time trend graphs were generated in Quattro Pro.

- Ground water piezometric head is described to determine if the well is upgradient or downgradient of the fill and to determine if an upward or downward hydraulic gradient exists. Piezometric head has been plotted for each well over the period of record, and flow rates calculated based upon measured hydrogeologic characteristics.

- Differences between wells are exhibited by box and whisker box plots. The plots show the median as a tick mark inside the box, the box spans the middle 50% of the data points, and the whiskers extend to the maximum and minimum values. The box plots provide a nonparametic statistic that displays chemical differences between wells. Boxes that do not overlap in space demonstrate significant differences between wells.

- Time trend plots have been prepared that display long term variation of ground water chemical composition. Due to the variety of patterns that these plots reveal, including no change over time, step changes, and linear and curvilinear changes, no statistics have been applied.

- The box plots and time trend plots have been prepared for each well using selected chemical constituents that are indicators of potential leachate migration. The selected indicator constituents are those that have been routinely monitored over the period of record, are early warning constituents, and are representative of metals and organic compounds as a whole. The indicators include specific conductance, chloride and sulfate which typically are good early warning constituents. Sulfate is not as mobile as chloride, so separation between the onset of the chloride increase and the sulfate increase provides general information regarding the extent to which soils may retard migration of other compounds. Inorganic nitrogen is the sum of nitrate + nitrite + ammonia, and may either increase or decrease in response to leachate migration as a function of the extent

of biological uptake. Chemical Oxygen Demand (COD) and Total Organic Carbon (TOC) are composite indicators of the extent of both natural and synthetic organic compounds. Iron is a metal that may migrate from the fill, or may be released from soil if oxygen levels are depressed near zero. Zinc is the last indicator used, and is considered representative of a wide range of heavy metals that may originate from the leachate.

- A list of all exceedances of potable ground water standards (WAC 973-200) is provided.

- A list of all detected organic compounds is provided.

The results are used collectively to evaluate the possibility of leachate migration.

DATA QUALITY ASSURANCE

Samples have been collected in accord with an approved monitoring plan. All appropriate quality assurance protocol have been observed including chain of custody documentation, sample holding time, instrument calibration, blank determinations, matrix spike recovery and sample duplication. Quality assurance data is reviewed as part of each quarterly monitoring report. The field efforts have been observed twice by both EPA and Ecology representatives, and the verdict was that the field work has been done appropriately. Sampling has been performed by the same group of individuals since 1988, and the same two laboratories, Aquatic Research, Inc., and Analytical Resources Inc. (ARI) have been used since 1988. Methylene chloride is routinely detected at low levels in blanks and in samples, as a result of laboratory contamination at ARI. Mercury was detected at slightly elevated levels in samples during 1990 and 1991, which was suspected to be due to laboratory contamination, so the metals analyses was switched from Aquatic Research to ARI. Since then Aquatic Research has purchased a new mercury analyzer, increased ventilation, and has resumed the metals analyses and mercury is not now routinely detected. The methylene chloride and mercury are the only two quality control problems that we are aware of.

Precision, accuracy, representativeness, completeness and comparability are all favorable for the Recomp data set. In summary, data quality is deemed to be good, and is suitable for the purposes of this report.

LEACHATE

Leachate from Recomp is discharged to the City of Ferndale sewage system and is a blend of water from several sources. Primarily these include: 1) quench water that is used to cool incinerator ash; 2) ground water that has been intercepted by a french drain located along the western edge of the closed ash storage area; 3) seepage (leachate) from the ash storage area; and 4) overland runoff from access roads and parking areas (Figure 3). Chemical concentrations and volume of flow are expected to be relatively constant year around for quench water but seasonal variations exist for the other components. During wet months, flow rates peak at about 120,000 gpd (Figure 6) and lower chemical concentrations generally occur.

Long-term changes in flow and constituent concentrations have also resulted from operational changes. Notably, site improvements in 1989 increased leachate flows and the addition of the acid gas scrubber to the incinerator stack in 1991 resulted in increased leachate pH. The increase in leachate pH influenced metals concentration in the leachate lagoon. Prior to 1991, leachate pH was about 7.7, and since 1991 the pH has been about 12.3 (Table 4). Concentrations of cadmium and zinc dropped approximately threefold; copper and lead approximately doubled; and no change was indicated for chromium or nickel as a result of the pH increase. These changes occur as a result of solubility equilibria that permit dissolution or precipitation of these metals at elevated pH. As such, the leachate lagoon is currently operating as a pretreatment facility in much the same way as the leachate pretreatment facilities at Cedar Hills landfill and Snohomish County Regional landfill, that are also designed to operate at high pH in order to remove metals.

Leachate is conveyed to the sewage treatment plant because it periodically exceeds primary drinking water criteria for barium, cadmium, chromium, lead, mercury and selenium; carcinogenic criteria for methylene chloride, benzene and bis (2-ethylhexyl) phthalate; and secondary criteria for chloride, sulfate, pH, iron, manganese and zinc (Table 5). <u>These drinking water criteria do not apply to leachate, but are listed only as a reference</u>. A broad range of organic compounds have been detected in the leachate, but at low concentrations and with low frequency in comparison to municipal landfill leachates (Table 6 and 7). No organic compound has been detected at the 1 mg/L level, and only five have been detected over 100 µg/L: acetone, 2-butanone, phenol and 4-methyl phenol, and benzoic acid.

The leachate pH is periodically in excess of 12.5, but this elevated pH is beneficial in terms of leachate pretreatment. Some metals exist at moderately elevated levels in the leachate relative to drinking water standards, but organic chemicals are either not present or are at very low concentrations. All leachate is properly disposed in sewage treatment works pursuant to WAC 173-303-071(3) (a) and (u).

GROUND WATER

This section identifies two important characteristics of ground water at the Recomp site. The first is that ground water flow is extremely sluggish in its movement through the clay soils that exist at Recomp. The second is that the ground water is very salty due to natural causes.

GROUND WATER HEAD AND FLOW

Measured vertical conductivity in the drift soil has ranged from 1×10^{-8} to 4×10^{-8} cm/sec (Golder 1988, 1989). This hydraulic conductivity is somewhat greater than expected for a marine clay, but is still very low - lower even than the hydraulic conductivity that is required of liners for hazardous waste facilities. Darcy's Law calculations to determine horizontal and vertical ground water velocities are performed as follows:

$$v = K\,(dh/dx)/n_e$$

where,			
	v	=	velocity
	K	=	hydraulic conductivity
	dh/dx	=	ground water slope
	n_e	=	effective porosity

Based upon the measured horizontal ground water slope of 0.009 ft/ft, the maximum vertical ground water gradient of 0.18 ft/ft, the horizontal and vertical hydraulic conductivities of 10^{-5} and 10^{-8} cm/sec respectively, and an assumed effective porosity of 10%:

Average horizontal ground water velocity:	0.9 ft/yr
Maximum vertical ground water velocity:	0.02 ft/yr

These low flow rates help explain why relict marine water has persisted at the site for approximately 10,000 years.

Ground water flow direction in the drift soils is indicated to be west northwest (Figure 7). Well clusters MW-3, MW-5, & MW-10 and MW-8 & MW-9 exhibit an upward hydraulic gradient, and clusters MW-6 & MW-11 and MW-4 & M-7 exhibit a downward hydraulic gradient. The downward gradient is important because wells located in this area are less saline than the others. The direction of flow and the magnitude of upward and downward gradients have been very constant over the period of record. Based upon the flow direction, it is clear that MW-4, MW-7 and MW-1 are located upgradient of the fill area. Wells MW-3, MW-5, MW-6, MW-8, MW-9, MW-10 and MW-11 are located downgradient of the fill.

Ground water head has risen by 1 to 2 feet at the Recomp site since 1988 (Figures 9 - 18). This increase occurred predominately between 1988 and 1990, and occurred for all wells except for MW-7, which is the only well located in Sumas Outwash soils. Settlement measurements have been collected since 1990 (Appendix). These indicate that the site has settled up to 0.15 feet (less than two inches), but at most locations less than 0.06 feet of settlement (less than one inch) has occurred. Settlement causes soil compaction and porosity reduction, so that pore water is expelled. Normal compaction displaces pore water radially, with no rise of water level. Low permeability soils, however, may exhibit increased water pressure (also called head, as measured by water level in the wells) after compression. The Drift soils at Recomp have low permeability that likely permits such pressure mounding. The effective porosity in the Drift clay is estimated to be 10%, so that for every 0.1 foot of compaction, 1.0 foot of ground water rise is expected eventually. The rise in piezometric head could be greater and would occur with no time lag, as would be the case with water level rise. Therefore, settlement could account for the measured increase in piezometric head. Upgradient MW-4, however, is located at least 500 feet from any area of compaction, but also exhibited a 2 foot rise of head. This information suggests a regional increase of head, although increased head below the fill area would tend to increase head of surrounding ground water to some degree The wells are low yield wells located in the clay. The repeated sampling that has occurred since 1988 may help to develop the wells and increase yields, but would not influence water pressure or static water elevation. Therefore, well development is not expected to have influenced measured piezometric head. The conclusion is that a multi-year increase of piezometric head in the drift soils occurred both upgradient and downgradient

of the site probably due to soil compression, rather than related to well development or regional water level fluctuations. Regardless of the mechanism, the increase in piezometric head is not considered to be a problem.

Seasonal piezometric head oscillation is on the order of one to two feet in the Kulshan and Bellingham Drift wells, and about four feet in the Sumas Outwash well MW-7. The lowest piezometric head measurements have been recorded during September and October, and the highest occur during March. These seasonal oscillations can occur when adjacent, hydraulically connected ground water levels rise during the rainy season and fall during the dry season. Pressure head can be transmitted laterally to the monitoring wells with no movement of underlying water. Therefore, head in the monitoring wells oscillates seasonally. MW-7 has the greatest seasonal oscillation because it is located directly in infiltratable soils where water levels can rise and fall easily. Deeper wells oscillate less than shallower wells, indicating greater isolation from surface perturbations.

GROUND WATER CHEMICAL CHARACTERISTICS

The following discussions compare well water quality to potable ground water quality criteria (WAC 173-200), even though water at all but MW-7 is not potable water due to high salinity. These criteria are used only for comparative purposes and exceedance of criteria do not signify any need for correction action.

MW-4 and MW-7. MW-4 and MW-7 are located, east and upgradient of Recomp (Figure 2). Soil strata at MW-4 and MW-7 (Figure 5) are different than at the downgradient wells due to the mantle of sandy Sumas Outwash soils. Because these wells are upgradient of the Recomp site, ground water quality at these wells should be uninfluenced by water quality at Recomp.

Specific conductance and concentrations of chloride, sulfate and dissolved inorganic nitrogen have been relatively low in MW-4 and MW-7 with respect to some of the other wells (Figure 8), but TOC and COD appear marginally elevated. Sulfate has apparently declined in both wells over the period of record (Figures 11 and 14), and chloride and nitrogen appear to have increased in MW-7. Iron, manganese and pH have periodically exceeded secondary drinking water standards, but no constituents have exceeded primary drinking water standards (Table 6). Traces of methylene chloride, acetone and bis(2-ethyl hexyl)phthalate have been detected, but are also the three of the most common laboratory contaminants.

MW-1. MW-1 is a lone well located upgradient and east of the fill but on-site in an area that is now a parking lot access road (Figure 1). Because of the waterproof gasketed seal that was installed on the wellhead during road construction, the well has become invalid for water level measurements, and all monitoring in MW-1 ceased in 1991. MW-1 penetrates approximately 11 feet of Sumas Outwash and 68 feet of Drift, to a total depth of 79.5 feet (Table 1).

MW-1 has been characterized by relatively low specific conductance, chloride and sulfate, low inorganic nitrogen and moderate TOC (Figure 8 and Table 5). MW-1 chemical characteristics are apparently more like those in MW-4 and MW-11, than the others (Figure 8). Sulfate apparently dropped in concentrations from about 120 mg/L to 40 mg/L during 1990 and nitrate + nitrite + ammonia dropped from about 0.4 mg/L to 0.1 mg/L since 1989 (Figure 9).

Due to the natural water chemistry in MW-1, secondary drinking water criteria have been periodically exceeded by chloride, pH, iron and manganese. Methylene chloride, acetone and bis (2-ethyl hexyl)phthalate have been detected at low levels.

MW-8 and MW-9. MW-8 and MW-9 are located downgradient near the northwest corner of the site (Figure 2). The wells are placed within 50 feet of the edge of both the closed and active fill areas. MW-9 is relatively shallow at about 21 feet deep and MW-8 is about 55 feet deep (Table 5). The close proximity and shallow depth of MW-9 make it a good location to provide early detection if there were leachate migration. MW-8 is deeper and, because of the upward hydraulic gradient that exists, is less likely to be impacted by any potential leachate migration. No samples from either well exceeded primary drinking water criteria (Table 6) and no synthetic organic chemicals were detected in the one sample tested (Table 7). Secondary standards were not met due to the high levels of chloride, sulfate, iron and manganese, which are natural to the monitored groundwater.

MW-3, MW-5 and MW-10. This well cluster is located due west of the landfill area. The wells are downgradient of the fill and at a location with an upward hydraulic gradient. MW-3 is 90 feet deep, the deepest Recomp well. MW-5 and MW-10 are 52 and 20 feet deep, respectively. The wells penetrate Bellingham Drift and Kulshan Drift, but the Sumas Outwash soil mantle is absent (Figure 5).

Water chemical composition in these three wells has been thoroughly investigated due to the proximity to the fill. Total and filtered metals, cations, anions, nutrients, field parameters, volatile organic compounds and acid-base-neutral extractable compounds have been analyzed between seven and sixteen times. The wells are saline, with chloride levels that ranged from 460 to 2958 mg/L, but have had only low concentrations of some metals. The naturally high salinity caused these wells to exceed secondary drinking water criteria for chloride, iron, and manganese on most or all occasions, while sulfate criteria were usually exceeded at MW-5 and sometimes at MW-10.

Ground water criteria for metals were exceeded rarely. Cadmium was measured at 24 µg/L at MW-3 in August, 1991, but remained below the criterion of 10 µg/L on the other 20 sampling dates, at MW-3, and did not exceed this criterion once in 42 samples taken over five years at MW-5 and MW-10. The chromium criteria of 50 µg/L were exceeded on 3 occasions at MW-10 with the highest measurement being 103 µg/L, but remained below the criterion or was not detected for 18 other sampling events on MW-10 (and never exceeded criteria at either MW-3 or MW-5 in 21 sampling events at each well). Methylene chloride, benzene, and bis (2-ethylhexyl) phthalate were detected from one to three different times at these wells. However, methylene chloride and bis(2-ethylhexyl)phthalate are likely due to contamination in the laboratory or during sampling, since blanks also periodically were found to have these two constituents. Benzene was detected only once at levels just higher than the 1.0 µg/L criteria in MW-3 and MW-5. None of these infrequent and relatively low concentrations indicate an ongoing problem, pattern, or trend.

MW-6 AND MW-11. MW-6 and MW-11 are located southwest and cross-gradient from the fill (Figure 7). They are located at the approximate western edge of the Sumas Outwash deposit, and exhibit a downward hydraulic gradient. MW-6 and MW-11 are 47.5 and 10 feet deep, respectively.

MW-6 has had higher sulfate concentrations than any other well (Figure 8), but otherwise has exhibited similar concentrations to wells MW-3, 5 and 8 (the other deep wells on-site). MW-11 has been most similar to MW-1 and 4, with comparatively low levels of chloride and sulfate, but has had the highest zinc levels of the monitoring wells. Zinc peaked at 77 µg/L, but the median value was only 6 µg/L (Table 6), both of which are under the secondary contaminant level of 500 µg/L. Lead was detected just once at a low concentration in MW-6.

Other than the approximate 1 foot increase in piezometric head between 1988 and 1990 and the temporary increase of TOC that occurred in both MW-6 and MW-11, only dissolved inorganic nitrogen in MW-6 has displayed a multi-year time trend. The sum of nitrate + nitrite + ammonia dropped from a peak value of about 2.6 mg/L as N to about 0.8 mg/L between 1989 and 1992.

Exceedances of primary carcinogenic water quality criteria have not occurred in MW-6 or MW-11. Due to the naturally saline ground water, secondary criteria are always exceeded for chloride and sulfate, often for manganese, and occasionally for iron in MW-6 (Table 5). In MW-11, secondary criteria are typically exceeded for chloride and manganese, and rarely for sulfate, pH and iron (Table 5). Organic substances have been detected in the wells, but toluene and bis-2-ethylhexyl phthalate have been detected only once at below detection limit levels in MW-11 and MW-6, respectively. Methylene chloride was detected, but attributed to laboratory contamination because it occurred in the blanks at similar levels.

APPARENT GROUND WATER TRENDS

Temporary TOC Increase. TOC concentrations apparently increased in all wells (including background) from about 5 to 60 mg/L between 1990 and 1992. Subsequently, TOC levels have returned to baseline levels (Figures 9-18). This trend is not coincident with any other pattern in the wells. Water level, sulfate, chloride and COD, for example, did not display similar patterns. Because COD did not corroborate the TOC pattern, it is suspected that the peak in TOC can be attributed to laboratory error, although laboratory personnel cannot identify any reason for this pattern. In deep wells with very slow ground water movement, it is unlikely that TOC would change much from quarter to quarter as is indicated by the data.

Saline Ground Water. Connate water is that which is trapped in the pores of a sediment during deposition. The Kulshan and Bellingham Drift at the Recomp site are marine deposits, so the original formation water is seawater. The composition of the major constituents in seawater is as follows (Morcos 1973):

Sodium	10,760 mg/L	Chloride	19,350 mg/L
Magnesium	1,300 mg/L	Sulfate	2,730 mg/L
Calcium	410 mg/L	Bicarbonate	140 mg/L
Potassium	400 mg/L	Bromide	67 mg/L

Constituent concentrations change (diagensis) after burial as a result of a variety of chemical reactions and as a result of freshwater dilution that may occur after uplift. Sea salts are very water soluble and mobile, so that washout by meteoric water occurs after a few tens of pore volumes have washed through the soil (Domenico and Schwartz 1990). The most saline wells at Recomp (MW-3, 5, 6 and 8) have about 13% of the chloride content of sea water. Other vicinity wells are also very salty due to the influence of marine water. For example, monitoring wells located ½ mile away at Bellingham Frozen Foods spray field have had conductivities, due to this marine water, of up to approximately 12,000 µS/cm, even saltier than those at Recomp. By contrast, the Recomp leachate is not nearly as salty, with about 2% of the chloride content of sea water. There appears little reason to doubt that the saline water at Recomp is connate marine water, and is not salty as a result of man's activities. The fact that the ground water remains salty is convincing evidence that the ground water flow rate is very low.

Similar Wells. Based upon the box plots (Figure 8), four distinct water quality types are tentatively identified. Wells MW-3, 5, 6 and 8 are deep, and contain approximately twice the Cl and inorganic nitrogen content and half the iron content of other wells. These may be located in Kulshan Drift and exist in an area of upward ground water flow so that freshwater dilution is minimized. MW-1 and 4 are also deep, but along with MW-11 are located in a region with a downward hydraulic gradient. As a result, these wells have had more dilution by meteoric water and are less saline. MW-7 is the only well located in the perched water table of the Sumas Outwash soil, and despite its upgradient location has had the highest TOC and COD levels. Otherwise, MW-7 exhibits very low levels of constituents. MW-9 and MW-10 are shallow downgradient wells located in the Bellingham Drift, and in an upward gradient. The shallow location of MW-9 and MW-10 apparently sets them apart from the others, as characterized by mid-levels of specific conductance and chloride (Figure 8). These various patterns can be accounted for by natural conditions, and do not indicate leachate migration from Recomp.

Multi-Year Trends. Notable long-term trends (see figures 9-18) include an increase in water level in all wells except MW-7, and;

Chloride:	declined in MW-4, 7, 9 and 10
Sulfate:	declined in MW-1, 3, 4, 5 and 7 increased in MW-10
Nitrate + Nitrite + Ammonia:	declined in MW 1, 5, 6 and 7 increased in MW-4

Other patterns, except for TOC as described above, were not evident. These trends, for example, were not associated with other patterns of heavy metals. Toxic metals have remained present at very low, typically undetectable and below primary water quality criteria, throughout the period of record.

Chloride, sulfate and nitrogen declines may be a result of dilution by meteoric water. Increased sulfate in MW-10 is likely a result of ground water oxidation, that occurred as a result of the water level increase in this shallow well, converting soil sulfides to sulfate. MW-10 sulfate concentrations rose from about 150 mg/L to 300 mg/L to become equivalent to those in MW-9. The increase in nitrogen in the upgradient well MW-4, is not attributable to the landfill because ground water flow is toward the landfill. In summary, the long-term patterns at Recomp involve mobile ions and can be accounted for by a change in ground water flow regime.

Seasonality. Seasonal oscillation of piezometric head is evident for all wells, with minimum head occurring around October and maximum head around May. Chemical concentrations also fluctuate seasonally (Figures 9-18). For example, sulfate and nitrogen seem to have their lowest concentrations in autumn, and COD appears to have peak concentrations in autumn. Because the peaks in these seasonal oscillations do not appear to be increasing in magnitude, they do not indicate any leachate migration from Recomp into the ground water.

SURFACE WATER

Based upon routine visual site inspection and the surface water data presented here, Recomp is not indicated to be a source of contamination to surface water. The clay berm that separates the industrial activities at Recomp from the surface water adjacent to the site appears to effectively isolate the Recomp facility.

The quality of the surface water immediately adjacent to the Recomp facilities has been monitored since 1989 in order to provide baseline water quality data (Table 9 and Appendix) and to assure that runoff or seepage is not impacting water quality.

The four surface water quality monitoring stations (Figure 2) were chosen because they well represent runoff sources. Three of the four stations are located in the ditch between the adjacent railroad and the Recomp eastern property line. Station SW-3 is located at the outfall from a culvert, which collects runoff from the ditch and thus from all three stations. Runoff from Station SW-3 then travels a short distance and drains into Claypit Pond, an abandoned clay quarry. All SW-4 runoff originates from property located to the north of the Recomp facilities. SW-1 runoff originates from property to the south of Recomp and possibly from the south side of the Recomp facilities, and SW-2 runoff originates from the same source as SW-1 and possibly some runoff or seepage across the eastern property line of Recomp. Only 7.8 acres of Recomp property contributes to surface water runoff which is collected and contained by an underdrain system which empties into the leachate lagoon. This area would provide, at most, only about 0.02 cfs of mean annual runoff.

Flow from the north station (SW-4) generally constitutes the vast majority of flow to SW-3. On only sixteen of nineteen sampling events flow from SW-4 constituted 90-100% of flow to SW-3. On the three other occasions 42%, 79%, and 83% of flow at SW-3 originated from SW-4, while SW-2 contributed the remainder of the flow to SW-3. Seepage from the leachate pond and/or runoff from the northside fenceline did not occur or at least were not measurable on those 19 sampling occasions.

Based on the previous discussions, the primary focus for water quality should be on runoff originating off-site from the north, upstream of station SW-4. Although, if constituent concentrations at SW-2 were higher than at SW-4, then SW-2 could be a significant source of pollutant loading. However, the reverse is usually the case. In Table 9 and in the appendix data, it can be seen that SW-4 has both a much greater volume of flow and much higher concentrations of dissolved constituents than SW-2, as indicated by specific conductance measurements.

Water quality at SW-3 is, for the most part, equivalent to water quality at SW-4. This is to be expected because flow at SW-3 is essentially flow at SW-4 diluted only a little by flow from SW-2. Differences between the two stations shown in Table 9 are due to the differing number of samples taken, not to differing constituent values. Some high values for SW-3 occurred when SW-4 was not sampled. We attempted to assess whether unmeasured seepage, from the lagoon or elsewhere, containing high concentrations of pollutants could potentially degrade SW-3 water quality below that of SW-4, and this has not been the case. Moreover, no seepage from the lagoon is likely to have occurred given the consistency of flow measurements, which show that all flow is accounted for at SW-2 and SW-4. Also, if the lagoon contributed even just 1% of surface flow, it was calculated that the pH at SW-3 should be at least 1.0 higher than at SW-4. In addition, certain metals concentrations would also be elevated if lagoon seepage occurs. Neither of these conditions has occurred. Elevated pH would be the first indicator of leachate seepage to SW-3. Finally, no seepage from the Recomp facilities is discernable and runoff is minimal and contained on-site.

ASH

A summary of the results of ash analyses for 1993 are presented in Table 8. The mean concentrations of heavy metals in the ash ranged from 0.6 mg/kg for mercury to 3440 mg/kg for lead. All of the remaining metals except barium averaged less than 100 mg/kg. Barium averaged 626 mg/kg.

Analysis using the Toxicity Characteristic Leachate Procedure (TCLP) demonstrated that all metals but lead had low leachate potential. All TCLP concentrations, except those for lead, were less than 1 mg/L and less than the promulgated regulatory criteria (CFR 40, part 261, 1990). TCLP mean lead concentrations exceeded these limits in 1993. Recomp facilities are designed for containing leachate just for this reason. This issue is adequately addressed because leachate is properly collected and disposed of.

Ash at Recomp is not classified as a dioxin containing waste, but analysis of ash for dioxins was carried out in March of 1994. Four composited samples were again composited and analyzed for a list of dioxins and furans as required by state regulations for ash monofills. Results of dioxin analysis are attached in the appendix. Dioxin and furan concentrations met treatment standards for dioxin containing wastes, even though Recomp Ash is not subject to these standards.

Soils investigations and analyses were conducted by Golder Associates in 1989 as part of the design process for the ash storage pad. The analyses indicated that there was a possibility that differential settlement could occur, with the storage facility settling downward and pushing up

soils to the west of site. A number of monuments were placed in the area to the west of the ash storage facility to monitor ground movement. These monuments are surveyed monthly to record both horizontal and vertical locations in order to detect movements. The surveying data is provided in Appendix A-6. Of the twelve points monitored, only two have shown signs of movement; Point A which has settled about 0.12 feet (1.44") in three years and point AZ which also settled 0.12 feet in three years. The lack of upward movement of perimeter soils as measured by the monuments indicates a stable condition. The good stability helps ensure good structural integrity of in-place closure.

The Recomp Ash Management Plan addressed the issue of methane generation in relation to settlement and stated that "previous combustible gas monitoring at ROW's site was conducted with the older ash that is currently in the closed landfill. Results varied between nondetectable and less than two percent by volume. This is a relatively low amount of methane generation. Methane generation will be reduced even further as a result of the MRF's materials separation process prior to incineration."

SOIL

Soil samples have been collected once during 1993 from sixteen locations along the property perimeter (Figure 2). These samples were collected from the top 8 inches of the soil and were composited into 4 samples to represent the N, E, S and W property borders. The results do not suggest any unusual conditions, but are included as part of the long term site assessment that calls for annual soil testing for percent solids and cadmium. The data:

	Solids (%)	Cadmium (mg/kg dry)
N soil sample	84.65%	1.34
E soil sample	88.16%	1.26
S soil sample	82.78%	1.45
W soil sample	83.14%	1.68

All measured values are less than MTCA method A standards (which is the state's most protective standards for soil).

CONCLUSIONS

- Data quality at Recomp is good, sufficient and suitable to characterize water quality.
- Piezometric head in the monitoring wells has risen by 1 to 2 feet since 1988.
- Ground water flow rate is very low, less than 0.9 feet per year horizontally, due the tight clay soils.

- An upward hydraulic gradient exists under the ash fill area so that ground water movement is upward and to the west rather than downward and to the west.

- Ground water is saline, almost definitely because it is relict sea water present since soil formation as a marine sediment 10,000 years ago.

- The two wells upgradient from Recomp property are significantly less saline than the seven downgradient wells. This is attributable to a downward hydraulic gradient at these wells that permits fresh water to percolate downward and dilute the salt water. This downward gradient is created by the presence of a mantle of gravelly saturated soils that occurs only upgradient of the Recomp site.

- Chloride, sulfate and nitrogen concentrations appear to have declined in most wells. This could be attributable to dilution and soil exchange processes that occurred concurrent with the change in aquifer head.

- Heavy metals and organics are rarely detectable in the wells, and primary drinking water quality standards (used here for comparison only) have been exceeded only rarely.

- Monitoring data does not indicate that leachate has impacted ground water quality.

- Recomp is not indicated as a source of surface water contamination.

- The volume of runoff and seepage into the water course adjacent to Recomp is low or zero and no seepage from the lagoon is discernible.

- The quality of surface water runoff to claypit pond is largely controlled by flow originating from the north of the Recomp facility not by flow passing by Recomp property.

PROPOSED MODIFICATIONS TO THE MONITORING PROGRAM

- Gamma radiation should be discontinued, based on previous monitoring data.

- Discontinue Ca, Mg, K, Na (total) analyses, but add hardness (dissolved Ca and Mg) to allow for calculation of surface water criteria for metals.

- Quarterly monitoring for organic pollutants at MW-3, MW-5, and MW-10 should be changed to yearly monitoring. Given that organic constituents are rarely detected if present at all, yearly monitoring will provide data that is just as useful as that gained from quarterly monitoring. Also, the ground water moves so slowly below the Recomp site that yearly monitoring would provide an adequately short interval for detecting incipient leachate migration.

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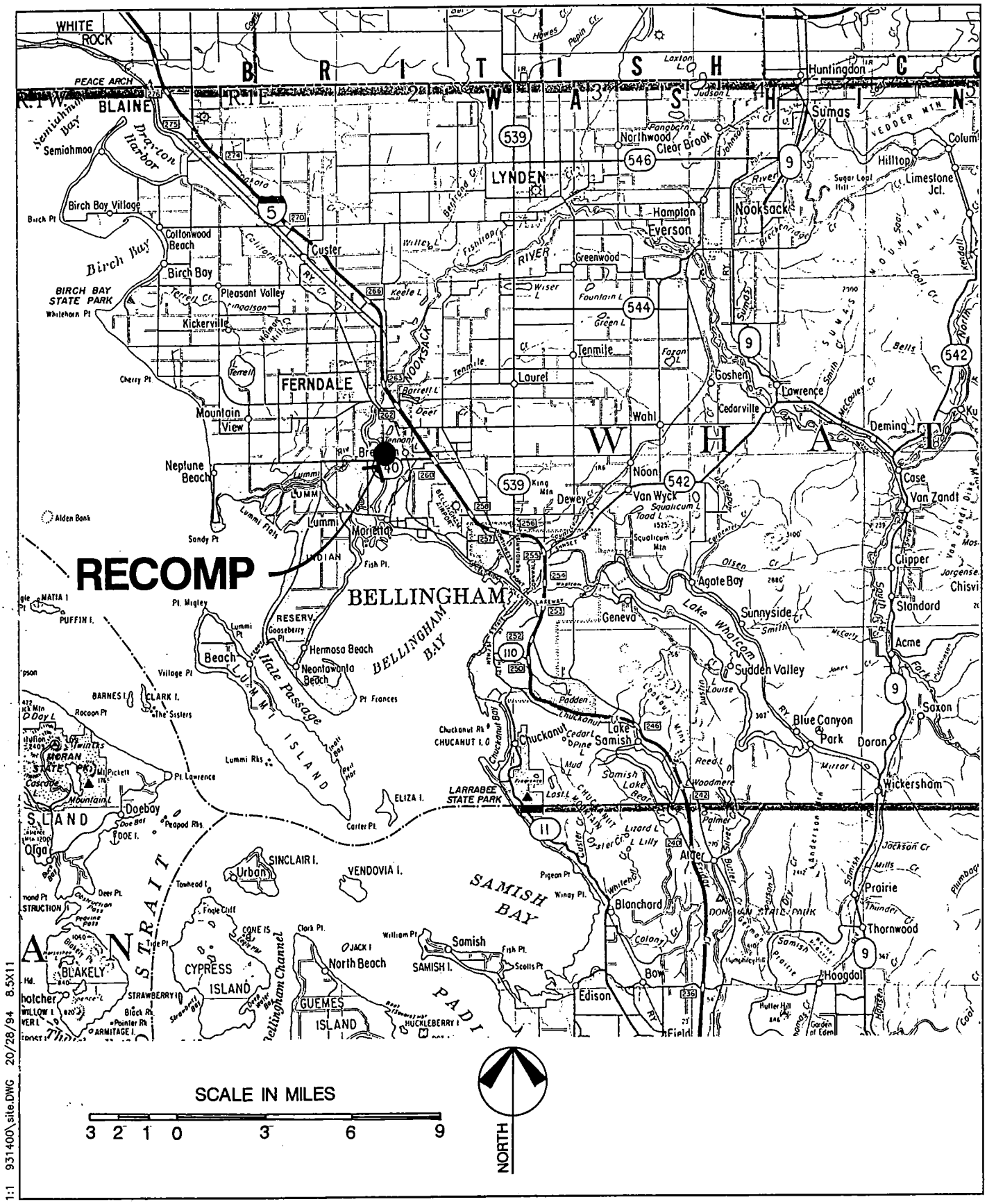

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SITE MAP

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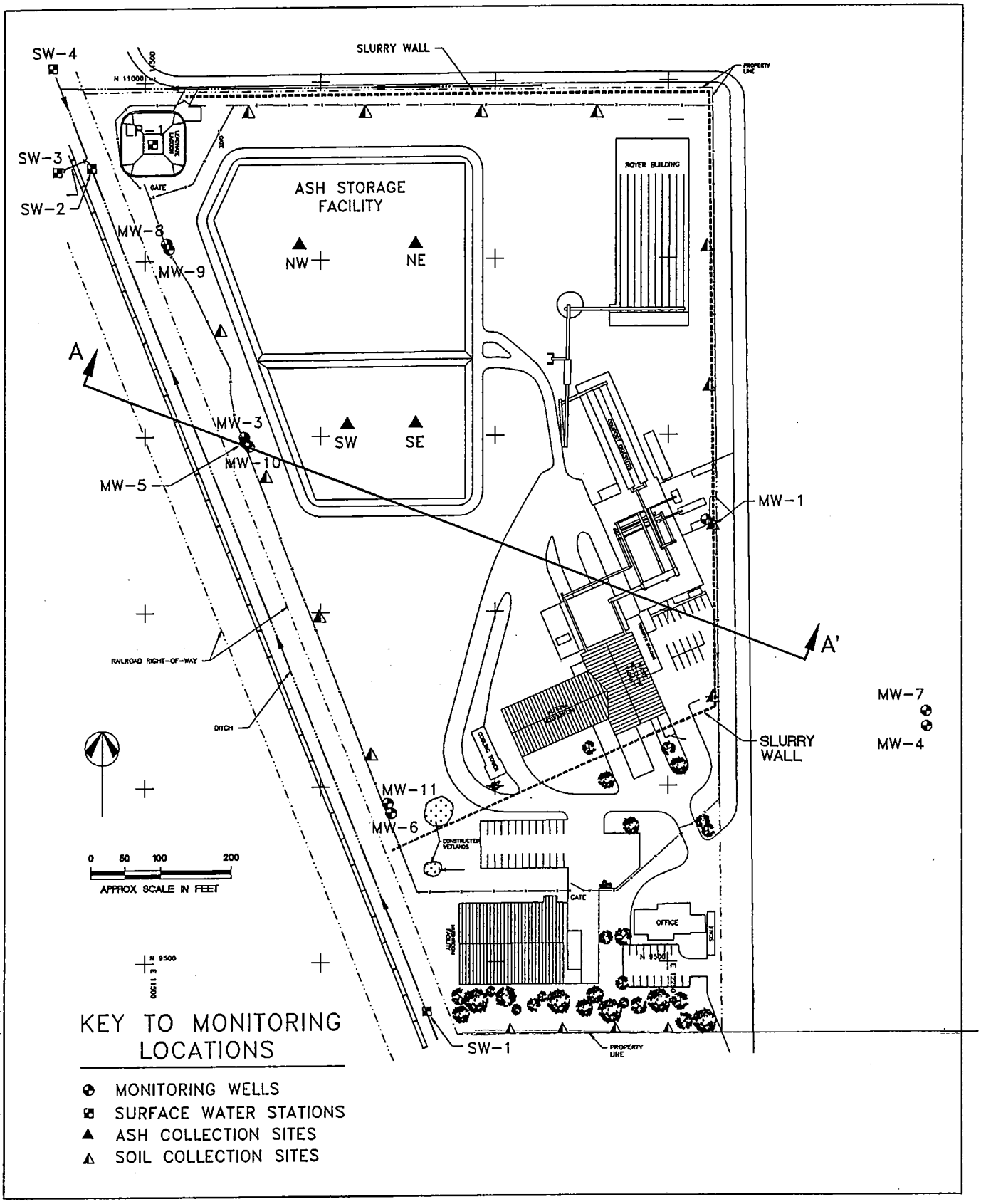
Figure 1



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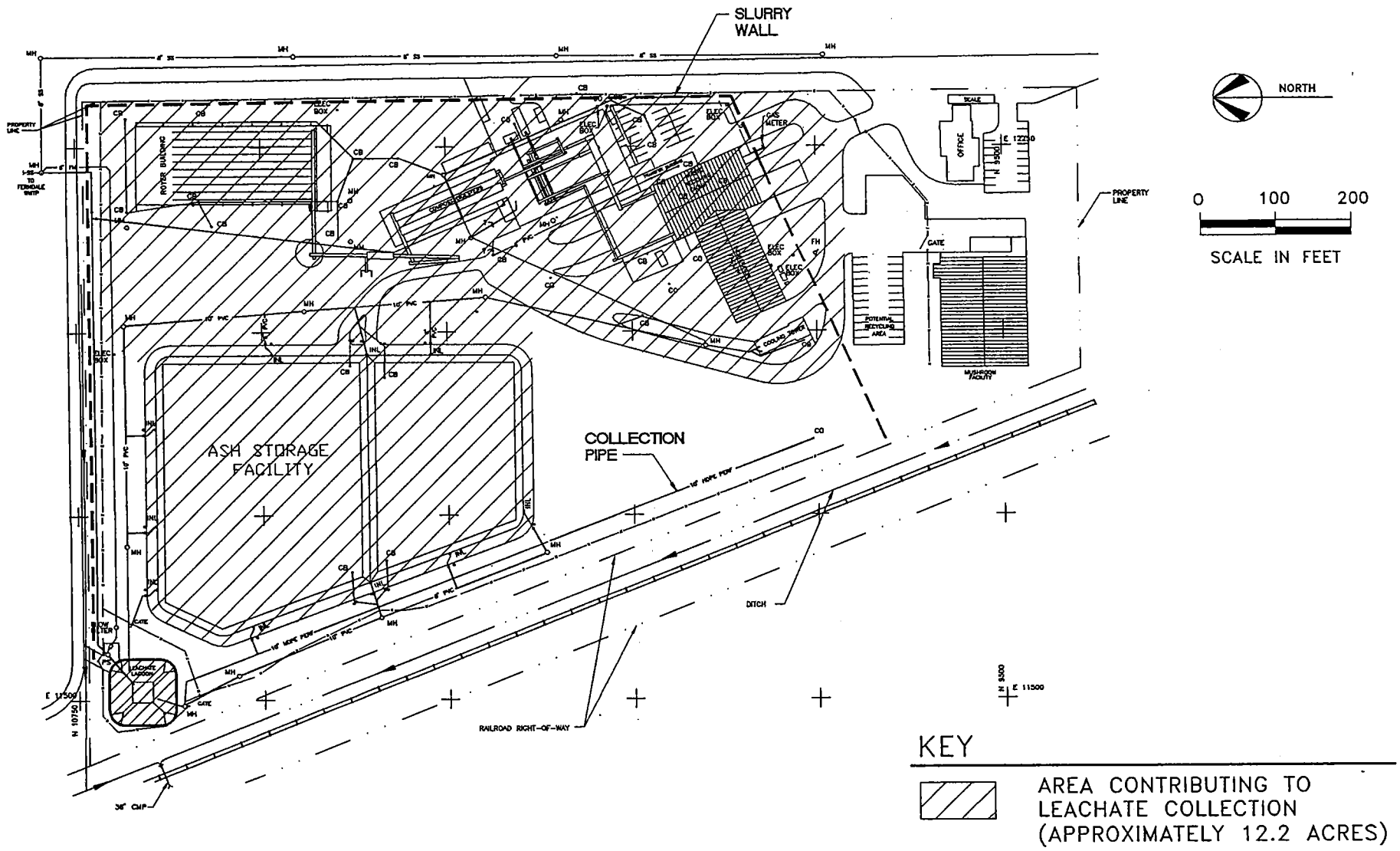
MONITORING LOCATIONS
Recomp of Washington
Ferndale, Washington

Figure
2



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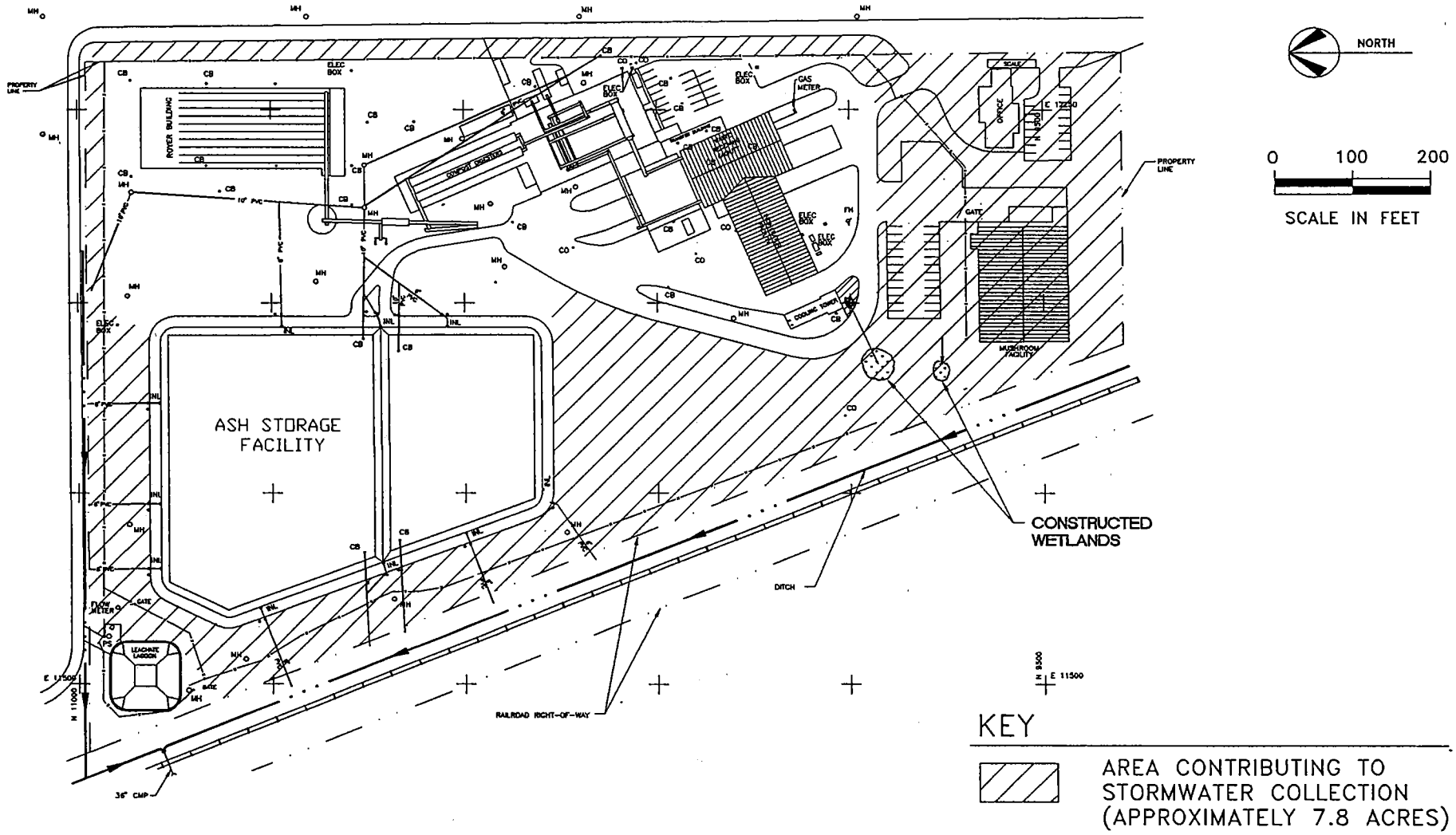
LEACHATE COLLECTION SYSTEM
Recomp of Washington
Ferndale, Washington

Figure
3



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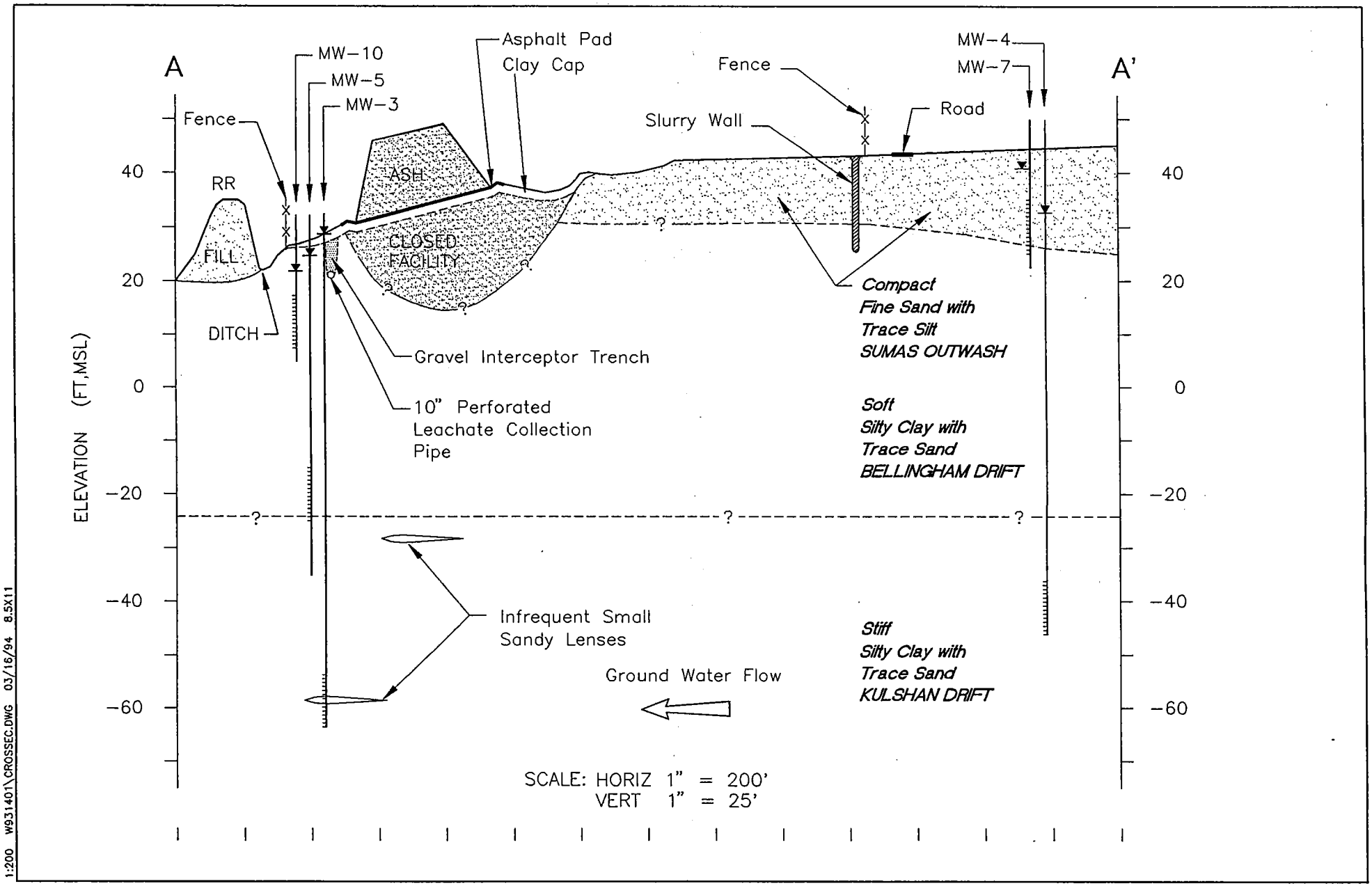
STORMWATER CONTROL FACILITIES
Recomp of Washington
Ferndale, Washington

Figure
4



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FACILITY CROSS SECTION

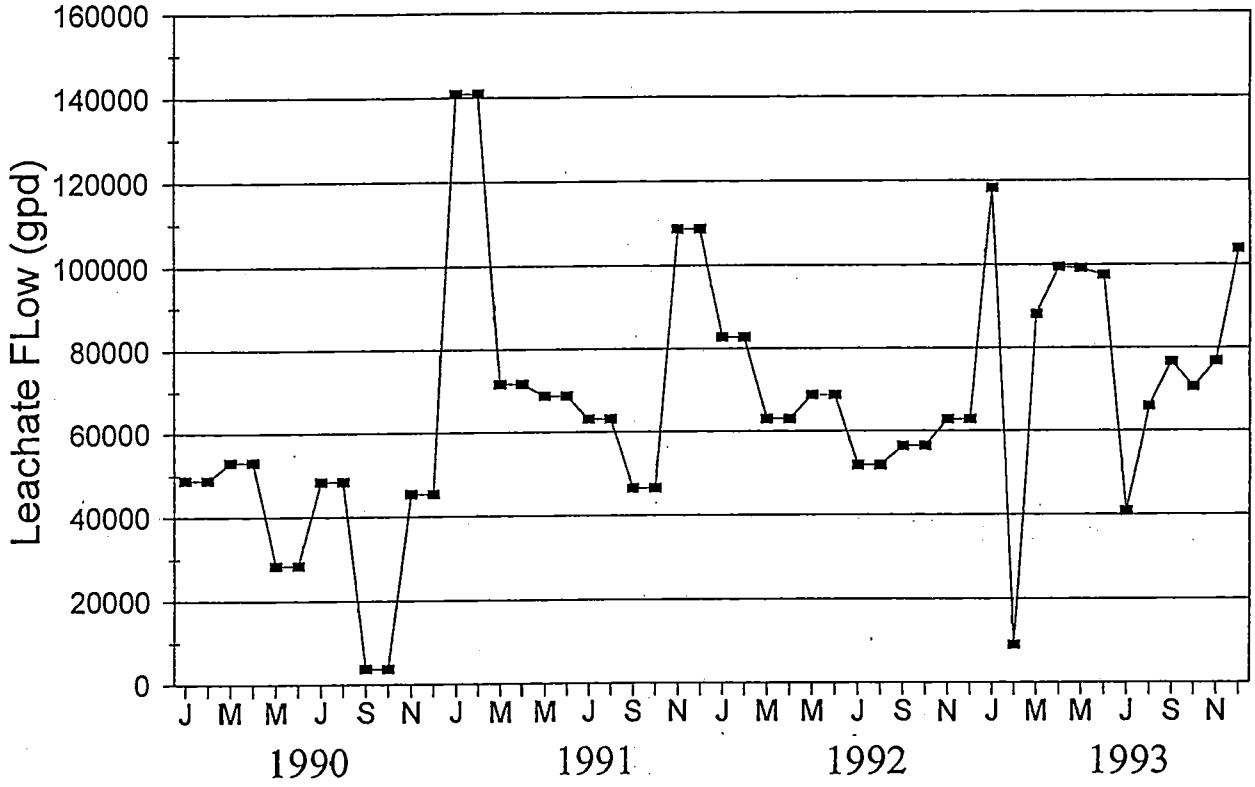
RECOMP of Washington

Figure

5

Monthly Leachate Flow

gallons/day



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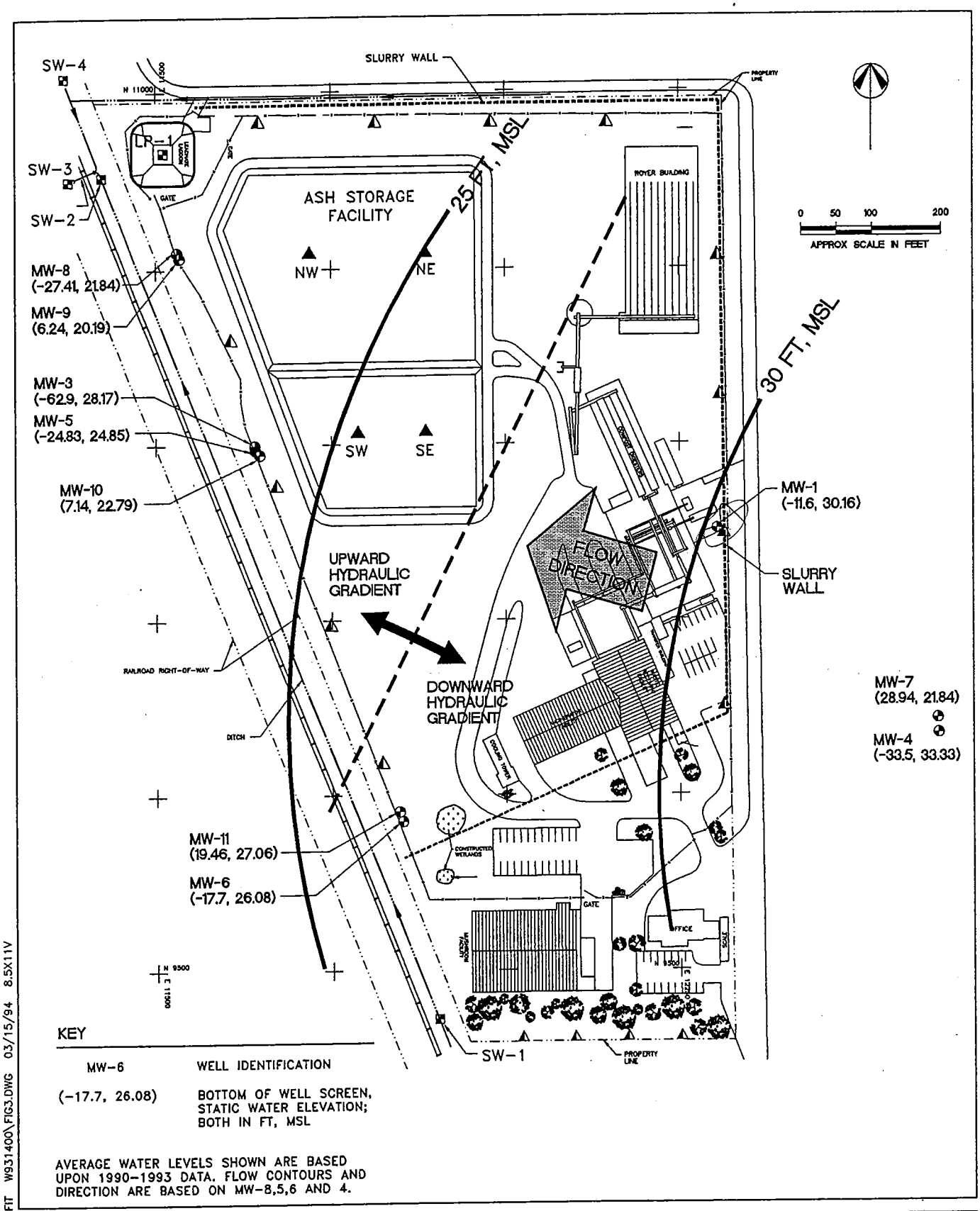
LEACHATE FLOW RATES

RECOMP of Washington

Figure

6



FIT W931400\FIG3.DWG 03/15/94 8.5X11V

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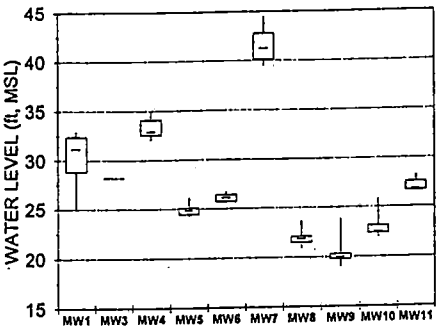
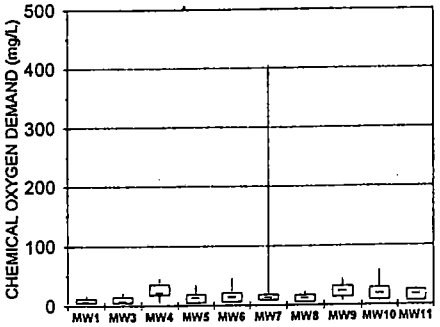
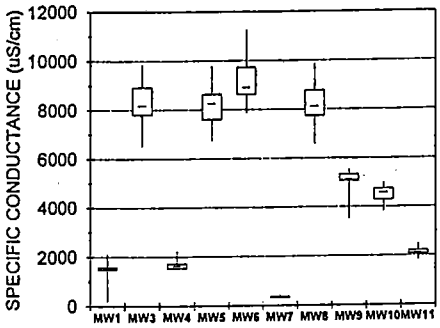
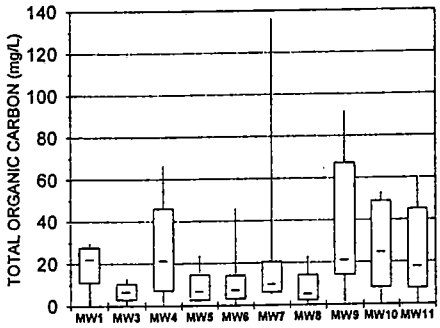
GROUND WATER LEVEL AND FLOW DIRECTION
Recomp of Washington
Ferndale, Washington

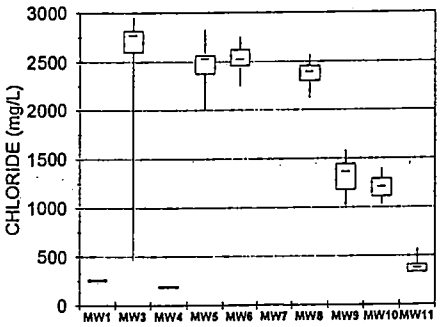
Figure 7

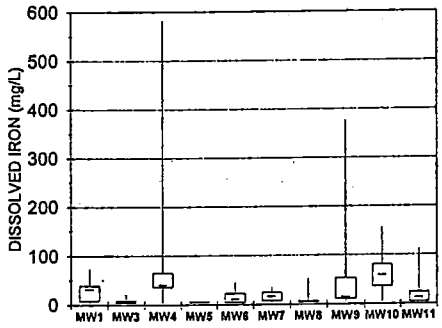


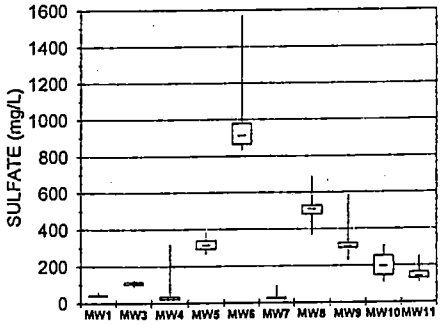


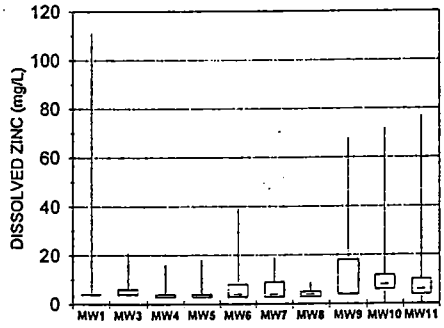












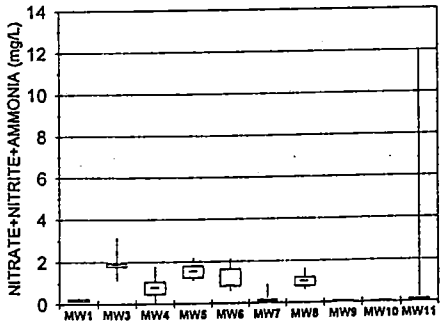


Figure 8

Box Plots
RECOMP of Washington

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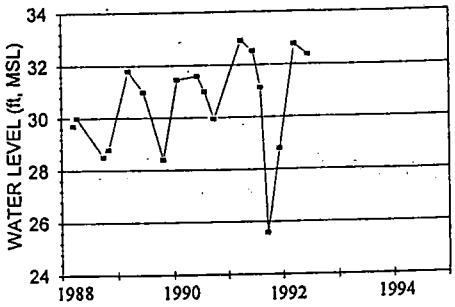

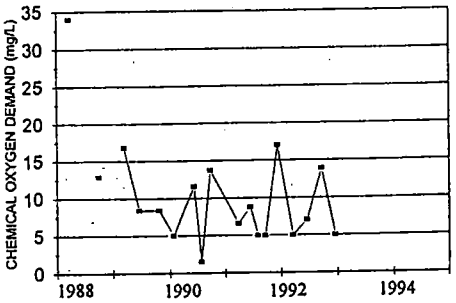

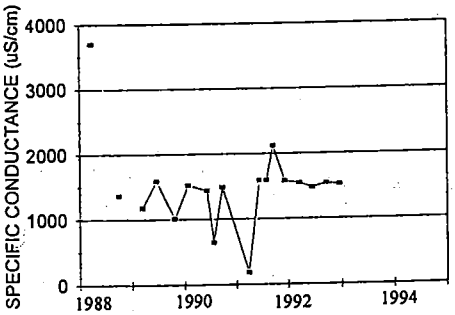

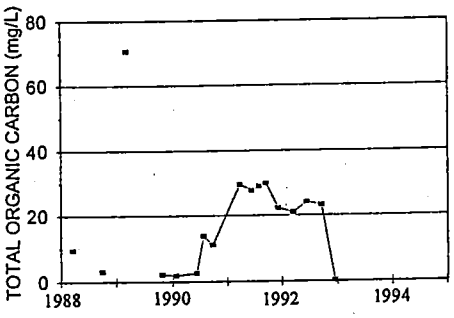

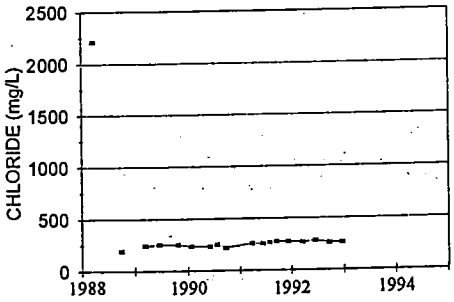

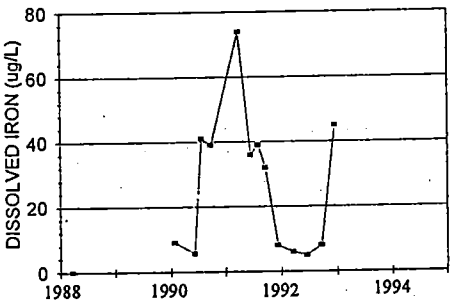

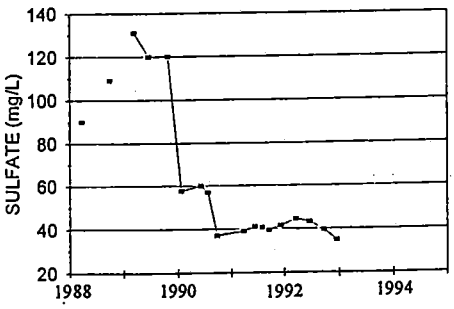

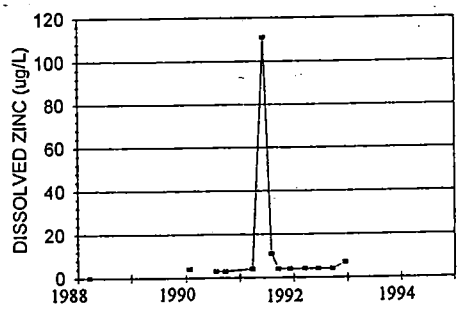

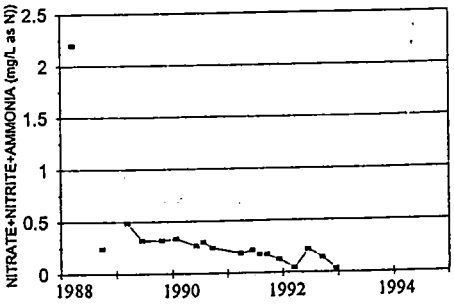

Figure 9

MW-1 Time Trends
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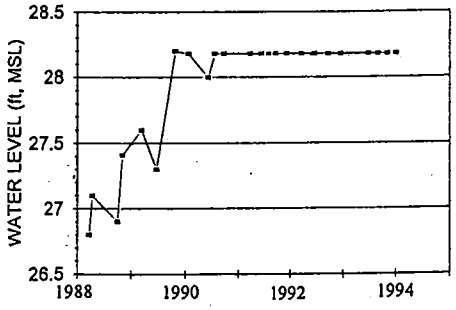

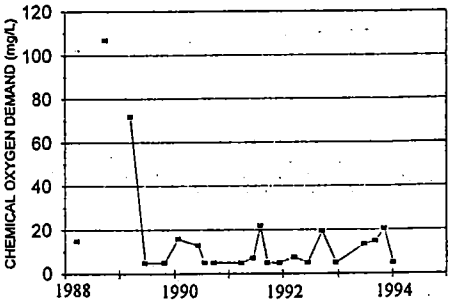

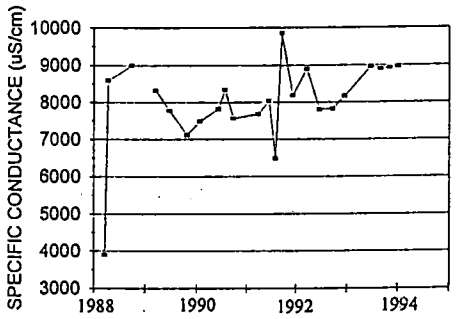

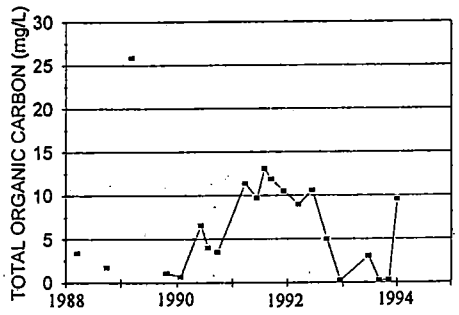

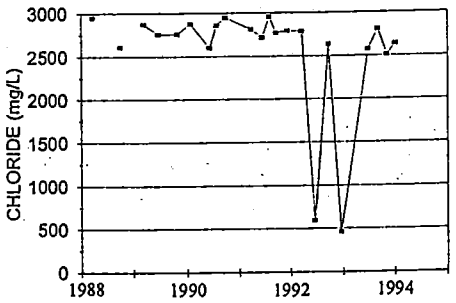

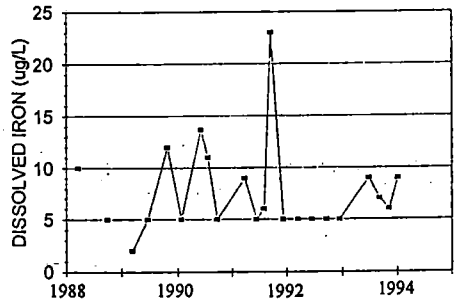

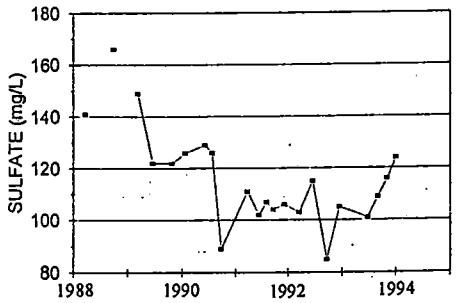

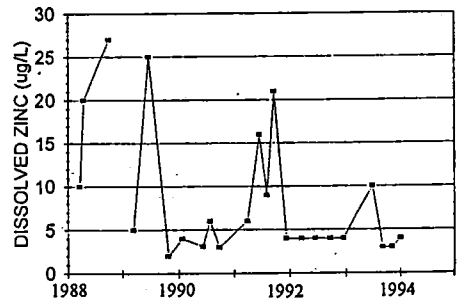

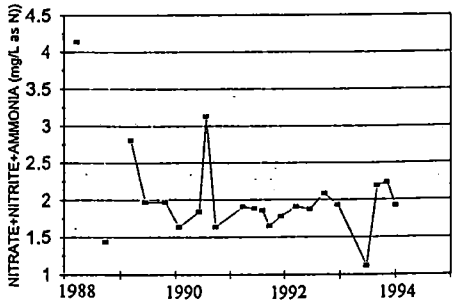

Figure 10

MW-3 Time Trends
RECOMP of Washington

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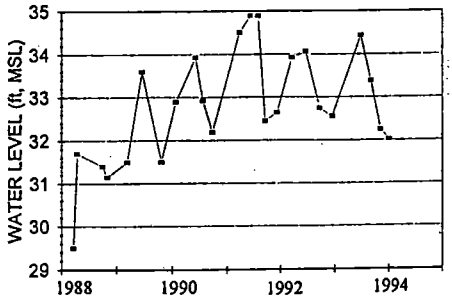
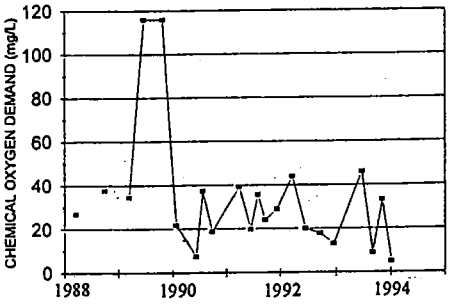
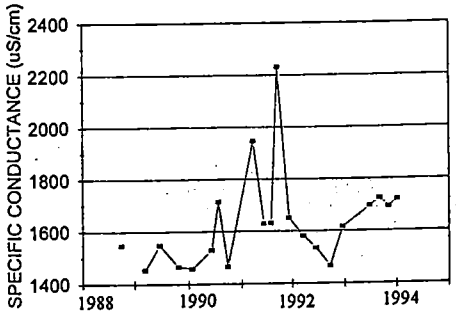
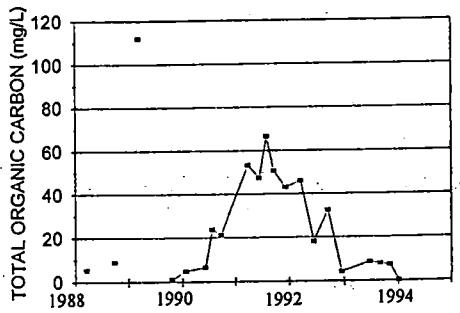
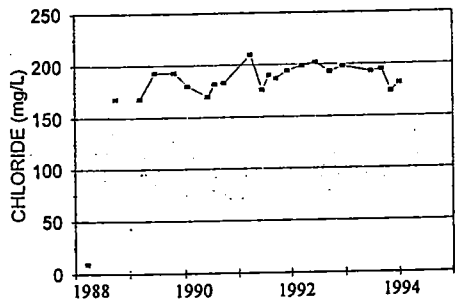
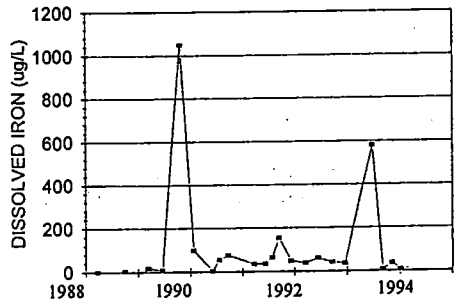


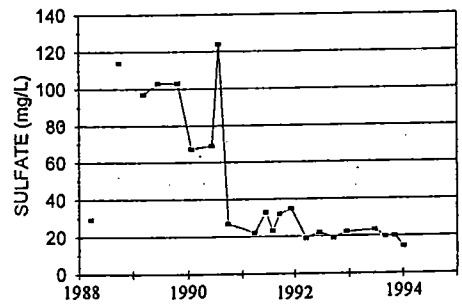


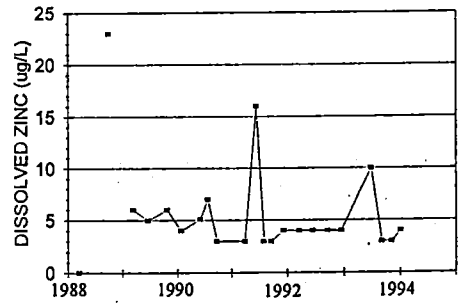












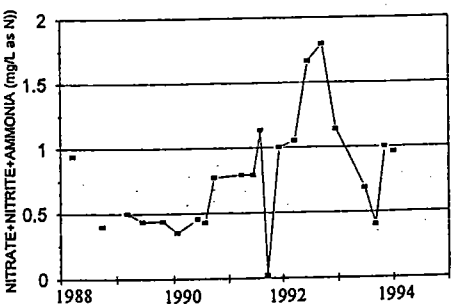
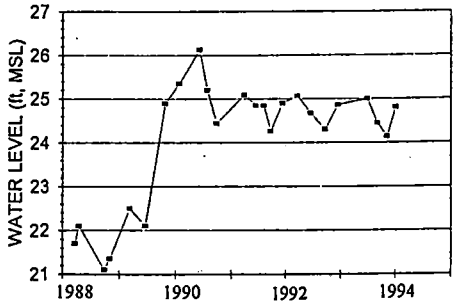
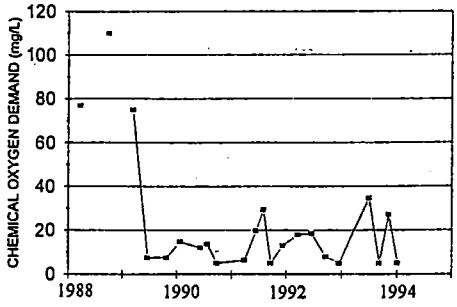


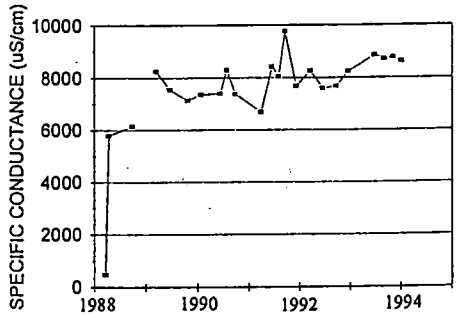
Figure 11

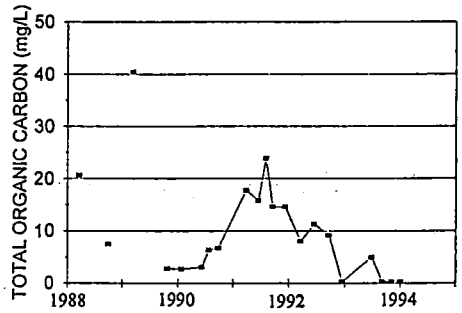
MW-4 Time Trends
RECOMP of Washington

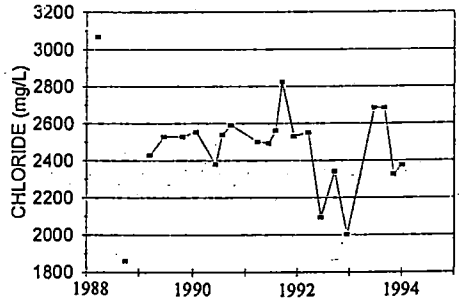
vasey engineering

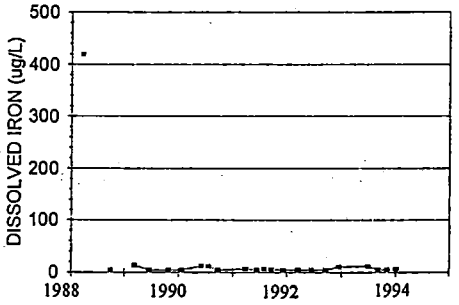


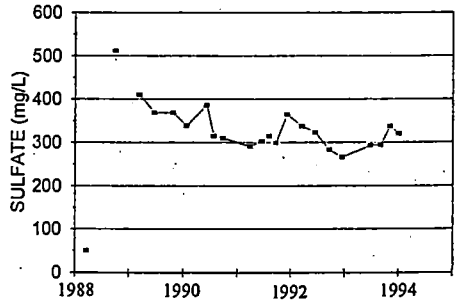


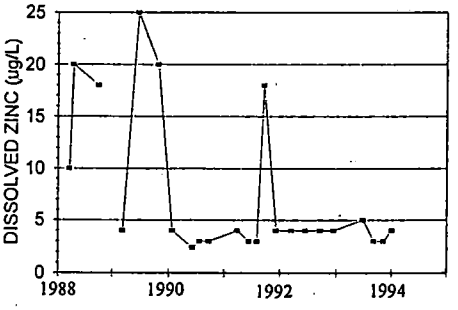












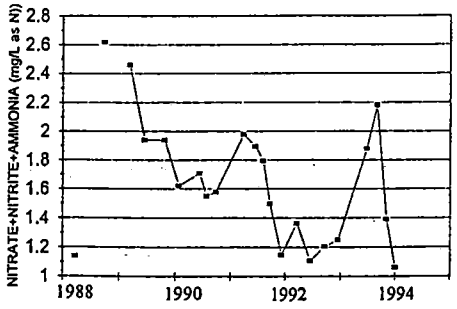
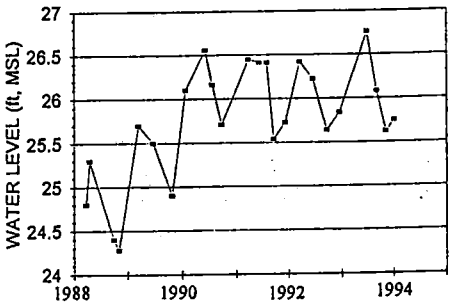
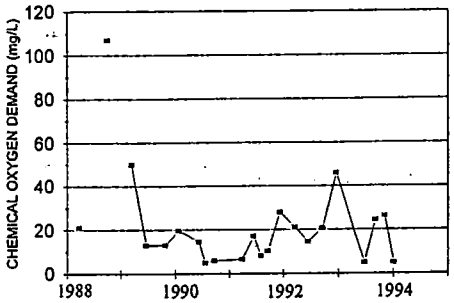


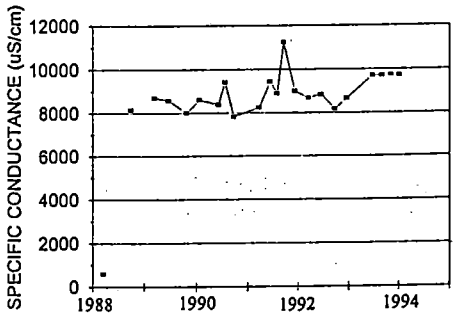
Figure 12

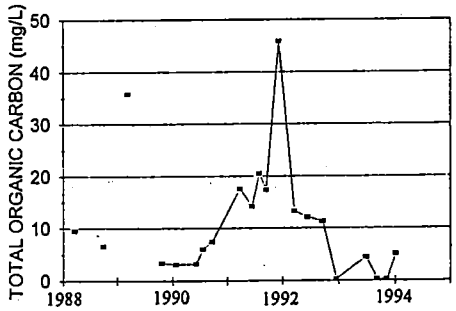
MW-5 Time Trends
RECOMP of Washington

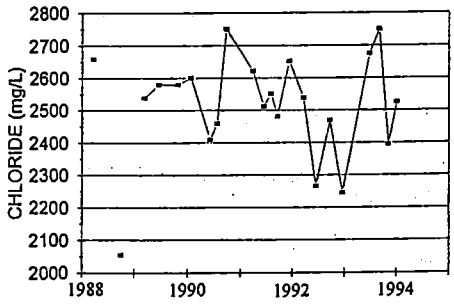
vasey engineering

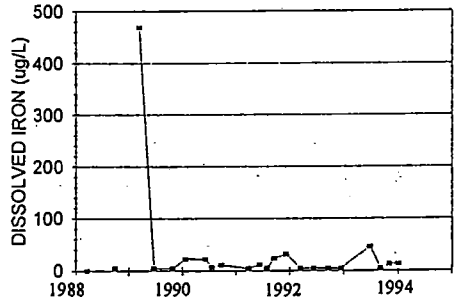


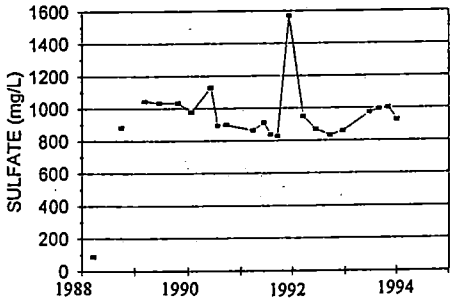


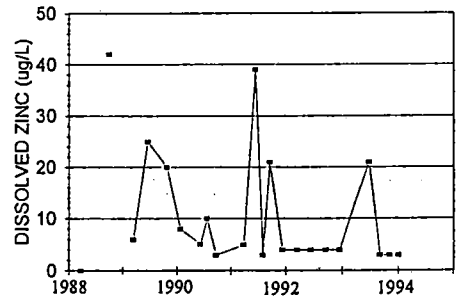












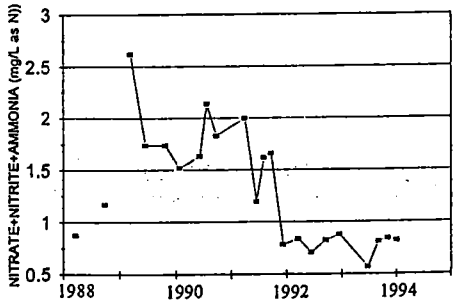
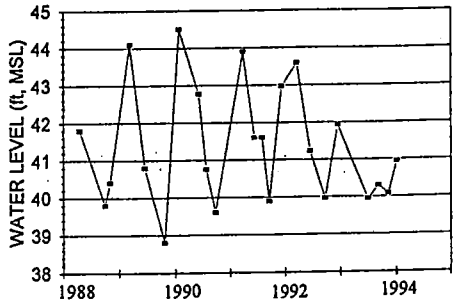
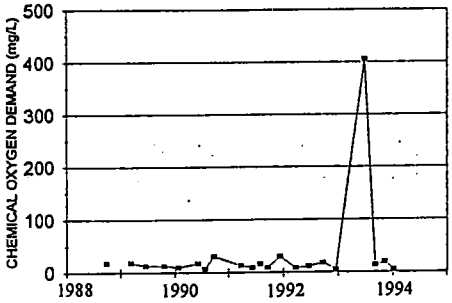


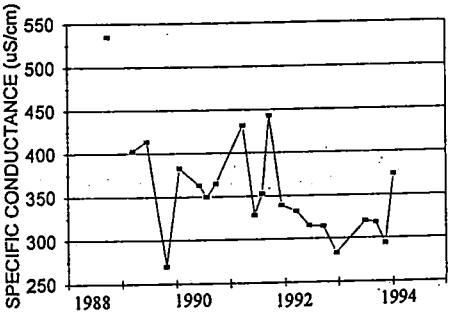
Figure 13

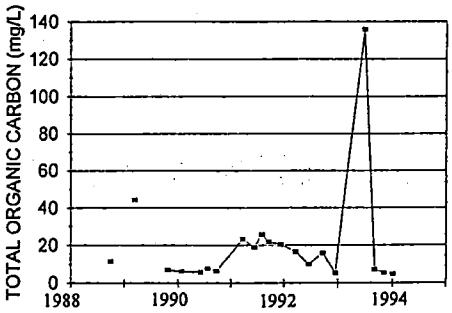
MW-6 Time Trends
RECOMP of Washington

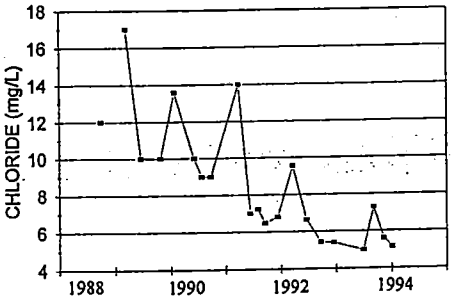
vasey engineering

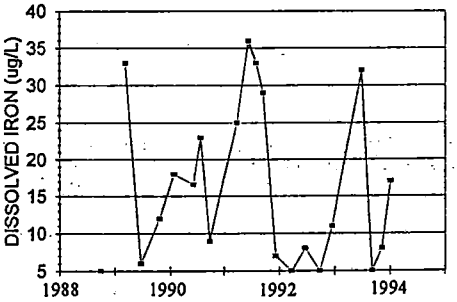


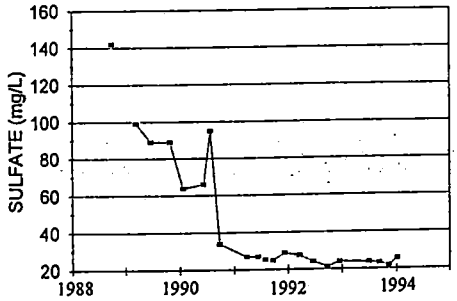


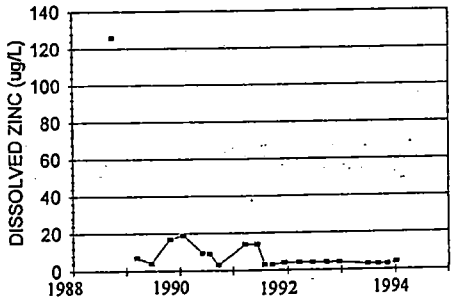












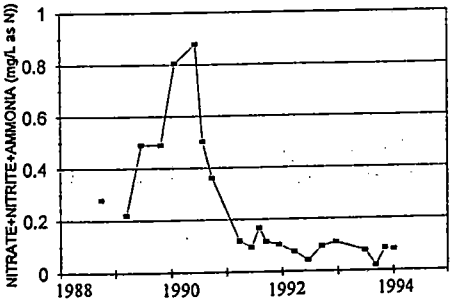
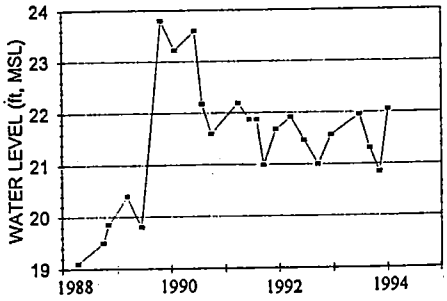
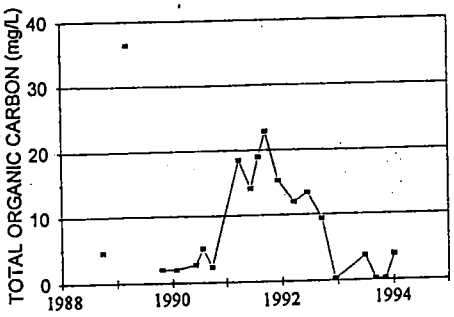


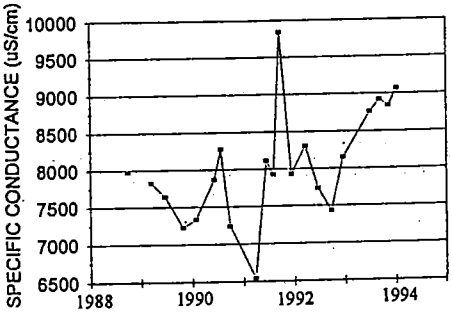
Figure 14

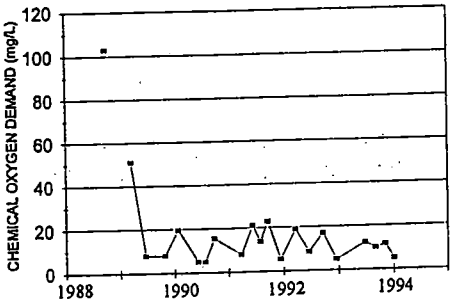
MW-7 Time Trends
RECOMP of Washington

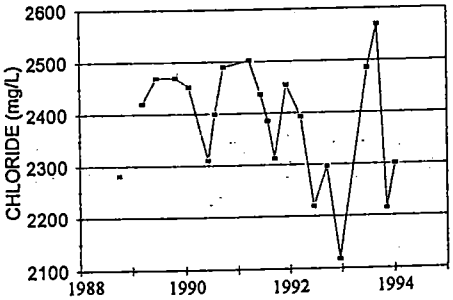
vasey engineering

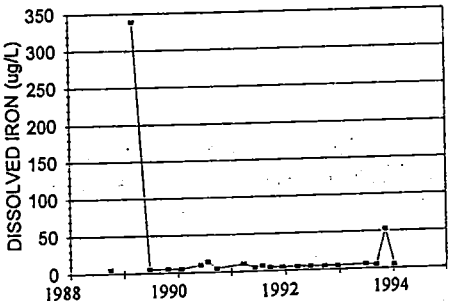


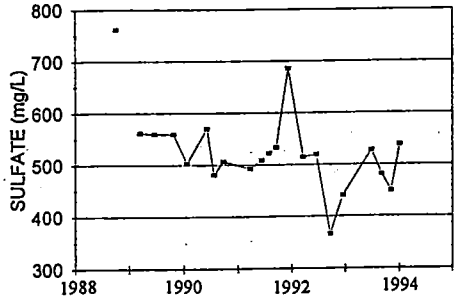


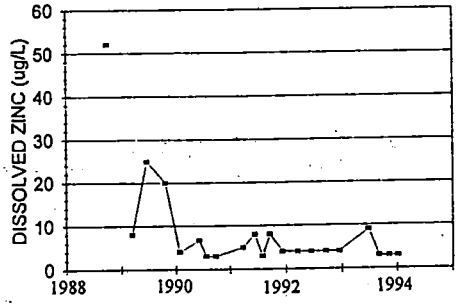












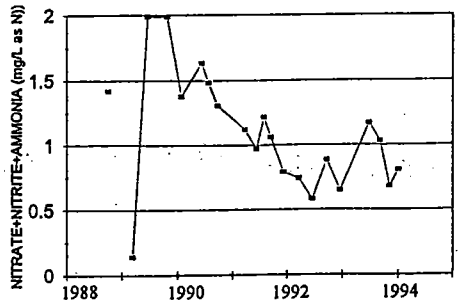
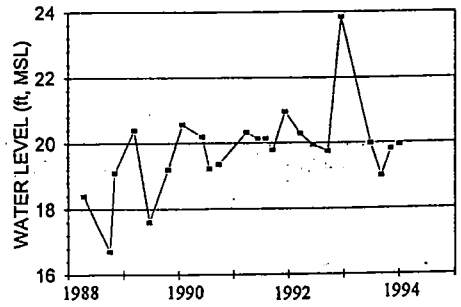
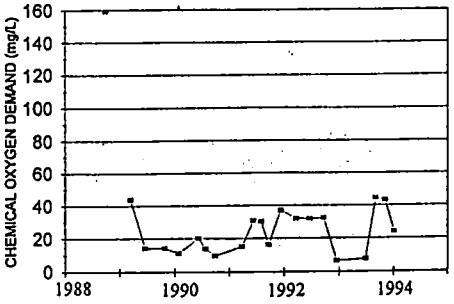


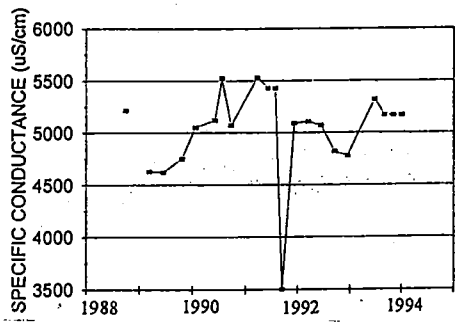
Figure 15

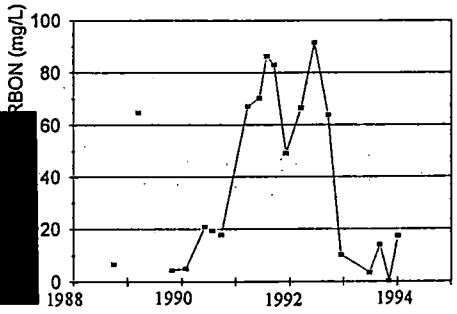
MW-8 Time Trends
RECOMP of Washington

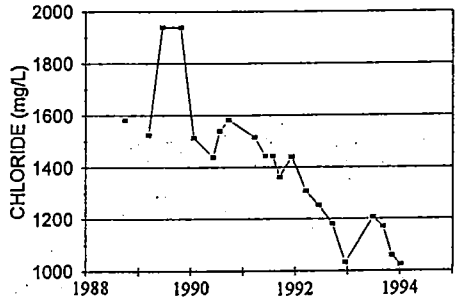
vasey engineering

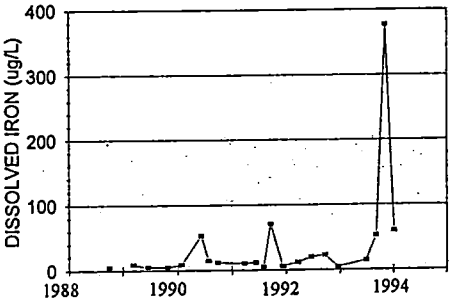


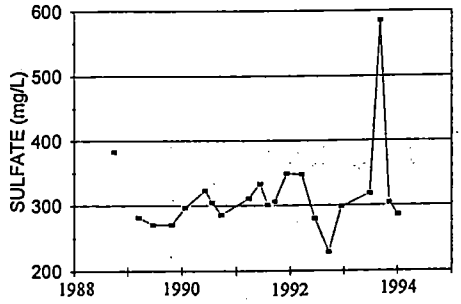


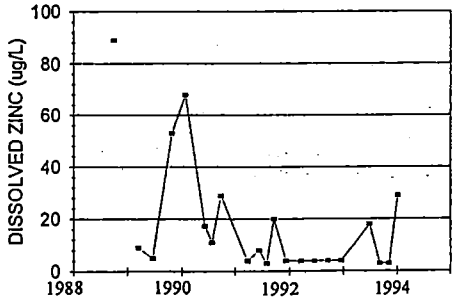












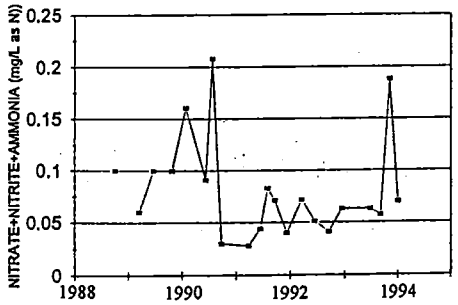


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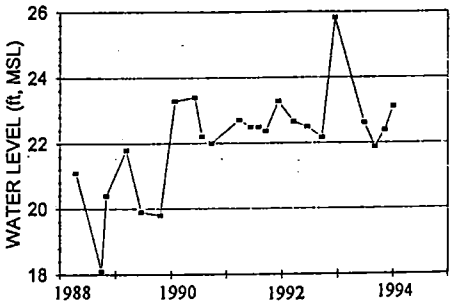
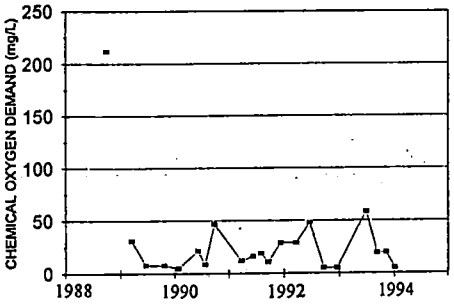
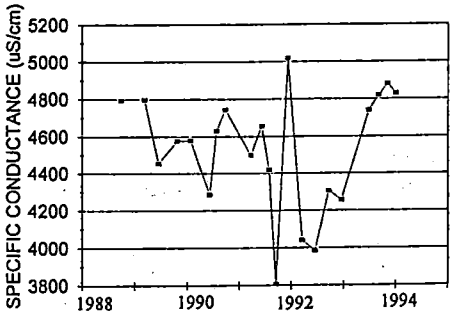
Figure 16

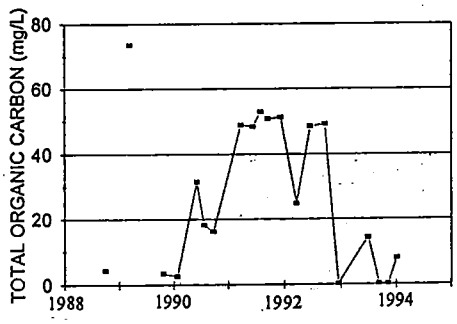
MW-9 Time Trends
RECOMP of Washington

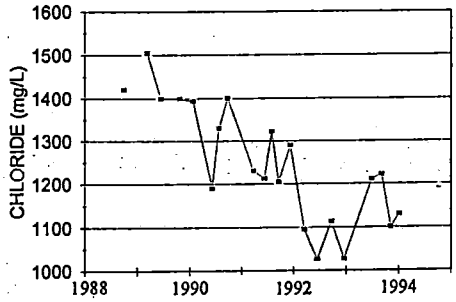
vasey engineering

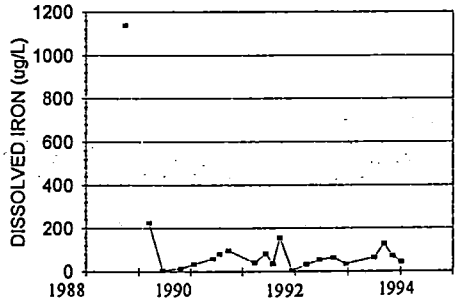


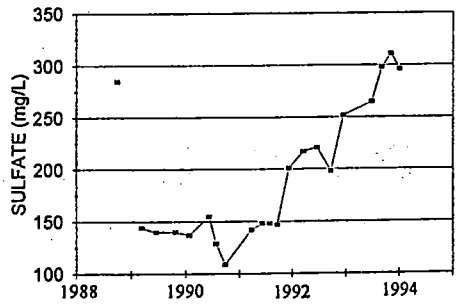


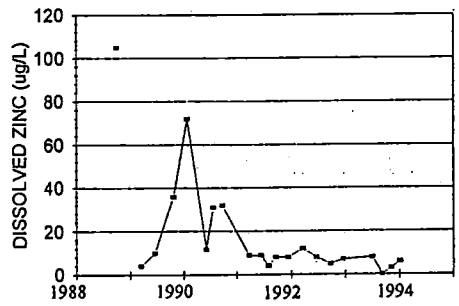












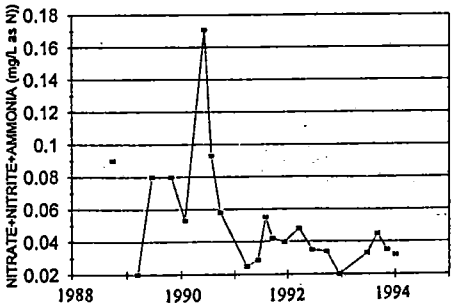
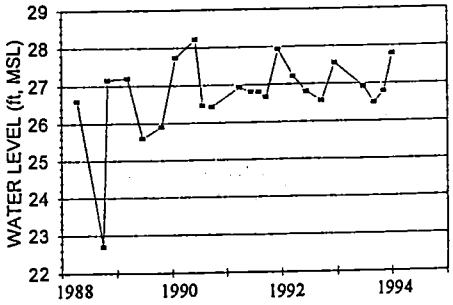
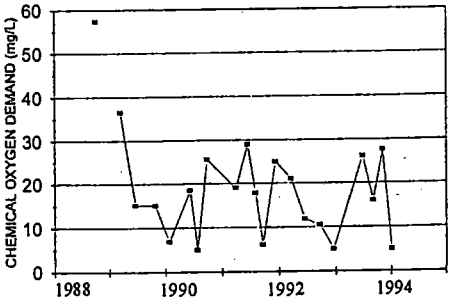


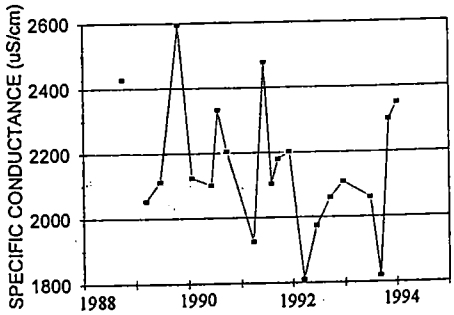
Figure 17

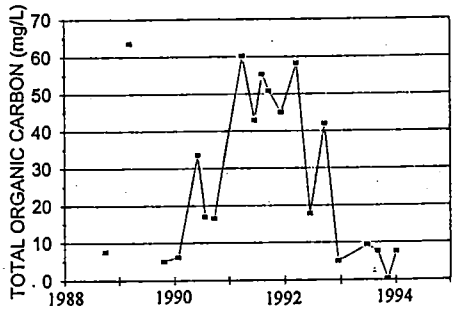
MW-10 Time Trends
RECOMP of Washington

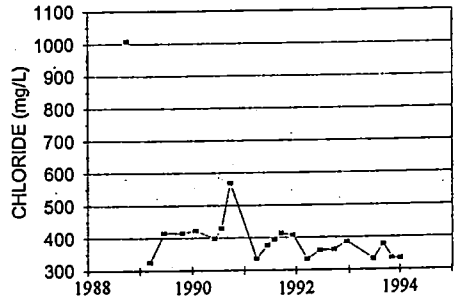
vasey engineering

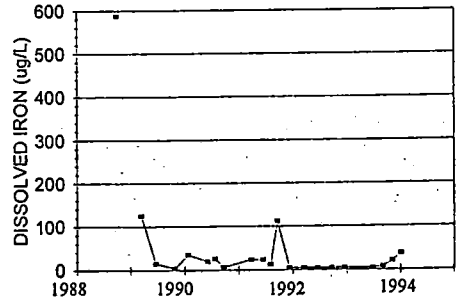


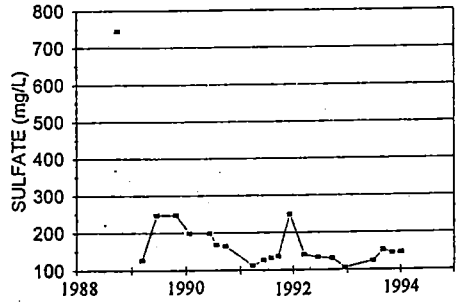


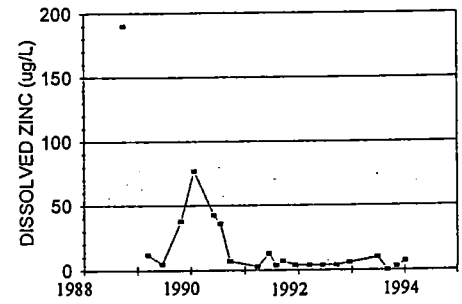












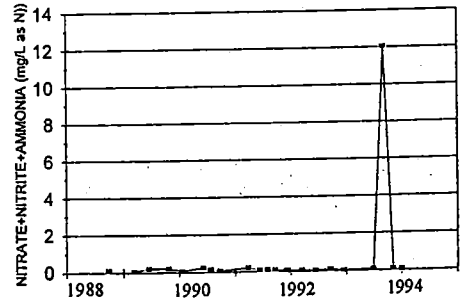


Figure 18

MW-11 Time Trends
RECOMP of Washington

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Table 1. Well completion details for Recomp of Washington.

	Date Constructed	Date Abandoned	Ground Surface Elevation (ft,MSL)	Top of Well Casing Elevation (ft,MSL)	Well Depth (ft)	Total Depth of Hole (ft)	Well Screen Interval (ft,MSL)	Typical Water Level (ft,MSL)
MW-1	6/16/87	*	43.40	44.65	55.0	79.5	-1.6 to -11.6	30.2
MW-2	6/17/87	1988	30.30	31.82	59.0	84.5	-16.2 to -26.2	--
MW-3	6/18/87	--	27.10	28.19	90.0	90.0	-52.9 to -62.9	28.2
MW-4	2/19/88	--	46.50	48.93	80.0	80.0	-23.5 to -33.5	33.3
MW-5	2/27/88	--	27.17	29.35	52.0	63.0	-14.83 to -24.83	24.9
MW-6	2/24/88	--	29.80	31.61	47.5	49.0	-7.7 to -17.7	26.1
MW-7	4/04/88	--	46.94	48.76	18.0	19.0	38.94 to 28.94	41.5
MW-8	4/06/88	--	24.59	27.11	52.0	62.0	-17.41 to -27.41	21.8
MW-9	4/06/88	--	25.24	27.49	19.0	22.0	16.24 to 6.24	20.2
MW-10	4/05/88	--	27.14	29.49	20.0	22.0	17.14 to 7.14	22.8
MW-11	4/05/88	--	29.46	32.63	10.0	10.0	24.46 to 19.46	27.1

* MW-1 has not been monitored since 1992. Parking lot construction over the well resulted in the installation of a water proof seal that invalidated water level measurements. Therefore all monitoring ceased.

Table 2. Ground Water Quality Criteria

GROUND WATER QUALITY CRITERIA
(WAC 173-200)

CONTAMINANT	CRITERIA
I. NON-CARCINOGENS	
A. PRIMARY CONTAMINANTS	
Barium*	1.0 mg/L
Cadmium*	0.01 mg/L
Chromium*	0.05 mg/L
Lead*	0.05 mg/L
Mercury*	0.002 mg/L
Selenium*	0.01 mg/L
Silver*	0.05 mg/L
Flouride	4.0 mg/L
Nitrate (as N)	10 mg/L
Endrin	0.0002 mg/L
Methoxychlor	0.1 mg/L
1,1,1-Trochloroethane	0.2 mg/L
2-4 D	0.1 mg/L
2,4,5-TP Silvex	0.01 mg/L
Total Coliform Bacteria	1.0 colony/100 ml
B. SECONDARY CONTAMINANTS	
Copper*	1.0 mg/L
Iron*	0.3 mg/L
Manganese*	0.05 mg/L
Zinc*	0.50 mg/L
Chloride	250.0 mg/L
Sulfate	250.0 mg/L
Total Dissolved Solids	500.0 mg/L
Foaming Agents	0.5 mg/L
pH	6.5-8.5
Corrosivity	non-corrosive
Color	15 color units
Odor	3 threshold odor units
II. RADIONUCLIDES	
Gross Alpha Particle Activity	15 picoCuries/liter (pCi/L)
Gross Beta Particle Activity	4 millirems/year (mrem/yr)
Radium 226 & 228	5 pCi/L
Radium -226	3 pCi/L

* metals are measured as total metals

III. CARCINOGENS (all expressed as ug/L)

Acrylamide	0.02
Acrylonityile	0.07
Aldrin	0.005
Aniline	14
Aramite	3
Arsenic*	0.05
Azobenzene	0.7
Benzene	1
Benzidine	0.0004
Benzo(a)pyrene	0.008
Bensotrichloride	0.007
Benzyl chloride	0.5
Bis(chloroethyl)ether	0.07
Bis(chloromethyl)ether	0.0004
Bis(2-ethylhexyl)phthalate	6
Bromodichloromethane	0.3
Bromoform	5
Carbazole	5
Carbon tetrachloride	0.3
Chlordane	0.06
Chlorodibromomethane	0.5
Chloroform	7
4 Chloro-2-mehtyl aniline	0.1
4 Chloro-2-methyl analine hydrochloride	0.2
o-Chloronitrobenzene	3
p-Chloronitrobenzene	5
Chlorthalonil	30
Diallate	1
DDT (include DDE and DDD)	0.3
1,2 Dibromoethane	0.001
1,4 Dichlorobenzene	4
3,3 Dichlorobenzidine	0.2
1,1 Dichloroethane	1
1,2 Dichloroethane (ethylene chloride)	0.5
1,2 Dichloropropane	0.6
1,3 Dichloropropene	0.2
Dichlorvos	0.3
Dieldrin	0.005
3,3' Dimethoxybenzidine	0.6
3,3' Dimehtylbenzidine	0.007
1,2 Dimethylhydrazine	60
2,4 Dinitrotoluene	0.1
2,6 Dinitrotoluene	0.1
1,4 Dioxane	0.0000005
1,2 Diphenylhydrazine	0.09
Direct Black 38	0.009
Direct Black 6	0.009
Direct Brown 95	0.009
Epichlorohydrin	8
Ethyl acrylate	2
Ethylene dibromide	0.001
Ethylene thiorea	2
Folpet	20
Furazolidone	0.02
Furium	0.002
Furmecyclox	3
Heptachlor	0.02
Heptachlor epoxide	0.009
Hexachlorobenzene	0.05
Hexachlorocycloexane (alpha)	0.001
Hexachlorocycohexane (technical)	0.05
Hexachlorodibenzo-p-dioxin, mix	0.00001
Hydrazine/Hydrazine sulfate	0.03
Lindane	0.06
2 Methoxy-5-nitroaniline	2
2 Mehthylaniline	0.2
2 Methylaniline Hydrochloride	0.5
4,4' Methylene bis(N,N'-dimethyl) aniline	2
Methylene Chloride (dichloromethane)	5
Mirex	0.05
Nitrofurazone	0.06
N-Nitrosodiethanolamine	0.03
N-Nitrosodiethylamine	0.0005
N-Nitrosodimethylamine	0.002
N-Nitrosodiphenylamine	17
N-Nitroso-di-n-propylamine	0.01
N-Nitrosopyrrolidine	0.04
N-Nitroso-di-n-butylamine	0.02
N-Nitroso-N-methylethylamine	0.004
PAH	0.01
PBBs	0.01
PCBs	0.01
o-Phenylenediamine	0.005
Propylene oxide	0.01
2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.0000006
Tetrachloroethylene (perchloroethlene)	0.8
, , , ,-Tetrachlorotoluene	0.004
2,4 Toluenediamine	0.002
o-Toluidine	0.2
Toxaphene	0.08
Trichloroethylene	3
2,4,6-Trichlorophenol	4
Trimethyl phosphate	2
Vinyl chloride	0.02

* metals are measured as total metals

Table 3. Water quality criteria for Class A fresh and marine waters for the State of Washington (WAC 173-201A). The freshwater criteria for metals and ammonia are calculated based upon the following average conditions for surface water at SW-3:

Hardness =	174	mg/L as CaCO3
pH =	7.1	
Temperature =	11	degrees C
Salmon present?:	no	

GENERAL CLASS A CRITERIA		FRESHWATER	MARINE WATER
Fecal coliform	(geometric mean)	<100 colonies/100 ml	<14 colonies/100 ml
	(90% of all samples)	<200 colonies/100 ml	<43 colonies/100 ml
Dissolved Oxygen		>8.0 mg/L	>6.0 mg/L, or not >0.2 below background
Temperature		<18.0 C, or not >0.3 above background	<16.0 C, or not >0.3 above background
pH		within 6.5 to 8.5, or within 0.5 of background	within 7.0 to 8.5, or within 0.2 of background
Turbidity		<5 NTU above background, or <10% if bkg >50 NTU	<5 NTU above background, or <10% if bkg >50 NTU

TOXIC SUBSTANCE CRITERIA		FRESHWATER		MARINE WATER	
		Acute	Chronic	Acute	Chronic
Aldrin/Dieldrin	ug/L	2.5	0.0019	0.71	0.0019
Ammonia (unionized as N)	mg/L	0.0583	0.0056	0.233	0.035
Arsenic (total)	ug/L	360	190	69	36
Cadmium (dissolved)	ug/L	6.34	1.52	37.2	8
Chlordane	ug/L	2.4	0.0043	0.09	0.004
Chloride	mg/L	860	230	-	-
Chlorine (total residual)	ug/L	19.0	11.0	13.0	7.5
Chloropyrifos	ug/L	0.083	0.041	0.011	0.0056
Chromium (hex)	ug/L	16.0	11.0	1100	50
Chromium (tri)	ug/L	2733	325.8	-	-
Copper (dissolved)	ug/L	25.75	16.36	2.5	-
Cyanide (dissociable)	ug/L	22.0	5.2	1.0	-
DDT (and metabolites)	ug/L	1.1	0.001	0.13	0.001
Dieldrin/Aldrin	ug/L	2.5	0.0019	0.71	0.0019
Endosulfan	ug/L	0.22	0.056	0.034	0.0087
Endrin	ug/L	0.18	0.0023	0.037	0.0023
Heptachlor	ug/L	0.52	0.0038	0.053	0.0036
Hexachlorocyclohexane	ug/L	2.0	0.08	0.16	-
Lead (dissolved)	ug/L	113.53	4.42	151.1	5.8
Mercury (total)	ug/L	2.4	0.012	2.1	0.025
Nickel (dissolved)	ug/L	2153	239	71.3	7.9
Parathion	ug/L	0.065	0.013	-	-
Pentachlorophenol	ug/L	10.0	6.3	13.0	7.9
Polychlorinated biphenyls	ug/L	2.0	0.014	10.0	0.03
Selenium (total)	ug/L	20	5	300	71
Silver (dissolved)	ug/L	5.59	-	1.2	-
Toxaphene	ug/L	0.73	0.0002	0.21	0.0002
Zinc (dissolved)	ug/L	166.7	151.0	84.6	76.6

Table 4. Summary of Recomp leachate pH and metal concentrations immediately before and after installation of the acid gas scrubber system. The scrubber introduces lime into the fly ash and increases the pH of quench water that discharges to the leachate lagoon.

Leachate Composition	TOTAL METALS (ug/L)						
	pH	**Cd**	**Cr**	**Cu**	**Pb**	**Ni**	**Zn**
20-Jun-89	7.5	136	7	14	410	< 10	7250
25-Oct-89	8.4	304	21	117	1130	20	7760
25-Jan-90	7.8	109	14	74	450	< 5	3390
07-Jun-90	7.2	471	28	104	127	15	11900
25-Jul-90	7.3	261	47	37	4160	99	14400
28-Sep-90	8.1	< 2	14	64	648	18	45
16-Jan-91	12.5	44	6	230	4020	21	4760
27-Mar-91	12.1	< 2	6	8	1620	16	2070
13-Jun-91	12.4	24	14	46	4660	16	1670
02-Aug-91	12.1	19	< 5	64	3230	20	1120
19-Sep-91	12.0	29	8	146	1310	21	1730
09-Dec-91	12.5	310	79	830	4080	8	1160
Prior to Jan-91							
Average *	7.7	214	22	68	1154	28	7458
Standard Deviation		152	13	36	1378	32	4823
After Jan-91							
Average *	12.3	71	20	221	3153	17	2085
Standard Deviation		107	27	282	1267	5	1241

* Geometric mean rather than average used for pH.

Table 5. Recomp Landfill summary statistics for selected indicator constituents in monitoring wells during the period 1990 through January 1994.

	MW-1	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	Leachate
Static Water Elevation (ft,MSL)											
Number	13	17	17	17	17	17	17	17	17	17	--
Maximum	32.92	28.18	34.89	26.13	26.76	44.51	23.60	23.84	25.82	28.22	--
Minimum	25.10	28.00	32.02	24.14	25.54	39.39	20.85	19.00	21.88	26.42	--
Mean	30.16	28.17	33.33	24.85	26.08	41.47	21.84	20.19	22.79	27.06	--
Standard Deviation	2.62	0.04	0.96	0.46	0.37	1.54	0.70	1.02	0.87	0.55	--
Median	31.14	28.18	32.92	24.85	26.10	41.23	21.87	19.98	22.49	26.81	--
pH											
Number	13	17	17	17	17	17	17	17	16	17	20
Maximum	9.0	8.5	9.1	8.6	12.6	8.0	8.6	7.3	7.3	7.7	12.8
Minimum	8.3	7.0	7.9	7.1	7.1	6.9	7.3	6.1	6.0	6.3	6.3
Mean	8.7	8.1	8.8	8.1	8.2	7.4	7.9	6.7	6.7	6.8	9.2
Standard Deviation	0.2	0.4	0.3	0.3	1.1	0.3	0.3	0.3	0.3	0.3	2.6
Median	8.8	8.2	8.8	8.1	7.9	7.4	7.8	6.7	6.7	6.8	7.9
Specific Conductance (uS/cm @ 25C)											
Number	13	17	17	17	17	17	17	17	17	17	20
Maximum	2,123	9,858	2,231	9,772	11,250	443	9,843	5,531	5,019	2,478	11,758
Minimum	186	6,487	1,459	6,700	7,836	283	6,542	3,500	3,806	1,810	1,810
Mean	1,407	8,234	1,664	8,107	9,083	347	8,135	5,080	4,500	2,126	3,827
Standard Deviation	461	769	185	719	797	42	772	446	334	176	2,867
Median	1,528	8,169	1,632	8,247	8,896	339	8,115	5,122	4,579	2,108	2,381
Alkalinity (mg/L as CaCO3)											
Number	13	13	13	13	13	13	13	13	13	13	16
Maximum	376.00	427.00	685.00	215.00	239.00	201.00	229.00	771.00	478.00	411.00	2,008.00
Minimum	351.00	128.00	511.00	10.00	160.00	126.00	170.00	356.00	373.00	325.00	39.00
Mean	364.38	157.77	566.69	163.38	179.54	146.54	181.77	568.62	397.08	370.92	555.44
Standard Deviation	8.0	78.2	40.9	45.9	21.8	19.0	14.1	127.1	26.3	19.9	470.5
Median	364	131	553	171	169	138	177	491	383	365	358
Chloride (mg/L)											
Number	13	17	17	17	17	17	17	17	17	17	20
Maximum	283	2958	210	2825	2752	14	2569	1583	1401	568	2,549
Minimum	221	460	170	2002	2245	5	2118	1025	1026	333	326
Mean	257	2491	189	2473	2524	8	2373	1325	1206	387	848
Standard Deviation	17.4	728.1	10.5	199.8	142.0	2.7	116.9	180.1	111.9	55.5	653.6
Median	262	2769	190	2531	2525	7	2393	1363	1211	379	486
Sulfate (mg/L)											
Number	13	17	17	17	17	17	17	17	17	17	20
Maximum	60.0	129.0	320.0	386.0	1571.0	95.0	686.0	585.0	311.0	249.0	746.0
Minimum	34.8	84.9	19.0	266.0	829.0	21.3	366.0	229.0	109.0	106.0	10.7
Mean	44.3	109.3	52.8	316.4	960.4	34.3	508.5	321.1	198.5	151.1	201.8
Standard Deviation	8.0	12.1	71.9	29.3	170.1	19.9	63.3	71.3	64.0	35.1	140.9
Median	41.0	107.0	23.2	315.0	912.0	25.5	509.0	305.0	198.0	141.0	162.5
Chemical Oxygen Demand (mg/L)											
Number	13	17	17	17	17	17	17	17	17	17	20
Maximum	17.0	21.9	46.1	34.7	46.0	406.0	22.8	44.3	58.4	29.0	194.0
Minimum	1.5	5.0	5.0	5.0	5.0	5.0	5.0	6.5	5.0	5.0	5.0
Mean	8.1	10.2	24.7	14.1	16.3	36.9	12.0	23.9	21.1	16.2	47.3
Standard Deviation	4.4	6.1	12.5	9.1	10.6	92.6	6.0	11.9	15.9	8.5	48.7
Median	6.6	7.1	21.6	13.0	14.6	13.1	11.6	23.9	19.0	17.8	26.8
Nitrite+Nitrate+Ammonia (mg/L as N)											
Number	13	17	17	17	17	17	17	17	17	17	20
Maximum	0.34	3.13	1.80	2.18	2.14	0.88	1.64	0.21	0.17	12.04	4.78
Minimum	0.03	1.12	0.02	1.06	0.57	0.02	0.58	0.03	0.02	0.03	0.02
Mean	0.19	1.92	0.85	1.54	1.22	0.22	1.03	0.08	0.05	0.81	0.93
Standard Deviation	0.09	0.39	0.44	0.32	0.50	0.26	0.30	0.05	0.03	2.81	1.28
Median	0.19	1.88	0.79	1.55	0.88	0.10	1.03	0.06	0.04	0.09	0.12
Total Organic Carbon (mg/L as C)											
Number	13	17	17	17	17	17	17	17	17	17	20
Maximum	29.97	13.08	66.59	23.85	45.90	136.00	22.90	91.60	52.95	60.20	759.00
Minimum	0.25	0.25	0.25	0.25	0.25	4.72	0.25	0.35	0.25	0.25	5.03
Mean	18.19	6.43	26.04	8.24	10.72	19.84	8.53	40.39	27.44	27.98	64.43
Standard Deviation	10.60	4.44	20.62	6.91	10.83	29.89	7.30	31.75	20.57	20.68	160.95
Median	22.20	6.60	21.30	6.73	7.40	9.92	5.10	21.00	24.80	17.80	18.40
Iron (ug/L)											
Number	13	17	17	17	17	17	17	17	17	17	20
Maximum	74.0	23.0	581.0	12.4	46.0	36.0	53.0	377.0	155.0	112.0	588.0
Minimum	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0
Mean	26.7	7.9	81.4	7.1	14.1	16.9	9.1	44.7	63.5	21.1	50.2
Standard Deviation	20.7	4.5	129.8	2.8	11.4	10.5	11.3	85.6	36.2	25.2	126.4
Median	32.0	6.0	41.0	6.0	11.0	16.6	5.0	15.0	58.8	13.0	9.5
Zinc (ug/L)											
Number	13	17	17	17	17	17	17	17	17	17	20
Maximum	111.00	21.00	16.00	18.00	39.00	19.00	9.00	68.00	72.00	77.00	770.00
Minimum	3.00	3.00	3.00	2.40	3.00	3.00	3.00	3.00	0.00	0.01	3.00
Mean	12.77	6.36	4.95	4.44	8.48	6.32	4.63	13.72	13.75	13.62	93.23
Standard Deviation	28.43	4.92	3.26	3.45	9.46	4.81	1.95	16.15	16.79	19.45	194.91
Median	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	8.00	6.00	12.50

Table 6. List of exceedances of drinking water and ground water quality criteria (WAC 173-200).

	Number of Ground Water Quality Exceedances										
	MW-1	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	Leachate
Number of Samples*	17,3,17,1	21,19,21,15	21,8,21,1	21,19,21,15	21,8,21,1	21,8,21,1	21,8,21,1	21,8,21,1	21,19,21,15	21,8,21,1	20,15,20,15
Primary Constituents											
Nitrate	–	–	–	–	–	–	–	–	–	–	–
Total Metals											
Barium	–	–	–	–	–	–	–	–	–	–	5
Cadmium	–	1	–	–	–	–	–	–	–	–	11
Chromium	–	–	–	–	–	–	–	–	3	–	2
Lead	–	–	–	–	–	–	–	–	–	–	8
Mercury	–	–	–	–	–	–	–	–	–	–	3
Selenium	–	–	–	–	–	–	–	–	–	–	4
Silver	–	–	–	–	–	–	–	–	–	–	2
Filtered Metals											
Barium	–	–	–	–	–	–	–	–	–	–	3
Cadmium	–	1	–	–	–	–	–	–	–	–	3
Chromium	–	–	–	–	–	–	–	–	–	–	1
Lead	–	–	–	–	–	–	–	–	–	–	8
Mercury	–	–	–	–	–	–	–	–	–	–	–
Selenium	–	–	–	–	–	–	–	–	–	–	4
Silver	–	–	–	–	–	–	–	–	–	–	–
Secondary Constituents											
Chloride	12	21	–	21	21	–	21	21	21	1	17
Sulfate	–	–	–	21	21	–	21	20	6	1	10
pH	16	2	17	2	–	–	–	4	4	2	13
Total Metals											
Copper	–	–	–	1	–	–	–	–	–	–	1
Iron	2	9	3	12	3	4	4	2	15	3	15
Manganese	1	12	1	17	4	4	4	4	15	4	16
Zinc	–	–	–	–	–	–	–	–	–	–	13
Filtered Metals											
Copper	–	–	–	–	–	–	–	–	–	–	–
Iron	–	–	2	–	1	–	1	–	1	1	4
Manganese	–	14	–	15	17	17	8	21	21	21	8
Zinc	–	–	–	–	–	–	–	–	–	–	8
Carcinogenic Constituents											
Methylene Chloride	–	1	–	2	–	–	–	–	1	–	2
Benzene	–	1	–	1	–	–	–	–	–	–	8
bis (2-Ethylhexyl) Phthalate	1	1	1	3	–	–	–	–	–	–	1

Notes:

* Number of samples (nonmetals, total metals, filtered metals, organic)

– Indicates no exceedances.

Only constituents that had at least one exceedances are listed.

The WAC 173-200 criteria apply to total, not filtered metals, however, filtered metals are also listed because thay were sampled more often.

Table 7. Detected organic compounds, at Recomp, showing number of times detected and the maximum concentration between 1988 and January 1994.

	Number Detected, Maximum Concentration detected (ug/L)										
	MW-1	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	Leachate
Volatile Organics											
Number of Samples	1	15	1	15	1	1	1	1	15	1	15
Methylene Chloride	–	–	–	2, 20	–	–	–	–	1, 19	–	2, 28
Acetone	–	–	–	–	–	–	–	–	–	–	3,150
Chloroform	–	–	–	1, 2.6	–	–	–	–	1, 5.6	–	7, 4.9
2-Butanone	–	–	–	–	–	–	–	–	–	–	10, 170
Benzene	–	–	–	1, 1.5	–	–	–	–	–	–	8, 60
Toluene	–	–	–	1, 5.2	–	–	–	–	2,1.1	–	7, 9.5
Total Xylenes	–	–	–	1, 2.3	–	–	–	–	–	–	3, 2.8
Ethylbenzene	–	–	–	–	–	–	–	–	–	–	5, 12.0
Styrene	–	–	–	–	–	–	–	–	–	–	4, 9.1
Chloromethane	–	–	–	–	–	–	–	–	–	–	2, 7.0
Carbon Disulfide	–	–	–	–	–	–	–	–	–	–	1, 5.3
1,1-Dichloroethane	–	–	–	–	–	–	–	–	1, 1.4	–	–
1,1,2-Trichloro-1,1,2-triflouroethane	–	–	–	–	–	–	–	–	–	–	–
Semivolatile Organics											
Number of Samples	1	5	1	6	1	1	1	1	6	1	15
Phenol	–	–	–	–	–	–	–	–	–	–	11, 400
2-Methyl Phenol	–	–	–	–	–	–	–	–	–	–	7,92
4-Methyl Phenol	–	–	–	–	–	–	–	–	–	–	10, 250
2,4-Dimethyl Phenol	–	–	–	–	–	–	–	–	–	–	6,37
Benzoic Acid	–	–	–	–	–	–	–	–	–	–	8, 760
Butylbenzylphthalate	–	–	–	–	–	–	–	–	–	–	1, 2.0
bis (2-Ethylhexyl) Phthalate	1, 10	2, 7.0	1, 11	4, 9.0	–	–	–	–	3, 4.0	–	6, 15
Naphthalene	–	–	–	–	–	–	–	–	–	–	5, 8.8
Diethylphthalate	–	–	–	–	–	–	–	–	–	–	4, 10
Acenaphthalene	–	–	–	–	–	–	–	–	–	–	4, 1.1
Phenanthrene	–	–	–	–	–	–	–	–	–	–	1, 2.5
Pesticides-Herbicides-PCBs*											
Number of Samples	1	1	1	1	1	1	1	1	1	1	10
Dinoseb	–	–	–	–	–	–	–	–	–	–	1, .25
2,4-D	–	–	–	–	–	–	–	–	–	–	1, 2.5

Notes:

* No pesticides were detected on any of the well samples analyzed.

Only detected compounds are listed.

– indicates none detected

Table 8. Summary of Recomp combined ash chemical characterstics during 1993. These statistics are based upon 16 composite samples.

	Average	Maximum	Minimum
TOC (%C, dry wt)	20.02%	34.80%	9.78%
Solids (%)	73.65%	92.20%	51.09%
Total Metals (mg/kg, dry wt)			
Arsenic	42.09	111.00	<75.0
Barium	626.06	2287.00	244.00
Cadmium	22.20	41.00	<14.0
Chromium	51.39	140.00	<28.0
Lead	3440.75	22016.00	385.00
Mercury	0.62	1.51	0.25
Selenium	86.25	222.00	<140
Silver	14.00	14.00	14.00
TCLP Metals (mg/L)			
Arsenic	<0.500	<0.500	<0.500
Barium	0.22	0.65	<0.100
Cadmium	0.33	0.54	<0.100
Chromium	<0.100	<0.100	<0.100
Lead	10.57	24.10	0.81
Mercury	0.0008	<0.0020	0.00050
Selenium	<1.00	<1.00	<1.00
Silver	0.05	0.05	0.05
Leachable Fraction (%)*			
Arsenic	--	--	--
Barium	1.21%	3.88%	0.28%
Cadmium	52.50%	110.57%	22.03%
Chromium	--	--	--
Lead	30.75%	178.62%	1.14%
Mercury	4.43%	10.85%	0.68%
Selenium	--	--	--
Silver	--	--	--

* Because TCLP is perfromed with 100g wet weight of ash per 2 L of leacahte, the leachable fraction is calculated as follows:

$$\frac{\text{(TCLP, mg/L) (20 L/kg) (100\%)}}{\text{(\% solids) (Total Metals, mg/kg}}$$

-- indicates leachable fraction could not be calculated due to numerous samples having undetectable amounts.
Fractions greater than 100% occur due to incomplete total metals extraction and laboratory and subsample variability

Table 9. Recomp Landfill summary statistics for selected surface water quality indicator constituents compiled from monitoring performed in 1989 through 1993.

STATION	SW-1	SW-2	SW-3	SW-4
pH				
Number	13	11	18	15
Maximum	8.31	8.29	8.93	8.88
Minimum	6.60	6.00	6.20	6.20
Mean	7.42	7.27	7.21	7.36
Standard Deviation	0.50	0.60	0.58	0.61
Dissolved Oxygen (mg/L)				
Number	10	9	16	12
Maximum	10.0	10.9	11.9	11.8
Minimum	5.1	2.3	2.6	1.7
Mean	7.5	6.4	6.6	6.0
Standard Deviation	1.6	2.8	2.6	3.1
Specific Conductance (uS/cm @ 25C)				
Number	13	11	18	15
Maximum	676	923	6166	3853
Minimum	250	275	367	363
Mean	485	634	2042	1659
Standard Deviation	118	219	1495	1055
Alkalinity (mg/L as CaC03)				
Number	10	7	16	2
Maximum	219	266	156	141
Minimum	42.1	67	8.35	76
Mean	145	162	104	109
Standard Deviation	55	64	46	46
Chloride (mg/L)				
Number	11	8	17	5
Maximum	74	146	2693	557
Minimum	30	72	48	236
Mean	46	106	674	396
Standard Deviation	12	26	745	143
Chemical Oxygen Demand (mg/L as O2)				
Number	10	8	15	4
Maximum	405.0	530.0	120.0	59.0
Minimum	5.0	5.0	5.0	5.8
Mean	76.3	91.6	31.8	32.2
Standard Deviation	117.7	178.0	29.0	22.5
Nitrate+Nitrite+Ammonia (mg/L)				
Number	11	3	17	4
Maximum	0.42	0.05	1.39	1.86
Minimum	0.02	0.02	0.02	0.42
Mean	0.09	0.04	0.58	0.93
Standard Deviation	0.12	0.01	0.43	0.65
Total Suspended Solids (mg/L)				
Number	10	9	14	2
Maximum	80.0	660.0	160.0	36.7
Minimum	6.6	1.5	1.8	19.0
Mean	33.0	90.4	22.9	27.9
Standard Deviation	27.2	215.5	41.9	12.5

A-1
MONITORING WELL DATA - INORGANIC

Recomp of Washington

Parameter (units)	Monitoring Well MW-1																	
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	04-Jan-94
Field Parameters																		
Static Water Elevation (ft,MSL)	28.50	31.80	31.00	28.40	31.46	31.59	31.01	29.95	32.92	31.37	30.91	28.00	28.70	31.53	31.22	25.65 A	25.53 A	-
Temperature (C)	13.6	11.6	15.4	13.0	9.9	12.8	10.0	12.6	11.5	11.8	12.6	12.1	10.7	11.2	12.2	13.0	11.7	-
Dissolved Oxygen (mg/L)	2.2	3.9	4.1	3.1	1.9	7.8	7.9	4.4	4.0	8.5	5.3	6.2	6.8	5.4	5.5	4.8	5.7	-
Redox Potential (mV)	-28	80	53	135	174	167	109	32		129	189	167	158	182	98	181	144	-
Specific Conductance (uS/cm @ 25C)	1368	1178	1591	1012	1524	1442	1654	1494	186	1591	1599	2123	1582	1548	1482	1544	1528	-
pH	8.6	8.8	8.8	8.9	8.9	8.8	8.8	8.8	8.7	8.7	8.9	8.6	9.0	8.8	8.4	8.3	8.8	-
Nonmetals																		
Alkalinity (mg/L as CaCO3)	381	380	393	378	359	376	373	374	366	364	354	361	356	373	351	360	370	-
Chloride (mg/L as Cl)	192	243	252	252	234	235	250	221	280	256	266	275	274	288	283	263	282	-
Sulfate (mg/L as SO4)	109.0	131.0	104.0	120.0	57.7	80.0	57.0	37.0	39.0	41.0	40.7	39.4	41.5	44.6	43.3	39.6	34.8	-
Nitrate+Nitrite (mg/l as N)	0.220	0.410	0.334	0.050	0.315	0.088	0.093	0.197	0.177	0.205	0.077	0.075	0.046	0.020	0.143	0.081	0.024	-
Ammonia (mg/L as N)	0.020	0.080	0.046	0.270	0.020	0.178	0.207	0.046	0.011	0.010 L	0.100	0.088	0.078	0.022	0.075	0.061	0.010 L	-
Chemical Oxygen Demand (mg/L)	12.9	16.8	11.1	8.4	5.0 L	11.6	1.5	13.7	6.6	8.8	5.0 L	5.0 L	17.0	5.0 L	7.0	13.9	5.0 L	-
Total Organic Carbon (mg/L as C)	3.1	70.7	-	2.2	1.9	2.6	13.8	11.1	29.6	27.7	29.1	30.0	22.2	21.0	24.1	23.2	0.3 L	-
Total Suspended Solids (mg/L)	-	146.7	170.0	15.0	42.2	14.2	-	174.0	20.0	92.0	18.0	11.0	25.0	13.0	12.0	12.0	9.0	-
Cyanide (mg/l)	-	-	-	-	-	0.01 L	-	-	-	-	-	-	-	-	-	-	-	-

Note: L denotes that the analyte was below the indicated detection limit.
- denotes that the constituent was not analyzed.
A denotes that the water level is suspect due to air escaping when well cap was opened. This pressure build-up is due to the tightness of the gasket combined with groundwater level recovery from previous purging.

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Monitoring Well MW-1

Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	04-Jan-94
Total Metals (ug/L)																		
Antimony	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	17	-	19	16	16.1	-	-	-	-	-	-	-	-	-	-	-	-
Barium	-	-	-	15	18	3.9 B	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	2 L	-	2 L	2 L	0.2 B	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	-	-	-	-	-	3440 B	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	9	-	11	12	3 L	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	12	-	9	9	9.9 B	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	6300	-	2350	3050	399	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	1 L	-	5 L	5 L	1.7 B	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	-	-	-	-	-	3820 B	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	-	16	-	50	66	24	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	0.2	-	0.1 L	0.1 L	0.2 L	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	10	-	10	10	10 L	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	-	-	-	5420	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	-	5 L	-	1 L	1 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-
Silver	-	3 L	-	3 L	3 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	-	-	-	-	-	331000	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	-	5 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	19	-	13	25	6.5 B	-	-	-	-	-	-	-	-	-	-	-	-
Filtered Metals (ug/L)																		
Antimony	1 L	1 L	-	-	-	-	70 L	70 L	9.9	10.1	4.4	5.5	7	9	8	3	4	-
Arsenic	13.6	12	16	-	-	-	10.8	12.6	15.3	17.3	15.4	12.7	17	19	18	18	22	-
Barium	-	-	11	16	55	33 B	58	4	3 L	7	3 L	3	4	3	5	4	5	-
Beryllium	1 L	1 L	-	-	-	-	1 L	1 L	1 L	1	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-
Cadium	2 L	2 L	2 L	2 L	2 L	0.1 L	2 L	2 L	2 L	2 L	4	2 L	2 L	2 L	2 L	2 L	2 L	-
Calcium	-	-	-	3750	3590	-	6700	4130	3670	14900	3450	3560	3280	3600	3720	3530	3620	-
Chromium	5 L	5 L	5 L	5 L	5 L	3 L	1.4 L	1.4 L	1.4 L	23	5 L	5 L	1 L	5 L	5 L	5 L	5 L	-
Chromium (hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2 L	2 L	2 L	2	2 L	9.1 B	5 L	5 L	5 L	39	5 L	5 L	2 L	8	6	2 L	2 L	-
Iron	5 L	10	5 L	12	9	5.6 B	41	39	74	36	39	32	8	6	5 L	8	45	-
Lead	2 L	1 L	1 L	5 L	5 L	1 L	0.8 L	1.1	0.6	0.5	1.4	0.9	1 L	1 L	1 L	1 L	1 L	-
Magnesium	-	-	-	-	3910	-	6130	3770	3900	3460	3330	3880	3530	3650	3740	3780	3560	-
Manganese	7	9	9	9	10	14.6 B	13	14	7	43	3	2 L	3	2	2	3	3	-
Mercury	0.1 L	0.2 L	0.1 L	-	-	0.2 I	0.2 L	0.21	0.5	0.35	0.53	0.62	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	-
Nickel	10 L	10	10 L	10 L	10 L	10 L	5 L	5 L	5 L	5 L	11	8	10 L	10 L	10 L	10 L	10 L	-
Potassium	-	-	-	7500	6900	2 L	7490	6490	192	7000	6680	8890	6800	7100	7200	8100	7500	-
Selenium	2 L	5 L	1 L	-	-	-	40 L	4.1	3 L	3 L	3 L	3 L	1 L	1 L	1 L	1 L	1 L	-
Silver	3 L	3 L	-	-	-	-	5 L	5 L	5 L	5 L	5 L	5 L	3 L	3 L	3 L	3 L	3 L	-
Sodium	-	350000	-	350000	333000	-	311000	368000	343000	304000	331000 L	362000	347000	342000	350000	358000	341000	-
Thallium	1 L	-	-	-	-	-	19 L	10 L	10 L	1 L	10 L	10 L	1 L	1 L	1 L	1 L	1 L	-
Zinc	23	4 L	5 L	4 L	4 L	-	3	3 L	4	111	11	4	4 L	4 L	4 L	4 L	7	-

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.
- denotes that the constituent was not analyzed.

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Monitoring Well MW-3

Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters																					
Static Water Elevation (ft.MSL)	28.86	27.64	27.34	28.00	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.19	28.19	28.19
Temperature (C)	12.2	11.0	13.4	12.5	8.6	14.3	10.9	13.1	12.5	13.0	13.0	12.9	11.0	7.9	12.9	12.8	11.1	11.5	15.4	11.2	11.2
Dissolved Oxygen (mg/L)	2.1	3.1	4.0	5.6	2.6	3.0	3.3	2.9	3.8	6.0	3.1	3.5	3.7	2.6	3.8	2.7	4.0	-	-	-	5.4
Redox Potential (mV)	62	89	147	200	151	22	131	96	-	44	194	125	135	171	104	190	128	-	-	-	-
Specific Conductance (uS/cm @ 25C)	9000	8326	7772	7118	7468	7824	8348	7561	7685	8044	6487	9858	8190	8910	7803	7823	8159	8970	8910	8930	8970
pH	8.0	8.6	8.5	6.3	8.4	7.8	8.3	8.3	8.3	8.1	8.4	8.2	8.5	8.2	7.9	7.0	8.4	8.1	7.2	8.1	7.9
Nonmetals																					
Alkalinity (mg/L as CaCO3)	102	120	141	137	130	131	165	134	131	427	133	137	128	137	135	130	133	-	-	-	-
Chloride (mg/L as Cl)	2513	2873	2868	2760	2877	2600	2860	2948	2815	2716	2958	2769	2794	2789	594	2636	460	2767	2808	2510	2640
Sulfate (mg/L as SO4)	166.0	149.0	164.0	122.0	126.0	129.0	126.0	89.0	111.0	102.0	107.0	104.0	106.0	103.0	115.0	84.9	105.0	101.0	109.0	116.0	124.0
Nitrate+Nitrite (mg/l as N)	0.040	2.560	0.852	0.020	0.086	0.010 L	0.072	0.037	0.129	0.283	0.036	1.640	0.020	0.039	0.086	0.076	0.293	1.110	0.073	0.165	0.070
Ammonia (mg/L as N)	1.400	0.250	0.671	1.950	1.550	1.830	3.060	1.600	1.780	1.600	1.820	0.010 L	1.760	1.870	1.790	2.010	1.640	0.010 L	2.120	2.070	1.850
Chemical Oxygen Demand (mg/L)	107.0	72.0	42.5	5.0 L	15.9	12.9	5.0 L	5.0 L	5.0 L	7.1	21.9	5.0 L	5.0 L	7.5	5.0 L	19.4	5.0 L	13.4	14.8	20.4	5.0 L
Total Organic Carbon (mg/L as C)	1.8	25.9	-	1.1	0.7	6.6	4.0	3.5	11.4	9.7	13.1	11.9	10.5	9.0	10.6	5.0	0.3 L	3.0	0.3 L	0.3 L	9.6
Total Suspended Solids (mg/L)	5000.0	25.0	206.0	17.0	16.7	10.2	1.8	2.4	13.0	18.0	14.0	2.5	16.0	6.5	11.0	6.2	11.0	-	-	-	-
Cyanide (mg/l)	-	-	-	-	-	0.01 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: L denotes that the analyte was below the indicated detection limit.
- denotes that the constituent was not analyzed.

Parameter (units)	Monitoring Well MW-3																			
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Total Metals (ug/L)																					
Antimony	-	1 L	-	-	-	-	70 L	70 L	3.5	2.2	3 L	5	1 L	1 L	5 L	1 L	1 L	-	-	-	-
Arsenic	-	22	-	22	15	15.2	15.8	50 L	12.9	12.9	14	14.9	21	20	21	19	19	-	-	-	-
Barium	-	-	-	67	73	65.1 B	68	58	67	67	59	65	66	68	67	69	72	-	-	-	-
Beryllium	-	1 L	-	-	-	-	1 L	2	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Cadmium	-	2 L	-	2 L	2 L	0.1 L	2 L	2 L	3	2 L	24	8	2 L	2 L	2 L	2 L	2 L	-	-	-	-
Calcium	-	-	-	-	-	53400	-	-	-	-	-	-	-	-	-	-	-	60300	53600	56000	53600
Chromium	-	5 L	-	5 L	5	3 L	5.7	1.6	4	10 L	5 L	5 L	2 L	5 L	5 L	13	8	-	-	-	-
Chromium (Hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	36	-	8	4	10.4 B	16	5 L	5 L	9	93	17	3	3	2 L	2 L	2 L	-	-	-	-
Iron	-	21300	-	542	1490	139 E	689	310	72	370	228	241	406	281	245	398	606	-	-	-	-
Lead	-	6	-	10 L	10 L	1.2 B	6.7	1.9	4.3	4.5	2	6.1	2	2	5 L	3	8	-	-	-	-
Magnesium	-	-	-	-	-	61000	-	-	66200	61600	58200	72600	60900	62000	61700	63500	62400	62800	55100	55000	73100
Manganese	-	448	-	71	90	77	85	78	73	65	71	75	71	73	70	78	76	-	-	-	-
Mercury	-	0.2 L	-	0.1	0.1 L	0.2 L	0.2 L	0.24 L	0.39 L	0.2 L	0.45	0.29	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	-	-	-	-
Nickel	-	30	-	10	10 L	10 L	112	5	5 L	5 L	5 L	13	10 L	10 L	10 L	10	10 L	-	-	-	-
Potassium	-	-	-	-	-	31700	-	-	-	-	-	-	-	-	-	-	-	27400	24600	30500	30900
Selenium	-	-	-	5 L	5 L	2 L	40 L	4 L	3 L	30 L	3	3 L	1 L	5 L	5 L	1 L	1 L	-	-	-	-
Silver	-	-	-	3 L	3 L	2 L	5 L	5 L	5 L	5 L	25	8	3 L	3 L	3 L	3 L	3 L	-	-	-	-
Sodium	-	-	-	-	-	16700	-	-	-	-	-	-	-	-	-	-	-	1850000	1495000	1690000	1780000
Thallium	-	-	-	-	-	-	19 L	10 L	1 L	1 L	10 L	10 L	1 L	1 L	5 L	1 L	1 L	-	-	-	-
Zinc	-	84	-	-	23	10 B	28	3	11	5	18	49	14	15	11	8	24	-	-	-	-
Filtered Metals (ug/L)																					
Antimony	1.6	1 L	-	-	-	-	70 L	70 L	24.9	4.2	13	4	6	7	8	3	3	-	-	-	-
Arsenic	20 L	16	16		-	-	11.7	16.9	17.4	16.8	18.1	13.7	21	23	19	22	5	-	-	-	-
Barium	-	-	68	96	77	76 B	86	60	60	72	57	66	63	65	67	69	63	-	-	-	-
Beryllium	1 L	1 L	-	-	-	-	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Cadmium	2 L	2 L	2 L	2 L	2 L	0.1 L	2 L	2 L	2	2 L	2	10	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L
Calcium	-	-	-	57800	58700	-	62000	54500	56000	58600	53500	59400	53100	56600	57900	59000	56900	-	-	-	-
Chromium	5 L	5 L	5 L	5 L	5 L	3 L	1.4 L	1.4 L	1.4 L	10 L	5 L	5 L	1 L	5 L	5 L	5 L	5 L	-	-	-	-
Chromium (hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2 L	2 L	2 L	2 L	2 L	3 B	5 L	5 L	5 L	5	37	5 L	4	6	6	2 L	2 L	-	-	-	-
Iron	5 L	5 L	5 L	5 L	5 L	13.7 B	11	5	9	5	6	23	5 L	5 L	5 L	5 L	5 L	9	7	6	9
Lead	2 L	2 L	2 L	10 L	10 L	1 L	0.8 L	0.8 L	0.5 L	0.7	0.8 L	0.8 L	1 L	1 L	2 L	1 L	1 L	1 L	1 L	1 L	1 L
Magnesium	-	-	-	61700	5880		64500	68800	64900	58500	62000	68100	59600	61200	62800	63800	61000	-	-	-	-
Manganese	36	46 L	39 L	70	62	65.2 B	67	73	71	68	61	71	62	66	67	72	63	-	-	-	-
Mercury	0.1 L	0.2	0.1 L	0.1 L	-	0.2 L	0.2 L	0.2 L	0.33	0.48	0.34	0.42	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.33	0.3	0.17	0.14
Nickel	10 L	10 L	10 L	10 L	10 L	10 L	5 L	5 L	5 L	5 L	14	5 L	10 L	10 L	10 L	10 L	10 L	-	-	-	-
Potassium	-	-	-	33800	32900	-	39900	33800	33300	29100	26500	36100	33800	33900	34200	36500	33700	-	-	-	-
Selenium	2 L	1 L	1 L	-	-	-	40 L	4 L	3.8	3 L	3 L	3 L	1 L	1 L	5 L	1 L	5 L	-	-	-	-
Silver	3 L	3 L	-	-	-	-	5 L	5 L	5 L	5 L	7	5 L	3 L	3 L	3 L	3 L	3 L	-	-	-	-
Sodium	-	-	-	1560000	1640000	-	1420000	2590000	1620000	1528000	1580000	1594000	1640000	1610000	1650000	1660000	1630000	-	-	-	-
Thallium	5 L	1 L	-	-	-	-		10 L	10 L	10 L	10 L	10 L	1 L	1 L	5 L	1 L	1 L	-	-	-	-
Zinc	27	5	25 L	20 L	4 L	3.1 B	6	3 L	6	16	9	21	4 L	4 L	4 L	4 L	4	10	3 L	3 L	4

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.
- denotes that the constituent was not analyzed.

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Monitoring Well MW-4

Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters																					
Static Water Elevation (ft.MSL)	31.40	31.84	33.98	31.86	33.23	34.27	33.29	32.53	35.23	33.92	32.78	32.97	34.26	34.41	33.08	34.44	33.38	34.44	33.38	32.24	32.02
Temperature (C)	13.9	8.3	12.2	12.0	8.7	10.6	9.3	12.2	10.8	11.2	10.5	10.2	8.5	9.9	10.5	11.2	8.6	11.6	13.0	9.0	9.6
Dissolved Oxygen (mg/L)	1.4	6.6	4.2	4.5	6.3	4.2	9.9	5.6	7.9	5.7	9.6	7.4	7.5	7.7	6.9	7.0	8.7	6.6	-	-	8
Redox Potential (mV)	122	81	165	90	203	110	139	79	-	102	124	159	129	141	130	125	134	-	-	-	-
Specific Conductance (uS/cm @ 25C)	1548	1454	1549	1467	1459	1529	1714	1467	1948	1630	1632	2231	1650	1581	1535	1467	1616	1696	1726	1694	1721
pH	8.4	9.1	9.0	9.2	9.1	7.9	9.0	8.8	8.9	8.7	8.9	8.6	9.0	8.8	8.5	8.3	8.8	9.0	8.8	8.9	9.0
Nonmetals																					
Alkalinity (mg/L as CaCO3)	575	529	606	851	543	558	685	577	578	525	554	564	549	604	511	553	566	-	-	-	-
Chloride (mg/L as Cl)	168	168	170	193	180	170	182	183	210	176	190	187	194	199	202	193	198	193	195	174	182
Sulfate (mg/L as SO4)	114.0	97.0	137.0	103.0	67.2	69.0	124.0	27.0	22.0	33.0	23.1	32.1	34.7	19.0	22.0	19.1	22.2	23.2	19.8	20.1	14.4
Nitrate+Nitrite (mg/l as N)	0.010 L	0.490	0.082	0.030	0.090	0.119	0.132	0.535	0.774	0.782	0.970	0.010 L	0.915	0.939	1.620	1.780	1.130	0.672	0.261	1.000	0.350
Ammonia (mg/L as N)	0.390	0.010 L	0.302	0.410	0.262	0.337	0.298	0.238	0.019	0.010 L	0.166	0.010 L	0.089	0.114	0.047	0.018	0.010 L	0.014	0.144	0.018	0.112
Chemical Oxygen Demand (mg/L)	37.7	34.5	43.4	116.0	21.6	7.3	37.3	18.6	39.3	19.7	35.7	24.0	29.0	44.0	20.0	17.8	13.0	46.1	8.8	33.2	18.8
Total Organic Carbon (mg/L as C)	9.0	112.0	-	1.2	4.9	6.6	23.7	21.3	53.4	47.4	66.6	50.7	43.1	46.1	18.1	32.4	4.3	8.7	8.0	7.2	6.5
Total Suspended Solids (mg/L)	-	37.9	1220.0	10600.0	596.0	37.0	-	222.0	945.0	111.0	603.0	1128.0	390.0	3383.0	482.0	293.0	363.0	-	-	-	-
Total Dissolved Solids (mg/L)	1290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (mg/l)	-	-	-	-	-	0.044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: L denotes that the analyte was below the indicated detection limit.
- denotes that the constituent was not analyzed.

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Monitoring Well MW-4

Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Total Metals (ug/L)																		-	-	-	-
Antimony	-	2.9	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	32	-	34	30	36.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	-	-	-	388	64	10.7 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	-	1 L	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	2 L	-	2 L	2 L	0.3 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	-	-	-	-		3150 B	-	-	-	-	-	-	-	-	-	-	-	146000	4040	8500	13.4
Chromium	-	7	-	115	12	3 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Hexavalent)	-	-	-	-		10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	27	-	148	25	16.9 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	1820	-	76100	7370	246 E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	14	-	97	35	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	-	-	-	-		3470 B	-	-	-	-	-	-	-	-	-	-	-	76500	4350	5300	12.4
Manganese	-	72	-	1640	174	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	0.2 L	-	0.2 L	0.1 L	0.2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	20	-	13	20	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	-	-		4320 B	-	-	-	-	-	-	-	-	-	-	-	18100	6300	7050	8.98
Selenium	-	2 L	-	5 L	5 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	-	3 L	-	3 L	3 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	-	-	-	-	-	350000	-	-	-	-	-	-	-	-	-	-	-	398000	316000	331000	371
Thallium	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	33	-	-	48	11.7 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Filtered Metals (ug/L)																					
Antimony	1 L	3.4	-	-	-	-	70 L	70 L	12.6	7.6	9.8	9.8	10	11	11	6	6	-	-	-	-
Arsenic	13.6	24	36	-	-	-	23.1	29.6	37.7	32.4	25	18.9	33	33	31	34	35	-	-	-	-
Barium	-	-	13	148	65	47 B	46	11	4	7	3 L	10	10	98	10	10	11	-	-	-	-
Beryllium	1 L	1 L	-				1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Cadmium	2 L	2 L	2 L	2 L	2 L	0.1 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L
Calcium	-	-	-	4730	7300	-	3900	2770	2760	4140	2360	2600	2250	2590	2500	2450	2400	-	-	-	-
Chromium	5 L	5 L	5 L	5 L	5 L	3 L	1.4 L	1.4 L	1.4 L	10 L	5 L	5 L	1 L	5 L	5 L	5 L	5 L	-	-	-	-
Chromium (hexavalent)	-	-	-	-	-	10 L		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2 L	10	6	7	10	17.6 B	7	5 L	10	23	8	9	18	18	17	17	10	-	-	-	-
Iron	5 L	17	8	1050	99	4 L	55	76	35	36	65	154	49	39	61	41	36	581	7	38	58
Lead	2 L	2 L	1 L	5 L	5 L	1 L	0.8 L	1	2.6	1.9	3.3	5.1	1	1 L	1	1 L	2	1 L	1.1	1 L	1 L
Magnesium	-	-	-	3850	3910	-	3550	2990	3300	2970	2910	3390	2840	3040	2990	3000	2940	-	-	-	-
Manganese	7 L	32	20	38	32	22.8	28	26	21	11	14	15	18	20	15	17	19	-	-	-	-
Mercury	0.1 L	0.2 L	0.1 L	0.2		0.2 L	0.2 L	0.2 L	0.36	0.28	0.32	0.31	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.85	0.11	0.2	0.5
Nickel	10 L	10 L	10 L	10 L	10 L	10 L	5 L	7	5 L	7	17	13	10 L	10 L	10 L	10 L	10 L	-	-	-	-
Potassium	-	-	-	9300	6700	-	8060	6350	7150	6680	5690	8050	6600	7500	7200	7400	7300	-	-	-	-
Selenium	2 L	1 L	1 L	-	-	-	40 L	4 L	3 L	3 L	3 L	3 L	1	1 L	1 L	1 L	1 L	-	-	-	-
Silver	3 L	3 L	-	-	-	-	5 L	5 L	5 L	5 L	5 L	5 L	3 L	3 L	3 L	3 L	3 L	-	-	-	-
Sodium	-	-	-	377000	355000	-	368000	355000	368000	363000	354000	378000	379000	402000	384000	392000	375000	-	-	-	-
Thallium	1 L	-	-	-	-	-	19 L	10 L	10 L	1 L	10 L	10 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Zinc	23	6	5 L	6	4	5.1 B	7	3 L	3 L	16	3 L	3	4 L	4 L	4 L	4 L	4 L	10	3 L	3 L	3 L

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.
- denotes that the constituent was not analyzed.

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Parameter (units)	Monitoring Well MW-5																			
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters																					
Static Water Elevation (ft.MSL)	21.12	22.63	22.1	24.92	25.40	26.16	25.25	24.49	25.14	24.90	24.35	24.31	24.95	25.12	24.72	24.35	24.91	25.00	24.45	24.14	24.81
Stream Discharge (CFS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (C)	14.1	10.1	13.9	13.0	8.6	14.4	10.5	12.5	12.50	13	12.3	12.40	10.80	9.4	12.6	12.9	10.1	13.2	15.2	12.7	10.8
Dissolved Oxygen (mg/L)	1.8	4.2	5.4	6.2	5.7	4.2	5.6	4.9	5.8	7.90	6.8	5.5	5.8	5.6	5.9	5.7	4.25	-	5	-	0.5
Redox Potential (mV)	50	93	136	205	169	120	168	113		136.0	176.00	126.0	138.0	158	132	173	140	-	-	-	-
Specific Conductance (uS/cm @ 25C)	6163	8247	7558	7135	7365	7399	8298	7377	6700	8433.0	8054.0	9772	7684	8262	7600	7673	8247.0	8860	8710	8770	8620
pH	7.8	8.5	7.0	6.3	8.5	8.1	8.4	8.3	8.2	7.1	8.3	8.04	8.3	8.2	7.8	7.9	8.04	8.6	7.7	7.8	7.9
Nonmetals																					
Alkalinity (mg/L as CaCO3)	174	187	184	193	182	178	215	167	176	171	172	10 L	171	172	168	168	174	-	-	-	-
Chloride (mg/L as Cl)	1861	2430	2574	2530	2554	2380	2540	2591	2502	2493	2561	2825	2531	2552	2094	2342	2002	2684	2683	2326	2376
Sulfate (mg/L as SO4)	512.0	411.0	449.0	369.0	339.0	386.0	315.0	310.0	291.0	303.0	315.0	299.0	365.0	338.0	323.0	283.0	266.0	293.0	294.0	336.0	320.0
Nitrate+Nitrite (mg/l as N)	0.460	2.450	0.293	0.470	0.770	0.945	0.653	1.015	1.950	1.860	1.220	0.805	1.050	1.050	0.814	1.160	1.240	1.870	0.632	1.370	0.821
Ammonia (mg/L as N)	2.160	0.010 L	1.260	1.470	0.852	0.863	0.897	0.563	0.029	0.035	0.576	0.691	0.097	0.312	0.293	0.044	0.010 L	0.010 L	1.550	0.029	0.240
Chemical Oxygen Demand (mg/L)	110.0	75.0	16.5	7.5	14.7	12.0	13.7	5.0 L	6.3	19.7	29.3	5.0 L	13.0	18.0	19.5	7.9	5.0 L	34.7	5000.0 L	27.1	5.0 L
Total Organic Carbon (mg/L as C)	7.5	40.5	-	2.8	2.7	3.1	6.4	6.7	17.7	15.9	23.9	14.6	14.6	8.1	11.3	9.2	0.3 L	5.0	250.0 L	0.3 L	0.3 L
Total Suspended Solids (mg/L)	-	46.3	15.0	223.0	472.0	24.3	92.5	82.0	71.0	88.0	174.0	35.0	124.0	240.0	40.0	26.0	59.0	-	-	-	-
Total Dissolved Solids (mg/L)	3781.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (mg/l)	-	-	-	-	-	0.011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Coliform (No./100ml)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: L denotes that the analyte was below the indicated detection limit.
- denotes that the constituent was not analyzed.

Monitoring Well MW-5

Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	16-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Total Metals (ug/L)																					
Antimony	-	1 L	-	-	-	-	70 L	70 L	2.9	2.5	3.5	4.1	5 L	1 L	5 L	1 L	1 L	-	-	-	-
Arsenic	-	11	-	13	17	1 L	5 L	6.2	6.9	6.5	9.7	6.1	12	12	18	13	12	-	-	-	-
Barium	-	-	-	140	238	129 B	125	94	99	111	97	107	122	116	106	104	101	-	-	-	-
Beryllium	-	1 L	-	-	-	-	1	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Cadmium	-	2 L	-	2 L	2 L	0.2 B	2 L	2 L	2	2 L	15	5	2 L	2 L	2 L	2 L	2 L	-	-	-	-
Calcium	-	-	-	-	-	53500	-	-	-	-	-	-	-	-	-	-	-	23000	50500	46400	54300
Chromium	-	5 L	-	5 L	46	3 L	7.6	1.7	4.3	10 L	5 L	5 L	27	21	12	14	23	-	-	-	-
Chromium (Hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	5	-	5	35	12.3 B	18	5 L	7	5 L	75	13	9	7	11	3	4	-	-	-	-
Iron	-	1010	-	956	23300	1470 E	2940	255	588	872	703	402	3790	3020	1080	991	1300	-	-	-	-
Lead	-	10	-	10 L	39	3.9	4.9	1.5	3	6.6	5.3	2.7	5	3	5 L	2	7	-	-	-	-
Magnesium	-	-	-	-	-	72900	-	-	73300	68300	58600	77400	69500	70100	69600	70500	69500	31000	61800	52900	75700
Manganese	-	93	-	81	607	185	151	85	82	89	83	70	160	151	84	70	99	-	-	-	-
Mercury	-	0.2 L	-	0.1 L	0.1 L	0.2 L	0.2 L	0.24	0.68	0.26	0.73	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	-	-	-	-
Nickel	-	-	-	10	50	10 L	25	13	13	5 L	12	18	10 L	10 L	10 L	20	20	-	-	-	-
Potassium	-	-	-	-	-	30000	-	-	-	-	-	-	-	-	-	-	-	12600	23500	27200	29000
Selenium	-	2 L	-	1 L	5 L	2 L	40 L	4 L	3 L	3 L	3.7	3 L	5 L	5 L	5 L	1 L	5 L	-	-	-	-
Silver	-	3 L	-	3 L	3 L	2 L	5 L	5 L	5 L	11	7	7	3 L	3 L	3 L	3 L	3 L	-	-	-	-
Sodium	-	-	-	-	-	1600000	-	-	-	-	-	-	-	-	-	-	-	319000	1215000	1440000	1570000
Thallium	-	1 L	-	-	-	-	19 L	10 L	1 L	10 L	10 L	10 L	1 L	1 L	5 L	1 L	1 L	-	-	-	-
Zinc	-	7	-	-	106	16.4 B	191	13	6	8	33	29	29	19	13	10	13	-	-	-	-
Filtered Metals (ug/L)																					
Antimony	1.8	1 L	-	-	-	-	70 L	70 L	11.7	8.3	12	11.9	6	10	10 L	4	2	-	-	-	-
Arsenic	15.5	12	15	-	-	-	9.6	9.5	9.6	10.1	10.2	6.3	15	14	14	13	16	-	-	-	-
Barium	-	-	142	140	125	140 B	121	105	113	100	97	103	95	983	101	105	92	-	-	-	-
Beryllium	1 L	1 L	-	-	-	-	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Cadmium	2 L	2 L	2 L	2 L	2 L	0.1 L	2 L	2 L	2	2 L	2	6	2 L	2 L	2 L	2 L	2 L	3	2 L	2 L	2 L
Calcium	-	-	-	53100	55800	-	62800	53200	54700 L	56000	47500	52000	46600	51200	52700	54200	50300	-	-	-	-
Chromium	5 L	5 L	5 L	5 L	5 L	3.5 B	1.4 L	1.4 L	1.4 L	10 L	5 L	5 L	1 L	5 L	5 L	5 L	5 L	-	-	-	-
Chromium (hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2 L	4	4	4	3	7.3 B	5	5 L	5 L	9	25	5 L	5	11	7	2 L	4	-	-	-	-
Iron	5 L	14	5 L	5 L	5 L	12.4 B	12	5 L	7	5 L	7	6	5 L	5 L	5 L	5 L	11	12	5 L	6	7
Lead	2 L	2 L	2 L	10 L	10 L	1 L	0.8 L	0.8 L	0.5 L	0.7	1.2	0.8 L	1 L	1 L	2 L	1 L	1 L	1 L	1 L	1 L	1 L
Magnesium	-	-	-	69100	69300	-	74800	72400	78200	69100	65900	74400	64200	68200	70100	71500	67300	-	-	-	-
Manganese	39	76	78	56	71	58	65	68	71	62	63	46	63	62	59	61	54	-	-	-	-
Mercury	0.1 L	0.2 L	0.2 L	-	-	0.2 L	0.2 L	0.2 L	0.6	0.35	0.37	0.38	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.33	0.23	0.36	0.17
Nickel	10 L	10 L	10 L	10 L	10 L	10 L	7	5	5 L	5 L	15	13	10 L	10 L	10 L	10 L	10 L	-	-	-	-
Potassium	-	-	-	33000	31800	-	37000	29100	32000	31300	25400	33000	32100	33500	35300	37100	34300	-	-	-	-
Selenium	2 L	2 L	1 L	-	-	-	40 L	4 L	4.5	3 L	3 L	3 L	2 L	1 L	5 L	1	5 L	-	-	-	-
Silver	3 L	3 L	-	-	-	-	5 L	5 L	5 L	10	5	9	3 L	3 L	3 L	3 L	3 L	-	-	-	-
Sodium	-	-	-	1510000	1560000	-	1400000	2160000	417000	1486000	1730000	1725000	1570000	1600000	1640000	1690000	1600000	-	-	-	-
Thallium	5 L	2 L	-	-	-	-	19 L	10 L	1 L	10 L	10 L	10 L	1 L	1 L	5 L	1 L	1 L	-	-	-	-
Zinc	18	4 L	25 L	20 L	4 L	2.4 B	3 L	3 L	4	3 L	3	18	4 L	4 L	4 L	4 L	4 L	5	3 L	3 L	4

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.
- denotes that the constituent was not analyzed.

Parameter (units)	Monitoring Well MW-6																			
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters																					
Static Water Elevation (ft MSL)	24.42	25.96	25.69	25.14	26.33	26.78	26.39	25.94	26.68	26.64	26.16	25.77	25.96	26.65	26.45	25.87	26.03	26.76	26.08	25.62	25.75
Stream Discharge (CFS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (C)	11.8	9.3	11.2	11.1	8.4	10.4	9.3	12.7	12.0	10.6	10.9	10.90	8.7	10.3	11.1	13.0	8.9	11.6	12.6	10.2	9.7
Dissolved Oxygen (mg/L)	2.3	3.2	3.2	3.5	6.2	5.0	7.6	5.8	4.9	4.8	5.7	6.6	5.8	6.1	6.7	6.0	6.9	-	-	-	12.1
Redox Potential (mV)	13	133	161	201	262	176	154	96		138	214	172.0	94	148	199	168	56	-	-	-	-
Specific Conductance (uS/cm @ 25C)	8156	8713	8597	8002	8615	8395	9427	7836	8248	9449	8896	11250	9003	8690	8849	8173	8664	9720	9720	9750	9720
pH	7.2	8.0	7.8	7.8	7.9	7.8	8.0	8.1	7.6	7.1	7.9	7.9	8.1	8.3	7.6	7.5	7.8	8.2	12.6	8.2	8.01
Nonmetals																					
Alkalinity (mg/L as CaCO3)	158	164	166	170	169	177	215	172	171	160	168	170	166	168	190	169	239	-	-	-	-
Chloride (mg/L as Cl)	2055	2539	2623	2580	2601	2410	2460	2752	2622	2512	2552	2481	2653	2538	2266	2469	2245	2675	2751	2395	2525
Sulfate (mg/L as SO4)	884.0	1046.0	916.0	1034.0	978.0	1130.0	894.0	899.0	865.0	912.0	838.0	829.0	1571.0	949.0	871.0	834.0	860.0	973.0	992.0	1003.0	928
Nitrate+Nitrite (mg/l as N)	0.140	2.610	0.271	0.660	1.095	0.445	1.650	1.460	1.390	1.180	1.210	1.400	0.696	0.527	0.675	0.776	0.867	0.558	0.702	0.822	0.562
Ammonia (mg/L as N)	1.030	0.010 L	1.211	1.080	0.425	1.190	0.489	0.370	0.010 L	0.013	0.411	0.260	0.086	0.310	0.033	0.049	0.010 L	0.010 L	0.110	0.018	0.258
Chemical Oxygen Demand (mg/L)	107.0	50.0	14.3	13.0	19.6	14.6	5.0 L	5.9	6.6	17.0	8.1	10.3	28.0	21.0	14.5	20.6	46.0	5.0 L	24.3	26.2	5 L
Total Organic Carbon (mg/L as C)	6.6	35.8	-	3.3	3.1	3.2	6.0	7.4	17.6	14.2	20.5	17.4	45.9	13.3	12.1	11.3	0.3 L	4.5	0.25 L	0.25 L	5.08
Total Suspended Solids (mg/L)	-	104.9	8.0	214.0	220.0	867.0	-	80.0	429.0	119.0	111.0	205.0	115.0	132.0	127.0	46.0	566.0	-	-	-	-
Total Dissolved Solids (mg/L)	4830.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (mg/l)	-	-	-	-	-	0.029	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Coliform (No./100ml)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: L denotes that the analyte was below the indicated detection limit.
- denotes that the constituent was not analyzed.

Monitoring Well MW-6

Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	
Total Metals (ug/L)																					
Antimony	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	10 L	-	8	8	2.6 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	-	-	-	86	125	87 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	2 L	-	2 L	2 L	0.2 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	-	-	-	-	-	66800	-	-	-	-	-	-	-	-	-	-	-	72900	60000	58500	69000
Chromium	-	28	-	5 L	23	4.4 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	19	-	4	14	20 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	9220	-	244	7400	3700 E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	4	-	10 L	11	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	-	-	-	-	-	86800	-	-	-	-	-	-	-	-	-	-	-	92700	76200	67800	94200
Manganese	-	810	-	435	460	538	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	0.2	-	0.1 L	0.1 L	0.2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	30	-	10 L	20	18.1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	-	-	-	34300 B	-	-	-	-	-	-	-	-	-	-	-	30000	24700	30800	91700
Selenium	-	2	-	1 L	5 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	-	3	-	3 L	3 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	-	-	-	-	-	1790000	-	-	-	-	-	-	-	-	-	-	-	909000	1575000	1680000	180000
Thallium	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	33	-	-	47	25.7 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Filtered Metals (ug/L)																					
Antimony	1.2	1 L	-	-	-	-	70 L	70 L	20.6	9.8	8.7	8.9	7	8	8	4	3	-	-	-	-
Arsenic	10 L	10 L	3	-	-	-	5 L	5 L	4.3	4.8	5.6	2.1	4	5	5 L	6	8	-	-	-	-
Barium	-	-	112	108	90	102 B	96	60	51	56	49	58	52	54	54	50	48	-	-	-	-
Beryllium	1 L	1 L	-	-	-	-	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Cadmium	2 L	2 L	2 L	2 L	4	0.2 B	2 L	2 L	2	3	2	6	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L
Calcium	-	-	-	57900	63500	-	65500	60000	65900	59200	57800	67900	57700	62600	64500	62200	61100	-	-	-	-
Chromium	5 L	5 L	5 L	5 L	5 L	3 L	1.4 L	1.4 L	1.4 L	10 L	5 L	5 L	1 L	5 L	5 L	5 L	5 L	-	-	-	-
Chromium (hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2 L	7	3	2	3	5.8 B	5 L	5 L	5 L	10	24	5 L	7	10	5	5	2	-	-	-	-
Iron	5 L	469	5 L	5 L	23	22.5 B	7	11	5 L	12	6	24	32	5 L	5 L	5 L	5 L	46	5 L	13	13
Lead	2 L	2 L	1 L	10 L	10 L	1 L	0.8 L	0.8 L	1.6	0.5 L	0.8 L	0.8 L	1 L	1 L	2 L	1 L	2	1 L	1 L	1 L	1 L
Magnesium	-	-	-	75800	77700	-	81200	85400	92500	75600	80500	95000	78400	82500	84800	86900	82200	-	-	-	-
Manganese	756	594	536	352	340	354	197	186	175	152	138	100	77	115	84	92	122	-	-	-	-
Mercury	0.1 L	0.2 L	0.1 L	0.1 L		0.2 L	0.2 L	0.2 L	0.59	0.51	0.35	0.31	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.49	0.24	0.22	0.1 L
Nickel	10 L	10 L	10 L	10 L	10 L	10 L	9	5 L	5 L	5 L	20	100	10 L	10 L	10 L	10 L	10 L	-	-	-	-
Potassium	-	-	-	32800	33700	-	35600	32200	34600	30700	26000	40400	35500	36600	37900	40800	37400	-	-	-	-
Selenium	2 L	2 L	5 L	-	-	-	40 L	4 L	3	3 L	3 L	3.4	1 L	1 L	10 L	1 L	5 L	-	-	-	-
Silver	3 L	3 L	-	-	-	-	5 L	5 L	5 L	5 L	6	6	3 L	3 L	3 L	3 L	3 L	-	-	-	-
Sodium	-	-	-	1740000	1740000	-	1380000	2510000	1832000	1790000	1776000	1932000	1800000	1820000	1870000	1920000	1830000	-	-	-	-
Thallium	5 L	-	-	-	-	-	19 L	10 L	1 L	10 L	10 L	10 L	1 L	1 L	5 L	1 L	1 L	-	-	-	-
Zinc	42	6	25 L	20 L	8	5.1 B	10	3 L	5	39	3 L	21	4 L	4 L	4 L	4 L	4 L	21	3 L	3 L	3 L

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.
- denotes that the constituent was not analyzed.

Parameter (units)	Monitoring Well MW-7																			
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters																					
Static Water Elevation (ft.MSL)	39.60	44.51	41.26	39.27	44.95	43.21	41.17	40.04	44.34	42.04	40.66	40.33	43.41	44.03	41.69	40.13	42.38	39.94	40.30	40.07	40.95
Stream Discharge (CFS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (C)	12.7	8.9	12.90	11.8	9.0	11.5	11.2	12.9	9.4	10.8	11.1	11.6	8.6	9.5	11.0	12.1	9.8	10.7	13.0	10.4	9.8
Dissolved Oxygen (mg/L)	5.2	6.0	5.1	5.4	3.3	6.7	5.5	4.3	5.0	7.3	6.1	5.3	4.4	4.1	5.2	4.8	4.7	7.2	-	-	8.50
Redox Potential (mV)	142	229	202.0	183	260	267	152	118		147	256	218	181	272	195	206	161	-	-	-	-
Specific Conductance (uS/cm @ 25C)	535	403	414	270	383	370	350	365	432	328	353	443	339	332	315	314	283	320	318	294	374
pH	7.8	7.4	7.4	7.4	7.6	7.0	7.7	7.4	7.4	6.9	7.4	7.0	7.4	7.3	6.9	7.3	7.5	7.5	7.4	7.8	7.96
Nonmetals																					
Alkalinity (mg/L as CaCO3)	255	192	185	185	163	152	201	155	144	138	145	148	129	143	129	132	126				
Chloride (mg/L as Cl)	12	17	16	10	14	10	9	9	14	7	7	6	7	10	7	6	5	6	7	6	5.15
Sulfate (mg/L as SO4)	142.0	99.0	98.3	89.0	63.8	66.0	95.0	34.0	27.0	27.0	25.4	25.0	29.0	27.7	24.2	21.3	24.0	23.8	23.3	21.7	25.5
Nitrate+Nitrite (mg/l as N)	0.130	0.210	0.705	0.340	0.762	0.755	0.410	0.326	0.108	0.084	0.108	0.088	0.067	0.034	0.018	0.064	0.010 L	0.068	0.010 L	0.072	0.037
Ammonia (mg/L as N)	0.150	0.010 L	0.063	0.150	0.043	0.124	0.092	0.035	0.010 L	0.010 L	0.059	0.027	0.036	0.042	0.025	0.032	0.010 L	0.010 L	0.010 L	0.013	0.044
Chemical Oxygen Demand (mg/L)	17.7	18.4	27.3	12.6	9.7	17.2	6.8	30.5	13.2	9.5	16.2	9.1	30.0	8.3	11.3	17.8	5.0 L	406.0	13.1	19.3	5 L
Total Organic Carbon (mg/L as C)	11.5	44.3	-	7.0	6.2	5.9	7.9	6.5	23.3	19.0	25.8	21.8	20.5	16.5	9.9	15.8	5.3	136.0	7.1	5.3	4.72
Total Suspended Solids (mg/L)	-	70.0	30.0	166.0	10.0	194.0	-	168.0	140.0	94.0	171.0	36.0	183.0	16.0	61.0	72.0	16.0	-	-	-	-
Total Dissolved Solids (mg/L)	343.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (mg/l)	-	-	-	-	-	0.067	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Coliform (No./100ml)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: L denotes that the analyte was below the indicated detection limit.
- denotes that the constituent was not analyzed.

Parameter (units)	Monitoring Well MW-7																				
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Total Metals (ug/L)																					
Antimony	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	20 L	-	2	1	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	-	-	-	68	33	98.8 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	2 L	-	2 L	2 L	0.2 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	-	-	-	-	-	50600	-	-	-	-	-	-	-	-	-	-	-	41900	40500	31200	44100
Chromium	-	5 L	-	10	5 L	3 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	7	-	19	4	17.5 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	3,555	-	6,170	1630	1590 E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	4.7	-	4	1	2.4 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	-	-	-	-	-	12800	-	-	-	-	-	-	-	-	-	-	-	16400	7820	6700	9400
Manganese	-	1330	-	1,090	349	2390	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	0.2 L	-	0.1 L	0.1 L	0.2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	10 L	-	20	10 L	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	-	-	-	700	-	-	-	-	-	-	-	-	-	-	-	3410	1340	1440	1370
Selenium	-	1 L	-	1 L	1 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	-	3 L	-	3 L	3 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	-	-	-	-	-	13600	-	-	-	-	-	-	-	-	-	-	-	19600	12400	13100	26500
Thallium	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	19	-	-	15	17.2 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Filtered Metals (ug/L)																					
Antimony	1 L	1 L	- -	-	-	-	70 L	70 L	4.2	3.7	3.9	6.2	6	7	8	3	3	-	-	-	-
Arsenic	2 L	5 L	1 L	-	-	-	5 L	5 L	10.7	3 L	2 L	2 L	1 L	1 L	5 L	1 L	1 L	-	-	-	-
Barium	-	-	24	49	58	57 B	47	16	7	11	16	13	12	12	11	11	10	-	-	-	-
Beryllium	1 L	1 L	-	-	-		1 L	1 L	1 L	1	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Cadmium	2 L	2 L	2 L	2 L	2 L	0.2 B	2 L	2 L	2	2	2 L	2 L	2 L	2 L	2	2 L	2 L	2 L	2 L	2 L	2 L
Calcium	-	-	-	46500	55500	-	52100	47100	51400	39700	47300	45200	43500	45300	37800	40100	41200	-	-	-	-
Chromium	5 L	5 L	5 L	5 L	5 L	3 L	1.4 L	1.4 L	1.4 L	10 L	5 L	5 L	1 L	5 L	5 L	5 L	5 L	-	-	-	-
Chromium (hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2 L	2 L	2	2	2 L	3.3 B	5 L	5 L	5 L	10	5 L	5 L	4	7	7	2 L	2 L	-	-	-	-
Iron	5 L	33	6	12	19	16.6 B	23	9	25	36	33	29	7	5 L	8	5 L	11	32	5 L	8	17
Lead	2 L	2 L	1 L	1 L	1 L	1 L	0.8 L	0.8 L	1.8	0.5 L	0.8 L	0.8 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L
Magnesium	-	-	-	13400	12800	-	9710	11200	11400	8040	10300	10000	9340	9240	7580	8180	8060	-	-	-	-
Manganese	1530	1230	1180	875	218	457	358	529	72	236	201	218	108	107	194	239	60	-	-	-	-
Mercury	0.1 L	0.2 L	0.1 L	0.1 L	-	0.2 L	0.2 L	0.36	0.41	0.43	0.29	0.21	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.14	0.23	0.1	0.1 L
Nickel	10 L	10 L	10 L	10 L	10 L	10 L	5 L	5 L	5 L	5 L	22	7	10 L	10 L	10 L	10 L	10 L	-	-	-	-
Potassium	-	-	-	1300	1400	-	952	1510	1240	916	1280	2320	800	800	1300	1100	1300	-	-	-	-
Selenium	2 L	1 L	1 L	-	-	-	4 L	40 L	3 L	3 L	3 L	3 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Silver	3 L	3 L	-	-	-	-	5 L	5 L	5 L	6 L	5 L	5 L	3 L	3 L	3 L	3 L	3 L	-	-	-	-
Sodium	-	-	-	19300	16700	-	14300	15600	17200	11900	12400	12600	12400	11800	10700	11200	11900	-	-	-	-
Thallium	1 L	-	-	-	-	-	-	10 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Zinc	126	7	4 L	17	19	9.4 B	9	3 L	14	14	3	3	4 L	4 L	4 L	4 L	4 L	3 L	3 L	3 L	4

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.
- denotes that the constituent was not analyzed.

Recomp of Washington

Parameter (units)	Monitoring Well MW-8																			
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters																					
Static Water Elevation (ft.MSL)	19.50	20.74	20.15	22.77	23.53	23.91	22.49	21.91	22.50	22.18	21.45	21.30	21.99	22.22	21.78	21.31	21.88	21.96	21.31	20.85	22.06
Stream Discharge (CFS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (C)	14.0	10.1	13.4	12.0	8.6	13.7	10.6	12.2	12.7	12.0	12.4	11.9	9.6	9.2	11.9	12.1	9.9	13.1	13.1	11.1	11
Dissolved Oxygen (mg/L)	1.9	6.3	7.0	7.6	5.2	5.8	6.7	9.1	6.6	8.5	6.8	5.9	6.8	7.2	7.1	7.3	7.8	-	3.20	-	6.90
Redox Potential (mV)	86	181	142	220	172	120	123	87		130	174	122	157	192	142	192	136	-	-	-	-
Specific Conductance (uS/cm @ 25C)	7976	7828	7644	7225	7333	7868	8276	7238	6542	8115	7928	9843	7934	8307	7735	7431	8151	8760	8920	8840	9070
pH	7.5	8.1	8.1	8.2	7.9	7.8	8.0	7.9	7.9	7.8	8.0	7.8	8.2	7.9	7.8	7.7	7.8	8.0	7.4	8.2	7.29
Nonmetals																					
Alkalinity (mg/L as CaCO3)	169	184	189	172	175	183	229	181	182	170	180	182	174	177	178	173	179				
Chloride (mg/L as Cl)	2282	2421	2555	2470	2453	2310	2400	2490	2502	2437	2385	2313	2455	2393	2219	2297	2118	2486	2569	2215	2301
Sulfate (mg/L as SO4)	762.0	562.0	540.0	560.0	503.0	571.0	481.0	507.0	493.0	509.0	523.0	534.0	686.0	515.0	520.0	366.0	440.0	528.0	481.0	449.0	539
Nitrate+Nitrite (mg/l as N)	0.140	0.130	0.439	1.160	1.258	1.470	1.310	1.200	1.090	0.932	1.190	1.040	0.761	0.672	0.563	0.830	0.637 L	1.160	0.809	0.660	0.748
Ammonia (mg/L as N)	1.280	0.010 L	1.390	0.830	0.122	0.165	0.174	0.106	0.032	0.040	0.026	0.021	0.029	0.069	0.018	0.056	0.010 L	0.010 L	0.222	0.019	0.06
Chemical Oxygen Demand (mg/L)	103.0	51.0	24.0	7.9	19.6	5.0 L	5.0 L	15.4	8.0	21.1	13.7	22.8	5.5	19.0	8.6	17.0	5.0 L	12.4	10.0	11.6	5 L
Total Organic Carbon (mg/L as C)	4.6	36.4	-	2.0	2.0	2.7	5.1	2.3	16.5	14.1	19.0	22.9	15.3	12.0	13.4	9.4	0.3 L	3.7	250.0 L	0.3 L	3.85
Total Suspended Solids (mg/L)	-	126.6	38.0	254.0	243.0	222.0	-	26.0	71.0	18.0	24.0	6.3	24.0	122.0	34.0	10.0	33.0	-	-	-	-
Total Dissolved Solids (mg/L)	4795.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (mg/l)	-	-	-	-	-	0.012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Coliform (No./100ml)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: L denotes that the analyte was below the indicated detection limit.
- denotes that the constituent was not analyzed.

Parameter (units)	Monitoring Well MW-8																				
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Total Metals (ug/L)																					
Antimony	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	34	-	6	5	3.1 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	-	-	-	122	112	92.6 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	2 L	-	2 L	2 L	0.7 B	-	-	-	-	-	-	-	-	-	-	-	44900	50200	49100	57100
Calcium	-	-	-	-	-	49000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	5 L	-	5 L	5 L	3 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	8	-	8	6	14.2 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	2,890	-	1,280	674	1200 E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	4.3	-	10 L	10 L	6	-	-	-	-	-	-	-	-	-	-	-	61400	65600	60600	76100
Magnesium	-	-	-	-	-	69800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	-	560	-	340	121	181	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	0.2 L	-	0.1 L	0.1 L	0.2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	10 L	-	10 L	10 L	10 L	-	-	-	-	-	-	-	-	-	-	-	26100	23500	30900	30400
Potassium	-	-	-	-	-	31500 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	-	1 L	-	1	5 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	-	3 L	-	3	3 L	2 L	-	-	-	-	-	-	-	-	-	-	-	928000	1410000	1610000	1630000
Sodium	-	-	-	-	-	1600000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	20	-	-	22	23.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Filtered Metals (ug/L)																					
Antimony	1.6	1 L	-	-	-	-	70 L	70 L	15.2	11.5	7.1	9.6	8	9	8	4	4	-	-	-	-
Arsenic	20 L	20 L	2	-	-	-	5.1	5 L	7.4	5.9	3.5	2.2	5	7	5 L	6	8	-	-	-	-
Barium	-	-	135	120	104	101 B	90	64	56	56	49	57	53	50	54	48	49	-	-	-	-
Beryllium	1 L	1 L	-	-	-	-	1 L	2	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Cadmium	2 L	2 L	2 L	2 L	2 L	0.4 B	2 L	2 L	2	2 L	3	4	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L	2 L
Calcium	-	-	-	45500	53100	-	49900	53100	51000	46800	45100	53000	50600	49200	50900	49400	48800	-	-	-	-
Chromium	5 L	5 L	5 L	5 L	5 L	3 L	1.4 L	1.4 L	1.4 L	10 L	5 L	5 L	1 L	5 L	5 L	5 L	5 L	-	-	-	-
Chromium (hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2 L	4	4	3	4	7.6 B	5 L	10	5 L	5	15	5 L	8	11	5	3	4	-	-	-	-
Iron	5 L	339	5 L	5 L	5 L	9.9 B	14	5 L	10	5	7	5	5 L	5 L	5 L	5 L	5 L	6	5 L	53	5 L
Lead	10 L	2 L	2 L	10 L	10 L	1 L	0.8 L	0.8 L	0.5 L	0.5 L	0.8 L	0.8 L	1 L	1 L	2 L	1 L	1 L	1 L	1 L	1 L	1 L
Magnesium	-	-	-	63900	68900	-	76300	74800	76800	62100	64700	77700	70300	66800	69400	71000	67100	-	-	-	-
Manganese	549	554	424	200	111	96.2	68	46	95	26	8	11	17	18	28	17	46	-	-	-	-
Mercury	0.1 L	0.2 L	0.1 L	0.1 L	-	0.2 L	0.2 L	0.2 L	0.61	0.6	0.67	0.51	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.37	0.32	0.13	0.31
Nickel	10 L	10 L	10 L	10 L	10 L	10 L	5 L	6	5 L	5 L	14	11	10 L	10 L	10 L	10 L	10 L	-	-	-	-
Potassium	-	-	-	31400	33700	-	39800	33200	34200	29200	26000 L	40100	35700	34100	35700	38900	36000	-	-	-	-
Selenium	2 L	1 L	5 L	-	-	-	40 L	4 L	3 L	30 L	3 L	3 L	5 L	5 L	5 L	1 L	5 L	-	-	-	-
Silver	3 L	3 L	-	-	-	-	5 L	5 L	5 L	5 L	5 L	6	3 L	3 L	3 L	3 L	3 L	-	-	-	-
Sodium	-	-	-	1560000	1610000	-	1400000	2490000	1730000	1528000	1520000	1614000	1650000	1600000	1670000	1690000	1650000	-	-	-	-
Thallium	5 L	-	-	-	-	-	-	1 L	1 L	1 L	10 L	10 L	1 L	1 L	5 L	1 L	1 L	-	-	-	-
Zinc	52	8	25 L	20 L	4	6.7 B	3	3 L	5	8	3 L	8	4 L	4 L	4 L	4 L	4 L	9	3 L	3 L	3 L

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.
- denotes that the constituent was not analyzed.

Parameter (units)	Monitoring Well MW-9																			
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters																					
Static Water Elevation (ft.MSL)	16.72	20.40	17.60	18.85	20.57	20.89	19.22	19.35	20.32	20.13	19.90	19.78	20.56	20.28	19.94	19.74	23.27	19.98	19.00	19.81	19.94
Stream Discharge (CFS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (C)	14.9	10.3	14.1	12.2	8.4	12.3	10.5	13.8	12.4	13.6	14.0	14.1	11.20	11.5	12.9	13.8	11.0	11.1	14.8	12.4	11.1
Dissolved Oxygen (mg/L)	4.6	6.3	4.8	4.6	3.1	6.1	8.7	7.0	5.4	6.6	8.4	6.1	5.2	5.5	4.3	2.6	7.4	-	-	-	-
Redox Potential (mV)	114	92	119	149	185	138	145	187		118	189	197	95.0	158	190	148	146	-	-	-	-
Specific Conductance (uS/cm @ 25C)	5216	4630	4622	4751	5053	5122	5525	5072	5531	543	543	3500	5092	5107	5072	4821	4778	5320	5169	5170	5170
pH	6.6	6.2	7.2	6.7	6.6	6.4	6.8	6.8	6.8	6.7	6.6	7.3	6.9	6.4	6.5	6.1	6.7	6.8	6.7	7.2	7.02
Nonmetals																					
Alkalinity (mg/L as CaCO3)	325	331	314	368	356	409	467	445	491	529	584	611	613	662	694	760	771	-	-	-	-
Chloride (mg/L as Cl)	1582	1525	1870	1940	1514	1440	1540	1583	1516	1444	1444	1363	1441	1308	1254	1181	1033	1206	1170	1059	1025
Sulfate (mg/L as SO4)	383.0	282.0	322.0	271.0	287.0	323.0	305.0	286.0	311.0	333.0	301.0	306.0	349.0	348.0	280.0	229.0	298.0	318.0	585.0	304.0	286
Nitrate+Nitrite (mg/l as N)	0.010 L	0.050	0.027	0.060	0.083	0.022	0.106	0.020	0.018	0.031	0.056	0.058	0.029	0.029	0.010 L	0.031	0.010 L	0.026	0.010 L	0.157	0.034
Ammonia (mg/L as N)	0.090	0.010	0.036	0.040	0.078	0.069	0.102	0.010 L	0.010 L	0.013	0.027	0.013	0.011	0.043	0.041	0.010 L	0.053	0.041	0.027	0.031	0.036
Chemical Oxygen Demand (mg/L)	159.0	44.0	26.3	14.3	11.3	20.2	13.9	9.7	15.1	30.8	30.3	16.3	37.0	32.0	31.9	32.3	6.5	7.7	44.3	43.1	23.9
Total Organic Carbon (mg/L as C)	6.8	64.8	-	4.5	5.0	21.0	19.5	17.9	67.2	70.3	86.3	83.0	49.1	66.5	91.5	63.8	10.2	3.4	14.1	0.4	17.4
Total Suspended Solids (mg/L)	-	12.0	1.0 L	8.0	4.0	304.0	-	82.0	81.0	200.0	134.0	257.0	147.0	138.0	94.0	11.0	626.0	-	-	-	-
Total Dissolved Solids (mg/L)	3977.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (mg/l)	-	-	-	-	-	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Coliform (No./100ml)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: L denotes that the analyte was below the indicated detection limit.
- denotes that the constituent was not analyzed.

Monitoring Well MW-9

Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Total Metals (ug/L)																					
Antimony	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	10 L	-	1 L	1 L	1.5 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	-	-	-	134	142	111 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadium	-	2 L	-	2 L	2 L	0.7 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	-	-	-	-	-	233000	-	-	-	-	-	-	-	-	-	-	-	260000	239000	195000	262000
Chromium	-	5 L	-	5 L	5 L	3 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	2 L	-	3	2 L	8.5 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	286	-	816	68	367 E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	2 L	-	5 L	5 L	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	-	-	-	-	-	277000	-	-	-	-	-	-	-	-	-	-	-	258000	257000	19100	286000
Manganese	-	340	-	731	712	928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	0.2 L	-	0.1	0.1 L	0.2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	10 L	-	10	10 L	25.7 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	-	-	-	4270 B	-	-	-	-	-	-	-	-	-	-	-	9670	7610	8420	11200
Selenium	-	1 L	-	5 L	5 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	-	3 L	-	3 L	3 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	-	-	-	-	-	398000	-	-	-	-	-	-	-	-	-	-	-	460000	490000	419000	50100
Thallium	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	8	-	-	23	14.8 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Filtered Metals (ug/L)																					
Antimony	1 L	1 L	-	-	-	-	70 L	70 L	10.2	3.8	11.8	5.5	6	9	7	3	2	-	-	-	-
Arsenic	10 L	20 L	1 L	-	-	-	5 L	5 L	3 L	3 L	2 L	2 L	1 L	1 L	5 L	1	2	-	-	-	-
Barium	-	-	133	134	137	141 B	131	129	117	110	106	119	114	114	117	110	107	-	-	-	-
Beryllium	1 L	1 L	-	-	-	-	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Cadium	2 L	2 L	2 L	2 L	2	0.8 L	2 L	2 L	3	2 L	2	2 L	2 L	2 L	2 L	2 L	2 L	7	2 L	2 L	2 L
Calcium	-	-	-	238000	256000	-	251000	175000	269000	267000	252000	284000	263000	254000	253000	238000	240000	-	-	-	-
Chromium	6 L	5 L	5 L	5 L	5 L	3 B	1.4 L	1.4 L	1.4 L	10 L	5 L	5 L	1 L	5 L	5 L	5 L	5 L	-	-	-	-
Chromium (hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2 L	2 L	2 L	2 L	2	2 L	5 L	5 L	5 L	15	5 L	5 L	2 L	8	13	2 L	2	-	-	-	-
Iron	5 L	9	5 L	5 L	9	53.3 B	15	12	11	12	5 L	71	6	12	20	23	16	15	53	377	60
Lead	2 L	2 L	1 L	5 L	5	2 B	0.8 L	0.8 L	3.7	6.2	1.3	2.1	1 L	1 L	2	1 L	3	1 L	1 L	2.1	5.6
Magnesium	-	-	-	269000	276000	-	273000	270000	306000	287000	291000	339000	300000	278000	273000	268000	264000	-	-	-	-
Manganese	978	388	449	651	711	910	805	717	929	977	806	911	947	1030	1100	1260	1040	-	-	-	-
Mercury	0.1 L	0.2 L	0.1 L	0.1 L	-	0.2 L	0.2 L	0.21	0.45	0.44	0.46	0.4	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.35	0.24	0.14	0.1
Nickel	10 L	10 L	10 L	10	10 L	10.4 B	15	16	20	14	32	36	20	10 L	10	10	20	-	-	-	-
Potassium	-	-	-	9000	10700	-	12600	9170	11400	11300	10600	13800	12000	11000	12000	13300	12400	-	-	-	-
Selenium	2 L	5 L	1 L	-	-	-	4 L	4 L	3.6	3	3 L	3.5	1 L	1 L	5	1 L	1 L	-	-	-	-
Silver	3 L	3 L	-	-	-	-	5 L	5 L	10	5 L	5 L	5 L	3 L	3 L	3 L	3 L	3 L	-	-	-	-
Sodium	-	-	-	405000	471000	-	396000	458000	423000	391000	414000	478000	473000	457000	474000	481000	481000	-	-	-	-
Thallium	5 L	-	-	-	-	-	19 L	10 L	1 L	1 L	10 L	10 L	1 L	1 L	5 L	1 L	1 L	-	-	-	-
Zinc	89	9	5 L	53	68	17.3 B	11	29	4	8	3 L	20	4 L	4 L	4 L	4 L	4	18	3 L	3 L	29

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.
- denotes that the constituent was not analyzed.

Monitoring Well MW-10

Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Total Metals (ug/L)																					
Antimony	-	1 L	-	-	-	-	70 L	70 L	4.9	2 L	3 L	3 L	2 L	1 L	5 L	1 L	1 L	-	-	-	-
Arsenic	-	20 L	-	2	1 L	1 L	5 L	5 L	17.6	3 L	2 L	2.4	4	2	1 L	2	1 L	-	-	-	-
Barium	-	1 L	-	123	101	123 B	95	216	80	153	79	168	281	216	126	126	119	-	-	-	-
Beryllium	-	-	-	-	-	-	1	2	1 L	1 L	1 L	1 L	1	1 L	1 L	1 L	1 L	-	-	-	-
Cadmium	-	2 L	-	2 L	2 L	0.4 B	2	3	2	2	4	2 L	2 L	2 L	2 L	2 L	2 L	-	-	-	-
Calcium	-	-	-	-	-	126000	-	-	-	-	-	-	-	-	-	-	-	129000	140000	131000	143000
Chromium	-	5 L	-	5 L	5 L	3 L	7.2	56.8	3.9	24	5 L	35	103	52	13	13	15	-	-	-	-
Chromium (Hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	3	-	6	2	19.9 B	18	47	15	38	26	43	52	33	16	13	6	-	-	-	-
Iron	-	2,980	-	3140	650	2320 E	4150	41600	21500	10900	1640	22600	39600	23200	8510	7900	4350	-	-	-	-
Lead	-	3.1	-	5 L	5 L	15.5	8.9	16.2	5.8	18.8	1.5	7.3	18	12	5 L	3	16	-	-	-	-
Magnesium	-	-	-	-	-	141000	-	-	140000	142000	127000	168000	147000	134000	132000	140	141000	136000	135000	133000	149000
Manganese	-	556	-	169	117	151	149	666	174	364	118	366	653	478	339	282	310	-	-	-	-
Mercury	-	0.2 L	-	0.1 L	0.1 L	0.2 L	0.2 L	0.28	0.37	0.25	0.44	6.12	0.1 L	0.1 L	0.01 L	0.1	0.1	-	-	-	-
Nickel	-	10 L	-	20	10 L	10 L	69	89	31	42	23	62	70	50	20	30	30	-	-	-	-
Potassium	-	-	-	-	-	6380	-	-	-	-	-	-	-	-	-	-	-	9830	7590	9680	9290
Selenium	-	1 L	-	5 L	5 L	2 L	40 L	4 L	3 L	3 L	4.3	3 L	5 L	5 L	5 L	1 L	1 L	-	-	-	-
Silver	-	3 L	-	8 L	3 L	2 L	5 L	5 L	5 L	5 L	5	7	3 L	3 L	3 L	3 L	3 L	-	-	-	-
Sodium	-	-	-	-	-	602000	-	-	-	-	-	-	-	-	-	-	-	366000	700000	626000	577000
Thallium	-	10 L	-	-	-	-	19 L	10 L	1 L	10 L	10 L	10 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Zinc	-	22	-	-	16	38	40	155	13	74	15	82	141	71	31	25	27	-	-	-	-
Filtered Metals (ug/L)																					
Antimony	1 L	1 L	-	-	-	-	70 L	70 L	11.7	15.3	7.2	8	7	8	9	4	7	-	-	-	-
Arsenic	10 L	20 L	1 L	-	-	-	5 L	5 L	3 L	3 L	2 L	2 L	1 L	1 L	5 L	1 L	2	-	-	-	-
Barium	-	-	137	208	112	106 B	135	104	78	79	75	79	85	75	82	81	88	-	-	-	-
Beryllium	1 L	1 L	-	-	-	-	1 L	2	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Cadmium	2 L	2 L	2 L	2 L	2 L	0.3 B	2 L	2 L	4	2 L	2 L	4	2 L	2 L	3	2 L	2 L	2 L	2 L	2 L	2 L
Calcium	-	-	-	141000	143000	-	129000	109000	146000	130000	121000	145000	132000	117000	127000	124000	134000	-	-	-	-
Chromium	5 L	5 L	5 L	5 L	5 L	3 L	1.4 L	1.4 L	1.4 L	10 L	5 L	5 L	1 L	5 L	5 L	5 L	5 L	-	-	-	-
Chromium (hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2 L	2 L	2 L	2 L	2 L	2 L	5 L	12	5 L	7	5 L	27	2 L	23	16	2 L	4	-	-	-	-
Iron	1140 L	225	5 L	15	34	58.8 B	80	97	40	82	36	155	41	33	54	63	35	64	128	71	44
Lead	2 L	2 L	1 L	5 L	5 L	1 L	0.8 L	0.8 L	0.5 L	0.5 L	0.8 L	0.8 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L
Magnesium	-	-	-	153000	148000	-	143000	138000	157000	131000	135000	164000	141000	121000	131000	135000	138000	-	-	-	-
Manganese	1630	444	339	115	103	120	105	111	148	152	93	104	134	172	201	176	241	-	-	-	-
Mercury	0.1 L	0.2 L	0.1 L	0.1 L		0.2 L	0.2 L	0.23	0.41	0.51	0.43	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.24	0.52	0.21	0.24
Nickel	10	10 L	10 L	10 L	10 L	10 L	8	5 L	6	5	32	19	10 L	10 L	10 L	10 L	10	-	-	-	-
Potassium	-	-	-	12700	12000	-	13700	10500	11500	10200	9030	14100	11400	9200	9500	10500	10400	-	-	-	-
Selenium	2 L	1 L	1 L	-	-	-	4 L	4 L	3 L	3 L	3 L	3 L	1 L	1 L	5 L	1	1 L	-	-	-	-
Silver	3 L	3 L	-	-	-	-	5 L	5	5 L	5 L	5 L	5 L	3 L	3 L	3 L	3 L	3 L	-	-	-	-
Sodium	-	-	-	655000	658000	-	576000	658000	658000	569000	570000	666000	645000	569000	607000	627000	644000	-	-	-	-
Thallium	1 L	1 L	-	-	-	-	-	10 L	10 L	1 L	10 L	10 L	1 L	1 L	5 L	1 L	1 L	-	-	-	-
Zinc	105	4 L	10 L	36	72	11.8 B	31	32	9	9	4	8	8	12	8	5	7	8	0.004	3 L	6

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.
- denotes that the constituent was not analyzed.

Recomp of Washington

Parameter (units)	Monitoring Well MW-10																			
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters																					
Static Water Elevation (ft.MSL)	18.08	21.80	19.9	19.83	23.29	26.29	22.20	22.00	22.71	22.49	21.54	22.37	23.28	22.65	22.49	22.17	25.82	22.61	21.88	22.39	23.11
Stream Discharge (CFS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (C)	13.7	11.6	12.0	11.9	8.2	13.7	12.1	14.9	12.8	13.8	14.1	14.6	12.6	13.2	13.9	14.1	12.0	13.4	15.6	13.5	10.9
Dissolved Oxygen (mg/L)	2.5	3.2	5.4	5.0	8.4	8.4	2.9	3.8	6.2	10.0	7.8	5.0	5.4	6.1	5.7	5.3	6.7	-	5.20	-	2.20
Redox Potential (mV)	50	-9	75	208	174	179	88	93		98	178	143	144	166	203	127	90	-	-	-	-
Specific Conductance (uS/cm @ 25C)	4795	4798	4454	4576	4579	4287	4631	4745	4498	4656	4420	3806	5019	4041	3985	4307	4257	474	4820	4880	4830
pH	7.8	6.4	7.6	6.8	6.7	6.6	6.7	7.2	6.7	6.3	7.3	6.8	6.9	6.5	6.5	6.0	6.5	6.9	6.4	7.1	-
Nonmetals																					
Alkalinity (mg/L as CaCO3)	382	417	376	374	384	390	478	401	401	373	380	382	380	420	400	383	390				
Chloride (mg/L as Cl)	1421	1505	1772	1400	1394	1190	1330	1401	1231	1213	1323	1205	1290	1095	1026	1114	1027	1211	1222	1101	1130
Sulfate (mg/L as SO4)	285.0	144.0	167.0	140.0	137.0	155.0	129.0	109.0	142.0	148.0	148.0	147.0	201.0	217.0	221.0	198.0	252.0	265.0	298.0	311.0	296
Nitrate+Nitrite (mg/l as N)	0.010 L	0.010 L	0.010 L	0.010 L	0.019	0.030	0.029	0.022	0.010	0.010 L	0.028	0.031	0.019	0.018	0.010 L	0.018	0.010 L	0.010 L	0.010 L	0.010 L	0.003
Ammonia (mg/L as N)	0.080	0.010	0.049	0.070	0.034	0.141	0.064	0.036	0.015	0.019	0.027	0.011	0.021	0.030	0.025	0.016	0.010 L	0.027	0.043	0.025	0.029
Chemical Oxygen Demand (mg/L)	212.0	31.0	18.5	7.9	5.0 L	21.5	9.5	46.7	12.2	16.4	19.0	10.9	29.0	29.0	48.1	5.0 L	5.0 L	58.4	19.3	19.8	5 L
Total Organic Carbon (mg/L as C)	4.3	73.6	-	3.4	2.6	31.5	18.2	16.2	48.9	48.4	53.0	50.8	51.2	24.8	48.5	49.2	0.3 L	14.3	25.0 L	0.3 L	8.03
Total Suspended Solids (mg/L)	-	58.0	1.0 L	15.0	12.7	944.0	48.5	773.0	686.0	479.0	1310.0	1060.0	803.0	695.0	430.0	296.0	75.0	-	-	-	-
Total Dissolved Solids (mg/L)	2965.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (mg/l)	-	-	-	-	-	0.031	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Coliform (No./100ml)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: L denotes that the analyte was below the indicated detection limit.
- denotes that the constituent was not analyzed.

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Parameter (units)	Monitoring Well MW-11																			
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters																					
Static Water Elevation (ft.MSL)	22.70	27.24	25.6	25.94	27.74	28.22	26.46	26.42	26.93	26.81	26.13	26.67	27.93	27.21	26.90	26.55	27.55	26.91	26.49	26.74	27.79
Stream Discharge (CFS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (C)	13.4	8.6	11.7	12.2	6.9	11.2	11.7	14.9	10.7	11.1	14.7	13.6	9.50	9.1	12.7	13.3	9.9	12.0	12.6	12.5	9.4
Dissolved Oxygen (mg/L)	4.7	6.1	3.5	5.2	9.0	4.0	4.7	7.1	3.2	10.6	4.9	5.2	5.4	3.9	5.1	2.4	4.0	-	-	-	7.6
Redox Potential (mV)	24	129	93	139	311	188	154	183		248	238	174	169.0	191	243	142	168	-	-	-	-
Specific Conductance (uS/cm @ 25C)	2428	2053	2112	2595	2124	2101	2333	2205	1926	2478	2104	2180	2202	1810	1974	2060	2108	2060	1820	2300	2350
pH	6.5	6.6	7.4	7.0	7.2	7.0	6.7	6.7	6.8	6.4	6.8	6.6	6.8	6.7	6.6	6.3	6.8	6.6	6.8	6.9	7.69
Nonmetals																					
Alkalinity (mg/L as CaCO3)	409	332	339	308	325	370	411	359	381	365	366	364	365	383	356	384	393	-	-	-	-
Chloride (mg/L as Cl)	1009	326	418	416	423	398	430	568	336	377	395	414	409	334	361	363	387	333	379	336	335
Sulfate (mg/L as SO4)	746.0	128.0	197.0	248.0	199.0	199.0	168.0	164.0	112.0	127.0	133.0	137.0	249.0	141.0	134.0	131.0	106.0	124.0	153.0	145.0	146
Nitrate+Nitrite (mg/l as N)	0.010 L	0.010	0.082	0.180	0.044	0.062	0.122	0.045	0.209	0.084	0.100	0.093	0.035	0.017	0.010 L	0.020	0.010 L	0.012	0.010 L	0.038	0.011
Ammonia (mg/L as N)	0.110	0.050	0.043	0.030	0.023	0.193	0.046	0.030	0.010	0.010 L	0.026	0.010 L	0.032	0.044	0.034	0.085	0.022	0.077	0.041	0.047	0.046
Chemical Oxygen Demand (mg/L)	57.4	36.5	24.0	15.1	6.8	18.5	5.0 L	25.6	19.0	29.0	17.8	6.0	25.0	21.0	11.8	10.5	5.0 L	26.2	16.0	27.7	5 L
Total Organic Carbon (mg/L as C)	7.6	63.6	-	5.1	6.2	33.6	17.0	16.6	60.2	42.9	55.4	50.9	45.0	58.3	17.8	42.0	5.0	9.4	7.7	0.3 L	7.62
Total Suspended Solids (mg/L)	-	70.0	48.0	57.0	2.7	1170.0	-	385.0	528.0	1350.0	377.0	439.0	623.0	416.0	185.0	138.0	173.0	-	-	-	-
Total Dissolved Solids (mg/L)	1551.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (mg/l)	-	-	-	-	-	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Coliform (No./100ml)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: L denotes that the analyte was below the indicated detection limit.
- denotes that the constituent was not analyzed.

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Monitoring Well MW-11

Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Total Metals (ug/L)																					
Antimony	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	-	20 L	-	1 L	1	2.1 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	-	-	-	106	82	141 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	-	1 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	2 L	-	2 L	2 L	0.3 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	-	-	-	-	-	53000	-	-	-	-	-	-	-	-	-	-	-	47000	40300	50800	5638000
Chromium	-	5 L	-	5 L	5 L	3 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Hexavalent)	-	-	-	-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	5	-	9	5	17 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	2980	-	1080	307	1130 E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	33	-	5 L	5 L	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	-	-	-	-	-	60800	-	-	-	-	-	-	-	-	-	-	-	51800	49800	54500	63700
Manganese	-	1650	-	688	1440	1750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	0.2 L	-	0.1 L	0.1 L	0.2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	10 L	-	10 L	10 L	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	-	-	-	2750 B	-	-	-	-	-	-	-	-	-	-	-	5150	6300	5620	5550
Selenium	-	1 L	-	1 L	5 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	-	3 L	-	3 L	3 L	2 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	-	-	-	-	-	353000	-	-	-	-	-	-	-	-	-	-	-	275000	325000	277000	33600
Thallium	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	-	23	-	-	27	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Filtered Metals (ug/L)																					
Antimony	1 L	1 L	-	-	-	-	70 L	70 L	6.1	2.8	6.8	6.3	5	8	11	3	3	-	-	-	-
Arsenic	2 L	1 L	1 L	-	-	-	5 L	5 L	3 L	3 L	2 L	2 L	1 L	1 L	5 L	1 L	1	-	-	-	-
Barium	-	-	90	87	90	87 B	105	48	36	35	32	36	47	34	39	46	41	-	-	-	-
Beryllium	1 L	1 L	-	-	-	-	1 L	1 L	1 L	5	1 L	1 L	1 L	1 L	1 L	1 L	1 L	-	-	-	-
Cadmium	2 L	2 L	2 L	2 L	2	0.2 B	2 L	2 L	2	7	2 L	2 L	2 L	2 L	3	2 L	2 L	2 L	2 L	2 L	2 L
Calcium	-	-	-	38300	44300	-	47900	45000	53400	43600	39800	48900	45500	44000	43100	47400	50100	-	-	-	-
Chromium	5 L	5 L	5 L	5 L	5 L	3 L	1.4 L	1.4 L	1.4 L	10 L	5 L	5 L	1 L	5 L	5 L	5 L	5 L	-	-	-	-
Chromium (hexavalent)	-	-	-	-	-	10 L	-	-	-	-	5 L	-	-	-	-	-	-	-	-	-	-
Copper	2 L	2 L	3	2	3	7 B	5 L	5 L	5 L	13	-	9	4	9	7	2 L	2 L	-	-	-	-
Iron	588	125	15	5 L	35	19.9 B	26	7	24	24	13	112	5 L	5 L	5 L	5 L	5 L	5 L	8	21	38
Lead	2 L	2 L	1 L	5 L	5 L	4.4	0.8 L	0.8 L	0.5 L	0.5 L	0.8 L	0.8	1 L	1 L	1 L	1 L	3	1 L	1 L	1 L	1 L
Magnesium	-	-	-	42400	48200	-	56100	56500	62700	48500	46900	59400	54300	50500	49600	53500	56000	-	-	-	-
Manganese	3770	1700	1720	620	1060	1460	1250	1270	1280	1280	529	377	911	1540	1380	1410	1050	-	-	-	-
Mercury	0.1 L	0.2 L	0.1 L	0.1 L	-	0.2 L	0.2 L	0.2 L	0.39	0.56	0.26	0.4	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.41	0.16	0.35	0.61
Nickel	10 L	10 L	10 L	10 L	10 L	10 L	8	12	11	9	28	14	10 L	10 L	10 L	10 L	10 L	-	-	-	-
Potassium	-	-	-	4700	5800	-	6340	5210	5540	5040	4850	7660	6000	4900	5500	5800	6200	-	-	-	-
Selenium	2 L	1 L	1 L	-	-	-	4 L	4 L	3 L	3 L	3 L	3 L	1 L	1 L	1 L	1	1 L	-	-	-	-
Silver	3 L	3 L	-	-	-	-	5 L	5 L	5 L	5 L	5 L	15	3 L	3 L	3 L	3 L	3 L	-	-	-	-
Sodium	-	-	-	285000	350000	-	310000	382000	326000	270000	332000	349000	350000	299000	319000	328000	331000	-	-	-	-
Thallium	1 L	-	-	-	-	-	-	1 L	10 L	1 L	10 L	10 L	1 L	1 L	5 L	1 L	1 L	-	-	-	-
Zinc	190	12	5 L	38	77	42.5	36	7	3	13	4	7	4 L	4 L	4	4 L	6	10	0.005	3 L	7

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.
- denotes that the constituent was not analyzed.

A-2
LEACHATE MONITORING DATA - INORGANIC

Recomp of Washington

Leachate Pond LP-1

Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters																					
Temperature (C)	16.0	11.9	19.7	19.0	8.9	-	17.4	20.5	13.1	19.4	19.5	24.0	9.2	15.0	20.4	22.5	12.1	25.9	26.2	16.8	11.6
Dissolved Oxygen (mg/L)	1.3	2.4	5.6	2.9	5.1	-	4.8	0.1	7.4	5.1	6.9	2.3	7.2	4.6	3.0	2.7	6.7	-	-	-	0.4
Redox Potential (mV)	-218	-60	124	60	311	-	189	-28		-40	37	-81	-93	-37	29	25	-12	-	-	-	-
Specific Conductance (uS/cm @ 25C)	2860	3108	1836	2058	2656	-	3252	3497	2045	11758	2458	7952	5120	6050	4276	4925	9050	3760	2910	9890	6860
pH	7.6	7.3	7.5	8.4	7.8	-	7.3	8.1	12.1	12.4	12.1	12.0	12.5	12.3	10.3	11.1	12.5	9.9	8.6	12.8	12.0
Nonmetals																					
Alkalinity (mg/L as CaCO3)	506	314	218	242	190	463	671	446	2008	631	279	1092	1201	988	656	455	975	-	-	-	-
Chloride (mg/L as Cl)	777	623	323	400	503	845	466	851	1618	2549	382	2099	1845	1510	1166	1307	1917	998	759	1143	542
Sulfate (mg/L as SO4)	725.0	590.0	324.0	776.5	368.0	511.0	355.0	89.1	161.0	224.0	274.0	267.0	300.0	149.0	176.0	224.0	171.0	124.0	154.0	10.7	157.0
Nitrate+Nitrite (mg/l as N)	0.013 L	0.050	0.069 L	0.421	0.810	0.716	0.332	0.012	1.310	0.400	0.590	0.910	1.030	0.890	6.350	0.437	3.760	0.031	0.797	0.362	2.283
Ammonia (mg/L as N)	6.880	4.190	0.450	6.900	0.740	5.890	7.770	10.300	2.660	1.770	1.650	3.440	3.890	1.990	6.650	1.660	6.640	7.280	4.770	0.926	1.910
Chemical Oxygen Demand (mg/L)	132.0	85.0	31.4	274.0	104.0 L	47.0 L	37.3 L	457.0	27.8	50.4	72.5	74.5	36.0	85.0	15.2	222.0	190.0	25.7	194.0	133.0	119.0
Total Organic Carbon (mg/L as C)	7.6	-	-	-	-	53.6	28.8	89.1	16.3	14.1	26.8	47.7	93.9	16.6	30.2	89.0	48.3	7.4	59.5	31.6	19.0
Total Suspended Solids (mg/L)	-	90.0	8.0	52.0	90.0	6.2	10.7	113.0	1240.0	206.0	198.0	207.0	553.0	174.0	540.0	505.0	122.0	-	-	-	-
Total Dissolved Solids (mg/L)	1551.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (mg/l)	-	-	-	-	-	0.158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: L denotes that the analyte was below the indicated detection limit.
- denotes that the constituent was not analyzed.
B denotes that the analyte was detected in the blank.

Leachate Pond LP-1

Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	27-Aug-91	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Total Metals (ug/L)																					
Antimony	-	156		-		91	111	53.9	16.5	14.5	39.2	284	82	1100	254	54	-	-	-	-	
Arsenic	-	4.8	1	1 L	5	2.1 B	5 L	10.9	3 L	3 L	6.1	4.5	52	7	161	30	4	-	-	-	-
Barium	-	-	184	198	543	141 B	144	773	550	1280	119	2070	1350	964	6210	1020	764	-	-	-	-
Beryllium	-	1 L		-	-	-	1 L	1 L	1 L	1 L	1 L	1 L	10 L	3 L	3 L	2 L	5 L	-	-	-	-
Cadmium	-	203	136	2 L	109	0.3 B	261	64	2 L	24	19	29	310	40	-	210	-	-	-	-	-
Calcium	-	-		-	-	53000	-	-	-	-	-	-	-	-	1010	-	20	470,000	229,000	1,480,000	883,000
Chromium	-	19	7	200	14	3 L	4.7	13.6	6.3	14	5 L	8	79	15 L	180	30	30 L	-	-	-	-
Chromium (Hexavalent)	-	-		-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	57	14	30	74	17 B	37	64	81	46	64	146	830	151	2270	490	240	-	-	-	-
Iron	-	2720	9	627	4600	1130 E	2580	1370	308	973	373	908	7630	557	24900	3250	620	-	-	-	-
Lead	-	810	4	10	45	5.3	4160	648	1602	4660	3230	1310	4080	3470	12300	4600	5700	-	-	-	-
Magnesium	-	-		-	-	60800	-	-	5210	1870	3030	2620	15100	1550	29000	5000	2040	7,570	8,600	5,010	63,900
Manganese	-	706	452	552	623	1750	2030	371	311	108	95	146	720	82	1480	230	184	-	-	-	-
Mercury	-	4 L	0.2 L	0.2 L	0.2	0.2 L	0.2 L	0.74	0.5	0.2 L	0.7	0.22	2	0.1	11	1.1	0.2	-	-	-	-
Nickel	-	10	10 L	10 L	10	10 L	69	18	16	16	20	21	100 L	30 L	100	40	50 L	-	-	-	-
Potassium	-	-		-	-	2750	-	-	-	-	-	-	-	-	-	-	-	209,000	134,000	62,200	70,700
Selenium	-	2 L	1 L;	1 L	5 L	2 L	40 L	4 L	45	3 L	3 L	3 L	8	14	28	23	17	-	-	-	-
Silver	-	3 L		3 L	3 L	2 L	5 L	5 L	5 L	51	7	14	20	9 L	100	10	20 L	-	-	-	-
Sodium	-	-		-	-	353000	-	-	-	-	-	-	-	1 L	-	-	-	368,000	257,000	70,800	144,000
Thallium	-	1 L		-	-	19 L	19 L	10 L	1 L	10 L	10 L	10 L	1 L	-	10 L	1 L	1 L	-	-	-	-
Zinc	-	8010	7250	-	3390	26	40	2050	2070	1670	1120	1730	11600	5140	54200	10400	3880	-	-	-	-
Filtered Metals (ug/L)																					
Antimony	12.3	15.4		-	-	-	70 L	110	13.8	6.6	14.2	8.2	16	23	37	31	27	-	-	-	-
Arsenic	2 L	2	1 L		-	-	5 L	5 L	3 L	3 L	2 L	2 L	2	1 L	5 L	1	1 L	-	-	-	-
Barium	-	-	178	218	439	87 B	161	482	1780	1070	85	1960	428	851	650	335	693	-	-	-	-
Beryllium	1 L	1 L		-	-	-	1 L	1 L	1 L	1	1 L	1 L	1 L	2 L	2 L	1 L	5 L	-	-	-	-
Cadium	4	18	134	2 L	11	0.2 L	158	2 L	2 L	2	2 L	2 L	2 L	4 L	4 L	2 L	10 L	2	2 L	2 L	2
Calcium	-	-		125000	137000	-	86700	186000	1500000	1720000	148000	1390000	588000	1110000	781000	397000	1450000	-	-	-	-
Chromium	5 L	13	5 L	200	5 L	3 B	37	3.5	1.4 L	10 L	5 L	5 L	2	10 L	5 L	5 L	30 L	-	-	-	-
Chromium (hexavalent)	-	-		-	-	10 L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	2 L	6	2 L	4	2	7 B	11	5 L	19	23	20	80	124	48	50	83	170	-	-	-	-
Iron	342	615	497	351	66	19.9 B	55	168	11	33	5 L	37	5 L	10 L	10 L	5 L	30 L	57	18	8	5
Lead	16.8	70	41	5 L	9	4.4	330	0.8 L	3760	1570	0.8 L	188	610	1390	467	460	3430	38	1 L	456	41.9
Magnesium	-	-		43700	14200	-	24700	17300	271	736	1790	227	110	50	200	310	280	-	-	-	-
Manganese	788	675	474	507	536	1460	2030	191	4	6	2 L	2 L	13	2 L	2 L	1	11	-	-	-	-
Mercury	0.1 L	0.2	0.1 L	0.2	-	0.2 L	0.2 L	0.2 L	0.35	0.33	0.4	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.34	0.18	0.36	0.37
Nickel	10	10 L	10 L	10 L	10 L	10 L	23	9	5	5	27	14	10	20 L	20 L	10 L	50 L	-	-	-	-
Potassium	-	-		73400	87500	-	107000	127000	134000	97500	50600	133000	84000	60000	68000	51100	134000	-	-	-	-
Selenium	2 L	1 L	5 L	-	-	-	40 L	4 L	5.3	5.7	3 L	3 L	6	12	12	17	13	-	-	-	-
Silver	3 L	3 L		-	-	-	5 L	5 L	5 L	5 L	5 L	5 L	3 L	6 L	10 L	3 L	20 L	-	-	-	-
Sodium	-	-		382000	413000	-	462000	418000	314000	224000	245000	300000	211000	117000	129000	93600	21800	-	-	-	-
Thallium	1 L	-		-	-	-	19 L	10 L	10 L	10 L	10 L	10 L	1 L	1 L	5 L	1 L	1 L	-	-	-	-
Zinc	201	4002	4180	35	1110	42.5	11100	3 L	770	64	3 L	13	30	591	160	24	850	12	3 L	537	12

Note: L denotes that the analyte was below the indicated instrument detection limit.
- denotes that the constituent was not analyzed.
B denotes that the analyte was detected in the blank.

A-3
MONITORING WELL DATA - ORGANIC

Recomp of Washington September, 1992 Page 3 of 4 Parameter (units)	MW-1	MW-3															MW-4	
	07-Jun-90	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	13-Jun-91	02-Aug-91	09-Dec-91	01-Mar-92	16-Jun-92	01-Sep-92	01-Dec-92	07-Jun-90	30-Sep-88
Volatile Organic Compounds (ug/L)																		
Methylene Chloride	0.4 JB	8.1 B	1.7 B	4.0 B	1.0 B	0.7 JB	0.4 JB	0.2 JB	1.3 JB	2.0 U	2.0 U	2.0 U	2.0 U	2.1 B	2.0 U	2.0 U	0.9 JB	20.0 B
Acetone	2.6 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.9 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.6 J	5.0 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.6
2-Butanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	1.0 U	1.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5
Toluene	1.0 U	4.4	0.8 M	0.5 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.2
Total Xylenes	2.0 U	2.3	0.5 M	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.3
Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl Chloride	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chlorethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1- Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroflouromethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Note: U denotes that the compound was not detected at the indicated detection limit.
J denotes an estimated value less than the detection limit.
M denotes an estimated value of analyte found and confirmed but with low spectral match parameters.
B denotes that compund was also present in labrotory blank and may represent laboratory contamination of field sample.
K denotes above linear range.
Laboratory analyses preformed by Analytical Resources Inc.

MW-5														MW-6	MW-7	MW-8	MW-9			
14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	13-Jun-91	02-Aug-91	09-Dec-91	01-Mar-92	16-Jun-92	01-Sep-92	01-Dec-92	07-Jun-90	07-Jun-90	07-Jun-90	07-Jun-90	30-Sep-88	14-Mar-89	20-Jun-89
1.0 JB	11.0 B	0.6 JB	0.8 JB	2.0 JB	0.4 JB	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	4.3 B	2.0 U	2.0 U	1.9 JB	0.6 JB	3.3 B	0.7 JB	19.0 B	0.9 JB	3.3 B
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.2 J	3.1 J	3.9 J	5.0 U	5.0 U	5.0 U
0.3 M	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.6	1.0 U	1.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
0.4 M	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	0.5 M	0.3 M
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.6 M	2.0 U	2.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.4
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

MW-10												MW-11
25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	13-Jun-91	02-Aug-91	09-Dec-91	01-Mar-92	16-Jun-92	01-Sep-92	01-Dec-92	07-Jun-90
2.0 U	2.6 B	0.9 JB	2.0 U	0.7 JB	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.8 B
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U	1.0 U	0.3 MJ
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Recomp of Washington September, 1992 Page 4 of 4 Parameter (units)	MW-1	MW-3					MW-4	MW-5						MW-6	MW-7	MW-8	MW-9	
	07-Jun-90	14-Mar-89	20-Jun-89	25-Oct-89	07-Jun-90	25-Jul-90	07-Jun-90	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	07-Jun-90	25-Jul-90	07-Jun-90	07-Jun-90	07-Jun-90	07-Jun-90	30-Sep-88
Acid/Base/Neutral Extractables (ug/L)																		
Phenol	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.7 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	7.0 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Methyl Phenol	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl Phenol	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4-Dimethyl Phenol	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.7 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic Acid	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	30.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Pentachlorophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Butylbenzylphthalate	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis (2-Ethyhexyl) Phthalate	10.0	7.0	1.0 U	1.0 U	1.0 U	3.0	11.0	2.0	8.0	1.0 U	8.0	5.0 J	9.0	5.0 J	1.0 J	6.0 J	1.0 U	3.0
Di-n-butylphthalate	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethylphthalate	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-octylphthalate	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-2'-Oxybis(1-Chloropropane)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorophenol	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis (2-chloroisopropyl) Ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitroso-Di-n-Propylamine	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.7 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Nitrobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isophorone	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Nitrophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
bis (2-Chloroethyloxy) Methane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4-Dichlorophenol	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	9.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
1,2,4-Trichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chloroaniline	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	9.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Hexachlorobutadiene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.7 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.7 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylnaphthalene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4,5-Trichlorophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloronaphthalene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Nitroaniline	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dimethyl Phthalate	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acenaphthylene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
3-Nitroaniline	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4-Dinitrophenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	30.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-Nitrophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenzofuran	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4-Dinitrotoulene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,6-Dinitrotoulene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Chlorophenyl-phenylether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Flourene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitroaniline	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4,6-Dinitro-2-Methylphenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	30.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
N-Nitosodiphenylamine (I)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-bromophenyl-phenylether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Phenanthrene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	30.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Anthracene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Flouranthene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
3-3'-Dichlorobenzidine	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	15.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)Anthracene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
chysene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(b)Flouranthene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(k)Flouranthene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(a)Pyrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)Pyrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
dibenz(a,h)Anthracene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(ghi)Perylene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbazole	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Note: U denotes that the compound was not detected at the indicated detection limit.
J denotes an estimated value less than the detection limit.
M denotes an estimated value of analyte found and confirmed but with low spectral match parameters.
B denotes that compund was also present in labrotory blank and may represent laboratory contamination of field sample.
K denotes above linear range.

MW-10					MW-11
14-Mar-89	20-Jun-89	25-Oct-89	07-Jun-90	25-Jul-90	07-Jun-90
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
3.0	1.0 U	1.0 U	1.0 U	4.0	1.0 U
1.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

A-4
LEACHATE MONITORING - ORGANIC

Parameter (units)	Leachate														
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	13-Jun-91	02-Aug-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92
Volatile Organic Compounds (ug/L)															
Methylene Chloride	**28.0 B**	**1.2 B**	**1.6 B**	**1.7**	**0.9 JB**	**1.3 JB**	**0.4 JB**	**6.7 B**	2.0 U	2.0 U	2.0 U	**2.3**	**2.4 B**	2.0 U	2.0 U
Acetone	**34.0**	**17.0**	**7.6**	0.6 U	**36.0**	**4.6 J**	5.0 U	**140.0**	**15.0**	**25.0**	**150.0**	**63.0**	**47.0 B**	**83.0**	**110.0**
Chloroform	**.9 B**	**0.4 M**	0.9 U	0.9 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.2**	**4.3**	**4.9**	**4.4**	**4.7**	**4.3**
2-Butanone	**8.6**	**13.0**	1.0 U	1.0 U	**10.0**	7.5 U	5.0 U	**170.0**	5.0 U	**7.0**	**39.0**	**18.0**	**9.1**	**20.0**	**23.0**
Benzene	0.4 U	**1.7**	0.4 U	0.4 U	**2.6**	1.0 U	1.0 U	**16.0**	**0.6 M**	**O.7 J**	**21.0**	**32.0**	**5.6**	**9.7**	**60.0**
Toluene	0.6 U	**1.7 B**	0.6 U	0.6 U	**1.4**	1.0 U	1.0 U	**4.9**	1.0 U	**0.6 J**	**9.5**	**7.3**	**1.1**	**2.9**	**7.8**
Total Xylenes	2.0 U	2.0 U	2.0 U	**0.7 J**	1.0 U	2.0 U	2.0 U	**2.0**	2.0 U	2.0 U	**2.4**	**2.8 M**	2.0 U	2.0 U	**1.4 J**
Ethylbenzene	1.0 U	**0.5 M**	1.0 U	1.0 U	**0.7 M**	1.0 U	1.0 U	**3.7**	1.0 U	1.0 U	**12.0**	**3.8**	1.0 U	**1.9**	**3.9**
Styrene	1.0 U	**0.9 M**	1.0 U	1.0 U	**0.8 M**	1.0 U	1.0 U	**5.2**	1.0 U	**0.6 J**	**9.1**	**7.2**	1.0 U	**1.8**	1.0 U
Chloromethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**7.0**	**3.9**	2.0 U	2.0 U	**1.4 J**
Vinyl Acetate	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide	**5.3**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.6 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	**0.3 M**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**1.6 M**	2.0 U	2.0 U	2.0 U
Vinyl Chloride	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chlorethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1- Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chloroethylvinylether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes: U indicates that the compound was not detected at the indicated detection limit.
B denotes that compound was also present in laboratory blank and may represent laboratory contamination of field sample.
J denotes an estimated value less than the detection limit.
M denotes an estimate value of analyte found and confirmed but with low spectral match parameters.
Laboratory analyses performed by Analytical resources Inc.

Parameter (units)	Leachate														
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	13-Jun-91	02-Aug-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92
Acid/Base/Neutral Extractables (ug/L)															
Phenol	**30.0**	**17.0**	2.0 U	2.0 U	**4.0 M**	**1.0 J**	2.0 U	**400.0**	**2.5**	**2.3**	**87.0**	**27.0**	**4.4**	**41.0**	**49.0**
Benzyl Alcohol	**1.0 M**	**2.0 J**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**1.6 J**	**3.6 J**	5.0 U	5.0 U	**1.9 J**	25.0 U
2-Methyl Phenol	**17.0**	**12.0**	1.0 U	1.0 U	**9.0**	1.0 U	1.0 U	**92.0**	1.0 U	1.0 U	**37.0**	**6.3 J**	**0.7 J**	**15.0**	**15.0**
4-Methyl Phenol	**67.0**	**24.0**	1.0 U	1.0 U	**17.0**	1.0 U	1.0 U	**250.0**	1.0 U	**1.8**	**75.0**	**13.0**	**1.6**	**43.0**	**27.0**
2,4-Dimethyl Phenol	**11.0**	**6.0**	2.0 U	2.0 U	**7.0**	2.0 U	2.0 U	**37.0**	2.0 U	2.0 U	**25.0**	2.0 U	2.0 U	**6.8**	**6.2 J**
Benzoic Acid	**110.0**	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	**760.0**	10.0 U	**15.0**	**460.0**	**74.0**	**46.0**	**280.0**	**330.0**
Pentachlorophenol	**3.0 J**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	50. U	5.0 U	25.0 U
Butylbenzylphthalate	**2.0**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
bis (2-Lexyl) Phthalate	2.0 U	**2.0**	1.0 U	**1.9 B**	**2.0 M**	1.0 U	1.0 U	**2.7**	**1.5**	**2.5**	**2.6**	1.0 U	1.0 U	**1.7 B**	**15.0 B**
Di-n-butylphthalate	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**7.8 B**
Naphthalene	1.0 U	**1.0 J**	1.0 U	1.0 U	**0.8 M**	1.0 U	1.0 U	**3.9**	1.0 U	**1.9**	**4.9**	1.0 U	1.0 U	**2.2**	**8.8**
Diethylphthalate	1.0 U	**1.0**	1.0 U	1.0 U	**2.0**	1.0 U	1.0 U	**3.5**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**10.0 B**
Di-n-octylphthalate	1.0 U	**3.0**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
2-2'-Oxybis(1-Chloropropane)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
2-Chlorophenol	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,3-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,4-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
bis (2-chloroisopropyl) Ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
N-Nitroso-Di-n-Propylamine	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Hexachloroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	10.0 U
Nitrobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Isophorone	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
2-Nitrophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	25.0 U
bis (2-Chloroethyloxy) Methane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
2,4-Dichlorophenol	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	15.0 U
1,2,4-Trichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
4-Chloroaniline	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	15.0 U
Hexachlorobutadiene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	10.0 U
4-Chloro-3-Methylphenol	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	10.0 U
2-Methylnaphthalene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**0.7 M**	1.0 U	1.0 U	1.0 U	5.0 U
Hexachlorocyclopentadiene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	25.0 U
2,4,6-Trichlorophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	25.0 U
2,4,5-Trichlorophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	25.0 U
2-Chloronaphthalene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
2-Nitroaniline	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dimethyl Phthalate	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acenaphthylene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.1**	1.0 U	1.0 U	1.0 U	1.0 U
3-Nitroaniline	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	**0.6 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.0 J**	**0.6 J**	1.0 U	1.0 U	**0.6 J**	1.0 U
2,4-Dinitrophenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-Nitrophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenzofuran	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4-Dinitrotoulene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,6-Dinitrotoulene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Chlorophenyl-phenylether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluorene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitroaniline	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**0.7 M**	1.0 U	1.0 U	1.0 U	1.0 U
4,6-Dinitro-2-Methylphenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
N-Nitrosodiphenylamine (I)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-bromophenyl-phenylether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Phenanthrene	**0.5 J**	1.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**2.5**	**0.6 J**	1.0 U	1.0 U	**0.5 J**	1.0 U
Anthracene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Flouranthene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**0.9 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
3-3'-Dichlorobenzidine	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)Anthracene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(b)Fluoranthene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(k)Fluoranthene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(a)Pyrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)Pyrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
dibenz(a,h)Anthracene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(ghi)Perylene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbazole	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes: U denotes that the compound was not detected at the indicated detection limit.
J denotes an estimated value less than the detection limit.
M denotes an estimated value of analyte found and confirmed but with low spectral match parameters.
B denotes that compound was also present in labrotory blank and may represent laboratory contamination of field sample.
Laboratory analyses performed by Analytical Resources Inc.

Parameter (units)	Leachate											
	25-Jan-90	07-Jun-90	25-Sep-90	20-Mar-91	13-Jun-91	02-Aug-91	20-Oct-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92
Pesticides/PCBs (ug/L)												
Alpha-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Beta-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Delta-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Gamma-BHC (Lindane)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aldrin	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor Epoxide	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan 1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dieldrin	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
4,4'-DDE	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Endrin	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Endosulfan 2	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
4,4'-DDD	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Endosulfan Sulfate	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
4,4'-DDT	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Methoxychlor	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Endrin Ketone	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Endrin Aldehyde	–	–	–	–	–	–	–	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Gamma-Chlordane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Alpha-Chlordane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Toxaphene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Aroclor-1242/1016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1248	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1254	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1260	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1221	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Aroclor-1232	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Herbicides (ug/L)												
Silvex (2,4,5-TP)	0.25 U	0.5 U	0.15 U	0.15 U	0.5 U	0.5 U	0.5 U	0.25 U	0.5 U	0.17 U	0.25 U	0.25 U
2,4,5-T	0.5 U	0.5 U	0.3 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.17 U	0.5 U	0.5 U
Dinoseb	0.5 U	0.5 U	0.6 U	0.6 U	0.5 U	**0.25 J**	0.5 U	0.5 U	0.5 U	0.19 U	0.5 U	0.5 U
Dicamba	0.5 U	0.5 U	0.15 U	0.15 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 U	0.5 U	0.5 U
2,4-D	1.0 U	1.5 U	5.0 U	5.0 U	1.5 U	1.0 U	1.0 U	**2.5**	1.5 U	1.5 U	1.0 U	1.0 U
2,4-DB	5.0 U	4.0 U	2.0 U	2.0 U	4.0 U	5.0 U	5.0 U	4.0 U	4.0 U	1.5 U	5.0 U	5.0 U
Dalapon	0.60 U	25.0 U	20.0 U	20.0 U	25.0 U	30.0 U	30.0 U	40.0 U	25.0 U	9.0 U	5.0 U	1.0 U
MCPA	–	–	–	–	–	–	–	–	–	–	200 U	200 U
Me-Dichloprop	–	–	–	–	–	–	–	–	–	–	1.0 U	3.0 U

Notes: U denotes that the compound was not detected at the indicated detection limit.
J denotes an estimated value less than the detection limit.
M denotes an estimated value of analyte found and confirmed but with low spectral match parameters.
B denotes that compound was also present in labrotory blank and may represent laboratory contamination of field sample.
Laboratory analyses performed by Analytical Resources Inc.

A-5
SURFACE WATER MONITORING DATA

Recomp of Washington

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Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91
Surface Water SW-1											
Field Parameters											
Stream Discharge (CFS)	DRY	DRY	DRY	DRY	0.017	0.001	DRY	0.000	0.003	0.001	DRY
Temperature (C)					5.8	17.3			15.6	19.4	
Dissolved Oxygen (mg/L)					9.0	7.6			5.4	7.5	
Redox Potential (mV)					295	212				-39	
Specific Conductance (uS/cm @ 25C)					250	506			622	503	
pH					7.5	7.5			7.0	7.1	
Nonmetals											
Alkalinity (mg/L as CaCO3)					70	184			219	140	
Chloride (mg/L as Cl)					30	57			45	40	
Sulfate (mg/L as SO4)					125.0	86.0			6.6	19.0	
Nitrate+Nitrite (mg/l as N)					0.019	0.058			0.010 L	0.010 L	
Ammonia (mg/L as N)					0.010 L	0.026 L			0.010 L	0.110	
Chemical Oxygen Demand (mg/L)					-	44.8			45.6	34.2	
Total Organic Carbon (mg/L as C)					19.0	21.6			86.6	54.1	
Total Suspended Solids (mg/L)					13.1	10.8			57.0	80.0	
Cyanide (mg/l)						0.147					
Total Coliform (No./100ml)					180						
Total Metals (ug/L)											
Antimony									4	2	
Arsenic					1	2 B			10	3 L	
Barium					74	65 B			93	115	
Berylium									1 L	1 L	
Cadmium					2 L	0 L			2 L	2 L	
Calcium						45,300					
Chromium					5 L	3 L			4	10 L	
Chromium (Hexavalent)						10 L					
Copper					6	10 B			13	15	
Iron					5,510	3,060 E			1,420	8,500	
Lead					6 L	1 L			5 L	22	
Magnesium						20,900			26,700	17,700	
Manganese					1,590	3,620			6,220	2,520	
Mercury					0 L	0 L			0	0	
Nickel					10 L	10 L			9	19	
Potassium						700 L					
Selenium					1 L	2 L			3 L	3 L	
Silver					3 L	2 L			5 L	5 L	
Sodium						32,500					
Thallium									1 L	1 L	
Zinc					51	12 B			5	51	
Filtered Metals (ug/L)											
Antimony											
Arsenic											
Barium						160 B					
Berylium											
Cadmium						0 L					
Calcium											
Chromium						3 B					
Chromium (hexavalent)						10 L					
Copper						5 B					
Iron						831					
Lead						1 L					
Magnesium											
Manganese						3,930					
Mercury						0.2 L					
Nickel						10 L					
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Zinc						20 B					

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.

Recomp of Washington Page 2 of 2 Parameter (units)	Surface Water SW-1 19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters										
Stream Discharge (CFS)	0.006	0.020	0.003	0.007	0.003	0.006	0.002	DRY	DRY	0.039
Temperature (C)	20.7	7.0	14.7	15.9	26.5	5.7	17.5		7.2	8.6
Dissolved Oxygen (mg/L)	6.2	9.3	5.1	7.8	7.4	10.0				
Redox Potential (mV)	96	164	-4	249	144	75				
Specific Conductance (uS/cm @	463	655	540	418	407	440	676		422	404
pH 25C)	7.6	7.2	7.3	6.6	6.9	7.4	7.7		8.3	8.3
Nonmetals										
Alkalinity (mg/L as CaCO3)	42	135	207	160	145	151				
Chloride (mg/L as Cl)	57	74	42	43	41	45				32
Sulfate (mg/L as SO4)	5.7	44.5	14.2	12.7	21.2	18.3				18.9
Nitrate+Nitrite (mg/l as N)	0.017	0.010 L	0.012	0.010 L	0.012	0.136				0.120
Ammonia (mg/L as N)	0.042	0.014	0.027	0.034	0.011	0.010 L				0.304
Chemical Oxygen Demand (mg/L)	22.8	90.0	55.0	34.1 L	26.2	5.0 L				405.0
Total Organic Carbon (mg/L as C)	15.5	34.9	36.1	24.9	19.5	10.1				118.0
Total Suspended Solids (mg/L)	29.0	6.6	27.0	27.0	7.0	72.0				
Cyanide (mg/l)										
Total Coliform (No./100ml)										
Total Metals (ug/L)										
Antimony	4	1 L	1 L	1 L	1 L	1 L				
Arsenic	2 L	1 L	5	1	2	1 L				
Barium	38	53	121	39	60	51				
Beryllium	1 L	1 L	1 L	1 L	1 L	1 L				
Cadmium	2 L	2 L	2 L	2	3	2 L				
Calcium										35
Chromium	5 L	4	5 L	5 L	5 L	5 L				
Chromium (Hexavalent)										
Copper	11	6	7	11	2 L	2 L				
Iron	2,320	1,730	9,240	3,750	857	1,100				
Lead	32	7	14	24	4	5				
Magnesium	13,700	17,700	21,000	18,200	16,700	19,100				22
Manganese	169	2,770	5,720	748	1,670	2,850				
Mercury	0	0 L	0 L	0 L	0 L	0 L				
Nickel	17	10	10 L	10 L	20	10 L				
Potassium										14
Selenium	3 L	1 L	1 L	1 L	1 L	1 L				
Silver	5 L	3 L	3 L	3 L	3 L	3 L				
Sodium										23
Thallium	10 L	1	1 L	1 L	1 L	1 L				
Zinc	32	31	18	26	7	10				
Filtered Metals (ug/L)										
Antimony										
Arsenic										
Barium										
Beryllium										2 L
Cadmium										
Calcium										
Chromium										
Chromium (hexavalent)										
Copper										
Iron										3,280
Lead										5
Magnesium										
Manganese										
Mercury										0.1 L
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Zinc										72

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.

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Parameter (units)	Surface Water SW-2										
	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91
Field Parameters											
Stream Discharge (CFS)	DRY	DRY	DRY	DRY	0.000	0.002	DRY	0.000	0.004	0.001	DRY
Temperature (C)					5.3	16.8			9.9	18.0	
Dissolved Oxygen (mg/L)					10.9	6.8			8.6	7.0	
Redox Potential (mV)					257	289				121	
Specific Conductance (uS/cm @ 25C)					275	343			625	923	
pH					7.8	7.5			7.4	7.1	
Nonmetals											
Alkalinity (mg/L as CaCO3)					75	74			173	266	
Chloride (mg/L as Cl)					30	33			86	109	
Sulfate (mg/L as SO4)					79.1	88.0			12.0	2.0 L	
Nitrate+Nitrite (mg/l as N)					0.163	2.840			0.012	0.010 L	
Ammonia (mg/L as N)					0.031	0.878			0.015	0.060	
Chemical Oxygen Demand (mg/L)						38.4			37.4	48.2	
Total Organic Carbon (mg/L as C)					9.4	13.2			37.0	54.7	
Total Suspended Solids (mg/L)					660.0	35.2			90.0	5.3	
Cyanide (mg/l)						0.144					
Total Coliform (No./100ml)					3,700						
Total Metals (ug/L)											
Antimony									3	2 L	
Arsenic					6	1 L			3 L	3 L	
Barium					229	38 B			32	29	
Berylium									1 L	1 L	
Cadmium					2 L	0 L			2	2 L	
Calcium						24,000					
Chromium					58	3 L			5	10 L	
Chromium (Hexavalent)						10 L					
Copper					10	12 B			11	13	
Iron					37,500	1,410 E			588	877	
Lead					10	4			4	2	
Magnesium						10,200			20,600	24,600	
Manganese					858	907			673	9,870	
Mercury					0	0 L			6	1	
Nickel					50	10 L			5 L	7	
Potassium						1,680 B					
Selenium					5 L	2 L			3 L	5	
Silver					3 L	2 L			5 L	5 L	
Sodium						25,700					
Thallium									1 L	1 L	
Zinc					105	13 B			10	19	
Filtered Metals (ug/L)											
Antimony											
Arsenic											
Barium						116 B					
Berylium											
Cadmium						0 B					
Calcium											
Chromium						3 B					
Chromium (hexavalent)						10 L					
Copper						8 B					
Iron						927					
Lead						1 L					
Magnesium											
Manganese						2,080					
Mercury						0.2 L					
Nickel						10 L					
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Zinc						16 B					

Note: L denotes that the analyte was below the indicated instrument detection limit.
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Surface Water SW-2

Parameter (units)	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters										
Stream Discharge (CFS)	DRY	0.044	0.013	0.000	0.019	0.038	DRY	DRY	0.000	0.000
Temperature (C)		5.4	9.9	15.1	15.1	3.9			6.1	7.9
Dissolved Oxygen (mg/L)		7.1	4.3	2.9	2.3	7.8				
Redox Potential (mV)		83	34	2	160	27				
Specific Conductance (uS/cm @ 25C)		495	611	888	728	600			920	568
pH		7.1	7.4	6.0	6.6	7.4			7.5	8.3
Nonmetals										
Alkalinity (mg/L as CaCO3)		107	178	197	67	147				
Chloride (mg/L as Cl)		128	84	146	129	97				72
Sulfate (mg/L as SO4)		38.1	13.0	53.5	76.9	21.7				36.2
Nitrate+Nitrite (mg/l as N)		0.038	0.069	0.010 L	0.026	0.011				0.019
Ammonia (mg/L as N)		0.021	0.044	0.219	0.022	0.010 L				0.017
Chemical Oxygen Demand (mg/L)		49.0	33.0	5.0 L	25.0	5.2				530.0
Total Organic Carbon (mg/L as C)		24.7	27.0	37.1	17.9	10.7				16.5
Total Suspended Solids (mg/L)		4.0	1.8	14.0	1.5	2.0				
Cyanide (mg/l)										
Total Coliform (No./100ml)										
Total Metals (ug/L)										
Antimony		1 L	1 L	1 L	1	1 L				
Arsenic		1 L	1 L	2	1	1 L				
Barium		22	19	106	51	20				
Beryllium		1 L	1 L	1 L	1 L	1 L				
Cadmium		2 L	2 L	2 L	2	2 L				
Calcium										32,700
Chromium		1	5 L	5 L	5 L	5 L				
Chromium (Hexavalent)										
Copper		4	4	12	12	2 L				
Iron		846	975	6,040	289	431				
Lead		2	1 L	2	1 L	2				
Magnesium		14,600	18,600	252,000	17,600	19,700				17,900
Manganese		259	1,370	13,100	134	468				
Mercury		0 L	0 L	0 L	0 L	0 L				
Nickel		10 L	10 L	10 L	10 L	10 L				
Potassium										5,590
Selenium		1 L	1 L	1 L	1 L	1 L				
Silver		3 L	3 L	3 L	3 L	3 L				
Sodium										45,900
Thallium		1	1 L	1 L	1 L	1 L				
Zinc		6	5	24	11	6				
Filtered Metals (ug/L)										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										2 L
Calcium										
Chromium										
Chromium (hexavalent)										
Copper										
Iron										112
Lead										1 L
Magnesium										
Manganese										
Mercury										0.1 L
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Zinc										6

Note: L denotes that the analyte was below the indicated instrument detection limit.
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Surface Water SW-3

Parameter (units)	30-Sep-88	14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91
Field Parameters											
Stream Discharge (CFS)	0.002	1.000	0.014	0.052	1.910	1.240	0.006	0.006	0.265	0.016	DRY
Temperature (C)	13.8	6.6	14.2	14.0	5.7	15.4	14.9	15.2	9.5	15.8	
Dissolved Oxygen (mg/L)	10.4	8.6	2.6	6.0	10.1	5.8	5.0	4.0	11.9	7.7	
Redox Potential (mV)	160	146	25	192	265	168		108		44	
Specific Conductance (uS/cm @	4,236	367	2,255	1,294	379	1,473	1,797	6,166	888	2,293	
pH 25C)	6.6	7.3	6.9	7.3	7.8	7.2	7.0	6.8	7.7	7.0	
Nonmetals											
Alkalinity (mg/L as CaCO3)	8	73	151	76	60	73	155	66	82	147	
Chloride (mg/L as Cl)	2,693	48	656	346	60	336	443	2,316	61	636	
Sulfate (mg/L as SO4)	514.0	86.0	74.4	113.0	60.2	85.0	35.0	217.0	20.0	8.0	
Nitrate+Nitrite (mg/l as N)	0.060	0.110	0.010 L	0.320	1.067	0.691	0.066	0.361	0.519	0.020	
Ammonia (mg/L as N)	0.390	0.010 L	0.014	0.170	0.061	0.343	0.044	1.033	0.010 L	0.039	
Chemical Oxygen Demand (mg/L)	120.0	11.0	38.0		-	26.7	26.3	32.3	9.2	24.2	
Total Organic Carbon (mg/L as C)	7.1	11.6		7.7	5.5	9.9	10.0	3.1	13.8	25.3	
Total Suspended Solids (mg/L)			6.0	31.0	160.0	52.5	9.5	10.0	1.8	5.2	
Cyanide (mg/l)						0.102					
Total Coliform (No./100ml)	12,000		400		21,000						
Total Metals (ug/L)											
Antimony							70 L	70 L	3	2	
Arsenic				3	3	1 B	5 L	5 L	3 L	3 L	
Barium				50	84	37 B	30	261	35	57	
Berylium							1 L	3	1 L	1 L	
Cadmium				2 L	2 L	0 L	2 L	2 L	38	2 L	
Calcium						21,500					
Chromium				6	17	3 L	5	4	2	10 L	
Chromium (Hexavalent)						10 L					
Copper				10	7	13 B	15 L	5	10	7	
Iron				3,720	11,000	1,190 E	4,050	3,570	692	1,840	
Lead				6	7	3	11	3	2	3	
Magnesium						9,760			12,000	26,500	
Manganese				291	290	199	786	7,960	119	4,930	
Mercury				0 L	0 L	0 L	0 L	0	0	0	
Nickel				10	20	10 L	50	11	5 L	5	
Potassium						1,340 B					
Selenium				1 L	5 L	2 L	40 L	4 L	3 L	3 L	
Silver				3 L	3 L	2 L	5 L	5 L	5 L	5 L	
Sodium						219,000					
Thallium							19 L	10 L	1 L	1 L	
Zinc				26	51	17 B	55	45	4	7	
Filtered Metals (ug/L)											
Antimony	1	1 L	1 L								
Arsenic	10 L	1 L									
Barium			78			105 B					
Berylium	1 L	1 L									
Cadmium	4	2 L	2 L			0 B					
Calcium											
Chromium	5 L	5 L	5 L			5 B					
Chromium (hexavalent)						10 L					
Copper	4	14	2 L			8 B					
Iron	31	391	1,560			334					
Lead	10 L	1 L	1 L			1 L					
Magnesium											
Manganese	4,490	27	5,570			155					
Mercury	0.1 L	0.2 L	0.1 L			0.2 L					
Nickel	30 L	10 L	10 L			10 L					
Potassium											
Selenium	2 L	1 L	1 L								
Silver	3 L	3 L									
Sodium											
Thallium	5 L	1 L									
Zinc	857	23	5 L			17 B					

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.

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Surface Water SW-3

Parameter (units)	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters										
Stream Discharge (CFS)	0.011	0.074	0.061	0.030	0.021	0.054	0.033	DRY	0.034	1.250
Temperature (C)	15.6	4.9	9.7	14.9	15.1	3.1			5.2	7.9
Dissolved Oxygen (mg/L)	3.9	7.0	6.7	4.3	4.9	7.0				
Redox Potential (mV)	22	88	13	-2	8	2				
Specific Conductance (uS/cm @	3,510	1,266	1,724	2,020	3,576	1,771			1,158	582
pH 25C)	6.8	7.1	7.5	6.2	6.9	7.5			7.2	8.9
Nonmetals										
Alkalinity (mg/L as CaCO3)	142	128	155	117	68	156				
Chloride (mg/L as Cl)	762	371	484	601	1,089	464				96
Sulfate (mg/L as SO4)	18.2	38.6	12.2	20.0	40.1	23.7				27.7
Nitrate+Nitrite (mg/l as N)	0.128	0.584	0.624	0.024	0.229	0.306				0.314
Ammonia (mg/L as N)	0.099	0.712	0.064	0.554	0.270	0.571				0.056
Chemical Oxygen Demand (mg/L)	23.4	67.0	35.0	5.0 L	20.2	5.0 L				34.4
Total Organic Carbon (mg/L as C)	25.9	26.9	21.3	19.7	13.7	10.0				12.1
Total Suspended Solids (mg/L)	2.5	15.0	2.0	18.0	4.4	3.0				
Cyanide (mg/l)										
Total Coliform (No./100ml)										
Total Metals (ug/L)										
Antimony	4	1 L	1 L	1 L	1 L	1 L				
Arsenic	2 L	1 L	1 L	2	1	2				
Barium	64	38	34	97	107	48				
Berylium	1 L	1 L	1 L	1 L	1 L	1 L				
Cadmium	2 L	2 L	2 L	2 L	2 L	2 L				
Calcium										23,600
Chromium	5	11	5 L	5 L	5 L	5 L				
Chromium (Hexavalent)										
Copper	5 L	10	3	7	7	4				
Iron	2,060	1,860	973	5,140	1,620	717				
Lead	1 L	3	1 L	2	2	6				
Magnesium	24,900	17,400	20,300	17,900	16,200	25,300				10,400
Manganese	2,870	431	457	4,400	1,500	351				
Mercury	0	0 L	0 L	0 L	0 L	0 L				
Nickel	24	10 L	10 L	10 L	10 L	10 L				
Potassium										4,040
Selenium	3 L	1 L	1 L	1 L	1 L	1 L				
Silver	5	3 L	3 L	3 L	3 L	3 L				
Sodium										73,500
Thallium	10 L	1 L	1 L	1 L	1 L	1 L				
Zinc	26	19	7	4	44	10				
Filtered Metals (ug/L)										
Antimony										
Arsenic										
Barium										
Berylium										
Cadmium										2 L
Calcium										
Chromium										
Chromium (hexavalent)										
Copper										
Iron										204
Lead										1 L
Magnesium										
Manganese										
Mercury										0.1
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Zinc										3 L

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.

Recomp of Washington Page 1 of 2 Parameter (units)	Surface Water SW-4 14-Mar-89	20-Jun-89	25-Oct-89	25-Jan-90	07-Jun-90	25-Jul-90	25-Sep-90	27-Mar-91	13-Jun-91	02-Aug-91
Field Parameters										
Stream Discharge (CFS)	0.830	DRY	DRY	2.120	1.180	0.006	0.006	0.261	0.016	DRY
Temperature (C)	6.6			5.4	15.8	13.7		9.3	15.7	
Dissolved Oxygen (mg/L)	8.7			10.4	6.8	4.0		11.8	7.0	
Redox Potential (mV)	171			284	231	214			42	
Specific Conductance (uS/cm @	367			363	1,564	1,773		481	2,383	
pH 25C)	7.3			7.5	7.9	7.1		7.8	6.9	
Nonmetals										
Alkalinity (mg/L as CaCO3)					76					
Chloride (mg/L as Cl)					392					
Sulfate (mg/L as SO4)					81.0					
Nitrate+Nitrite (mg/l as N)					0.454					
Ammonia (mg/L as N)					0.428					
Chemical Oxygen Demand (mg/L)					25.0					
Total Organic Carbon (mg/L as C)					5.1					
Total Suspended Solids (mg/L)					36.7					
Cyanide (mg/l)					0.111					
Total Coliform (No./100ml)										
Total Metals (ug/L)										
Antimony										
Arsenic					1 I					
Barium					35 B					
Berylium										
Cadmium					0 b					
Calcium					21,000					
Chromium					3 L					
Chromium (Hexavalent)					10 L					
Copper					10 B					
Iron					1,170 E					
Lead					3					
Magnesium					9,820					
Manganese					115					
Mercury					0 L					
Nickel					10 L					
Potassium					921 B					
Selenium					2 L					
Silver					2 L					
Sodium					252,000					
Thallium										
Zinc					15 B					
Filtered Metals (ug/L)										
Antimony										
Arsenic										
Barium					102 B					
Berylium										
Cadmium					0 B					
Calcium										
Chromium					5 B					
Chromium (hexavalent)					10 L					
Copper					8 B					
Iron					572					
Lead					1 L					
Magnesium										
Manganese					52					
Mercury					0.2 L					
Nickel					10 L					
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Zinc					21					

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.

Recomp of Washington Page 2 of 2	Surface Water SW-4									
Parameter (units)	19-Sep-91	09-Dec-91	18-Mar-92	16-Jun-92	19-Sep-92	15-Dec-92	24-Jun-93	02-Sep-93	05-Nov-93	04-Jan-94
Field Parameters										
Stream Discharge (CFS)	0.010	0.031	0.048	0.030	0.030	0.059	0.033	DRY	0.034	1.210
Temperature (C)	16.0	4.9	10.0	15.3	14.9	3.0	15.4		5.2	8.7
Dissolved Oxygen (mg/L)	2.7	5.0	4.7	3.2	1.7	5.6				
Redox Potential (mV)	17	92	39	-32	71	5				
Specific Conductance (uS/cm @	3,502	1,542	1,962	2,087	3,853	2,070	1,239		1,128	576
p 25C)	6.8	7.1	7.4	6.2	6.9	7.7	7.4		7.5	8.9
Nonmetals										
Alkalinity (mg/L as CaCO3)		141								
Chloride (mg/L as Cl)		520				557	275		236	
Sulfate (mg/L as SO4)		34.8					6.4		29.4	
Nitrate+Nitrite (mg/l as N)		0.989					0.406		0.341	
Ammonia (mg/L as N)		0.875					0.010		0.236	
Chemical Oxygen Demand (mg/L		59.0					39.0		5.8	
Total Organic Carbon (mg/L as C)		26.6					11.5		6.3	
Total Suspended Solids (mg/L)		19.0								
Cyanide (mg/l)										
Total Coliform (No./100ml)										
Total Metals (ug/L)										
Antimony		1 L		1 L	1 L	1 L				
Arsenic		1 L		4	1 L	2				
Barium		42		124	113	57				
Beryllium		1 L		1 L	1 L	1 L				
Cadmium		2 L		5	2 L	2 L				
Calcium							38,500		31,100	
Chromium		13		5 L	5 L	5 L				
Chromium (Hexavalent)										
Copper		11		10	7	4				
Iron		1,810		13,600	1,500	854				
Lead		3		2	2	3				
Magnesium		18,200		17,000	14,200	26,700	19,300		19,300	
Manganese		419		4,470	1,510	393				
Mercury		0 L		0 L	0 L	0 L				
Nickel		10 L		10 L	10 L	10 L				
Potassium							2,400		5,050	
Selenium		1 L		1 L	1 L	1 L				
Silver		3 L		3 L	3 L	3 L				
Sodium							177,000		158,000	
Thallium		1 L		1 L	1 L	1 L				
Zinc		17		12	52	9				
Filtered Metals (ug/L)										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium							2 L		2 L	
Calcium										
Chromium										
Chromium (hexavalent)										
Copper										
Iron							654		292	
Lead							1 L		1 L	
Magnesium										
Manganese										
Mercury							0.1		0.1	
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Zinc							10		3	

Note: L denotes that the analyte was below the indicated instrument detection limit.
B denotes that the analyte was detected in the blank.

A-6
STORAGE FACILITY SETTLEMENT DATA

RECOMP SETTLEMENT 1/17/94

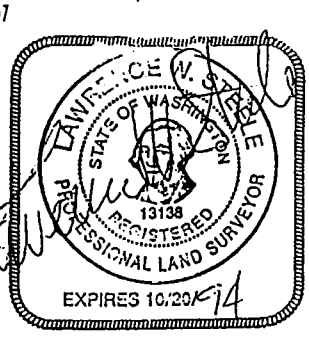
DATE----	POINT A1 NORTH	EAST	ELEV.	CHANGE ELEV.	POINT R4 NORTH	EAST	ELEV.	CHANGE ELEV.	POINT R5 NORTH	EAST	ELEV.	CHANGE ELEV.	POINT R6 NORTH	EAST	ELEV.	CHANGE ELEV.
7/18/90	356.65	648.08	34.02		341.69	604.59	27.54		316.20	537.60	25.54		308.20	511.02	22.75	
8/28/90	356.63	648.06	33.99	-0.03	341.68	604.58	27.49	-0.05	316.18	537.56	25.52	-0.02	308.20	511.02	22.72	-0.03
9/14/90	356.65	648.06	33.98	-0.04	341.70	604.58	27.49	-0.05	316.20	537.58	25.52	-0.02	308.22	511.00	22.72	-0.03
10/15/90	356.64	648.08	33.99	-0.03	341.69	604.56	27.50	-0.04	316.20	537.59	25.53	-0.01	308.21	511.01	22.74	-0.01
11/27/90	356.65	648.09	33.98	-0.04	341.69	604.57	27.50	-0.04	316.21	537.60	25.53	-0.01	308.21	511.03	22.74	-0.01
12/19/90	356.61	648.04	33.97	-0.05	341.64	604.52	27.50	-0.04	316.14	537.55	25.53	-0.01	308.15	511.00	22.74	-0.01
1/17/91	356.60	648.06	33.96	-0.06	341.62	604.50	27.55	0.01	316.16	537.60	25.53	-0.01	308.15	511.01	22.75	0.00
2/12/91	356.64	648.08	33.97	-0.05	341.67	604.52	27.54	0.00	316.19	537.60	25.53	-0.01	308.18	511.01	22.74	-0.01
3/14/91	356.62	648.07	33.97	-0.05	341.64	604.49	27.54	0.00	316.18	537.58	25.53	-0.01	308.18	511.02	22.75	0.00
4/22/91	356.63	648.08	33.98	-0.04	341.65	604.50	27.54	0.00	316.18	537.60	25.53	-0.01	308.19	511.02	22.76	0.01
5/15/91	356.66	648.09	33.96	-0.06	341.69	604.51	27.53	-0.01	316.23	537.60	25.53	-0.01	308.24	511.03	22.75	0.00
6/17/91	356.63	648.06	33.97	-0.05	341.66	604.48	27.53	-0.01	316.19	537.58	25.54	0.00	308.19	511.00	22.75	0.00
7/16/91	356.65	648.08	33.96	-0.06	341.68	604.51	27.52	-0.02	316.23	537.60	25.53	-0.01	308.23	511.01	22.75	0.00
8/14/91	356.64	648.09	33.96	-0.06	341.67	604.51	27.52	-0.02	316.23	537.61	25.53	-0.01	308.23	511.01	22.75	0.00
9/19/91	356.65	648.07	33.96	-0.06	341.68	604.50	27.51	-0.03	316.21	537.60	25.53	-0.01	308.22	511.02	22.75	0.00
10/21/91	356.63	648.07	33.95	-0.07	341.66	604.51	27.51	-0.03	316.20	537.60	25.52	-0.02	308.20	511.02	22.74	-0.01
11/15/91	356.64	648.07	33.96	-0.06	341.67	604.50	27.52	-0.02	316.21	537.60	25.53	-0.01	308.21	511.02	22.75	0.00
12/16/91	356.64	648.08	33.96	-0.06	341.67	604.48	27.53	-0.01	316.22	537.60	25.54	0.00	308.22	511.02	22.76	0.01
1/20/92	356.63	648.09	33.93	-0.09	341.66	604.49	27.51	-0.03	316.22	537.61	25.51	-0.03	308.21	511.04	22.73	-0.02
2/18/92	356.58	648.07	33.94	-0.08	341.61	604.47	27.52	-0.02	316.15	537.60	25.53	-0.01	308.15	510.99	22.75	0.00
3/20/92	356.64	648.09	33.93	-0.09	341.68	604.50	27.52	-0.02	316.23	537.62	25.52	-0.02	308.22	511.02	22.75	0.00
4/28/92	356.64	648.08	33.93	-0.09	341.67	604.47	27.52	-0.02	316.22	537.59	25.52	-0.02	308.23	511.00	22.74	-0.01
5/14/92	356.64	648.08	33.92	-0.10	341.67	604.49	27.52	-0.02					308.21	510.99	22.74	-0.01
6/11/92	356.63	648.06	33.91	-0.11	341.66	604.47	27.50	-0.04					308.22	511.01	22.72	-0.03
8/3/92	356.60	648.05	33.95	-0.07	341.63	604.47	27.51	-0.03					308.19	511.00	22.76	0.01
8/18/92	356.64	648.07	33.92	-0.10	341.67	604.49	27.51	-0.03					308.23	511.01	22.74	-0.01
9/17/92	356.63	648.06	33.92	-0.10	341.66	604.48	27.49	-0.05					308.22	511.00	22.73	-0.02
10/21/92	356.62	648.08	33.91	-0.11	341.65	604.49	27.50	-0.04					308.22	511.02	22.74	-0.01
11/10/92	356.60	648.07	33.92	-0.10	341.63	604.48	27.51	-0.03					308.19	511.01	22.74	-0.01
12/22/92	356.62	648.08	33.91	-0.11	341.66	604.48	27.51	-0.03					308.22	511.02	22.74	-0.01
1/19/93	356.62	648.08	33.95	-0.07	341.65	604.48	27.52	-0.02					308.19	511.03	22.75	0.00
2/10/93	356.63	648.09	33.90	-0.12	341.66	604.48	27.50	-0.04					308.23	511.02	22.74	-0.01
3/17/93	356.62	648.09	33.94	-0.08	341.66	604.48	27.49	-0.05					308.22	511.02	22.75	0.00
4/23/93	356.60	648.07	33.90	-0.12	341.63	604.46	27.50	-0.04					308.19	511.01	22.73	-0.02
5/25/93	356.61	648.07	33.90	-0.12	341.64	604.46	27.50	-0.04					308.21	511.00	22.74	-0.01
6/23/93	356.61	648.07	33.90	-0.12	341.64	604.46	27.49	-0.05					308.22	511.00	22.73	-0.02
7/19/93	356.60	648.05	33.95	-0.07	341.62	604.43	27.50	-0.04					308.18	510.99	22.77	0.02
8/13/93	356.63	648.08	33.90	-0.12	341.65	604.47	27.49	-0.05					308.22	511.00	22.73	-0.02
9/13/93	356.61	648.07	33.89	-0.13	341.64	604.47	27.49	-0.05					308.21	511.00	22.72	-0.03
10/14/93	356.59	648.07	33.90	-0.12	341.62	604.47	27.49	-0.05					308.20	511.00	22.72	-0.03
11/17/93	356.62	648.08	33.89	-0.13	341.64	604.47	27.49	-0.05					308.23	511.02	22.72	-0.03
12/15/93	356.60	648.07	33.90	-0.12	341.62	604.45	27.50	-0.04					308.19	511.00	22.75	0.00
1/17/94	356.57	648.05	33.87	-0.15	341.60	604.43	27.48	-0.06					308.15	510.98	22.71	-0.04

LAWRENCE W. STEELE
STATE OF WASHINGTON
13138
REGISTERED
PROFESSIONAL LAND SURVEYOR
EXPIRES 10/20/94

JAN 2 5 1994

RECOMP SETTLEMENT 1/17/94

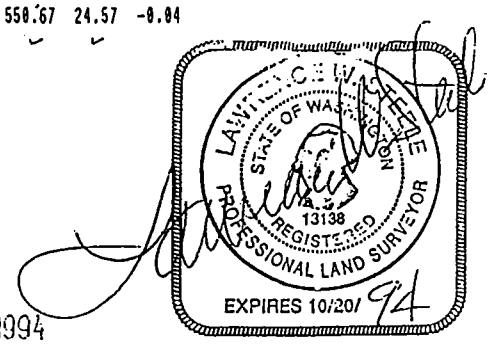
DATE----	POINT A NORTH	EAST	ELEV.	CHANGE ELEV.	POINT R7 NORTH	EAST	ELEV.	CHANGE ELEV.	POINT R8 NORTH	EAST	ELEV.	CHANGE ELEV.	POINT R9 NORTH	EAST	ELEV.	CHANGE ELEV.
7/18/90	481.59	602.15	36.78		464.92	560.57	28.26		436.57	488.64	24.51		427.11	465.25	22.52	
8/28/90	481.58	602.13	36.76	-0.02	464.90	560.55	28.24	-0.02	436.57	488.61	24.49	-0.02	427.10	465.24	22.50	-0.02
9/14/90	481.58	602.14	36.75	-0.03	464.91	560.56	28.23	-0.03	436.58	488.62	24.49	-0.02	427.12	465.24	22.50	-0.02
10/15/90	481.59	602.15	36.75	-0.03	464.91	560.57	28.24	-0.02	436.58	488.64	24.50	-0.01	427.12	465.26	22.52	0.00
11/27/90	481.59	602.17	36.74	-0.04	464.92	560.58	28.24	-0.02	436.59	488.65	24.50	-0.01	427.14	465.27	22.52	0.00
12/19/90	481.56	602.09	36.74	-0.04	464.86	560.49	28.25	-0.01	436.53	488.57	24.51	0.00	427.06	465.19	22.53	0.01
1/17/91	481.56	602.12	36.73	-0.05	464.86	560.51	28.32	0.06	436.54	488.61	24.50	-0.01	427.07	465.21	22.54	0.02
2/12/91	481.59	602.14	36.73	-0.05	464.90	560.53	28.32	0.06	436.58	488.63	24.49	-0.02	427.11	465.24	22.53	0.01
3/14/91	481.57	602.14	36.74	-0.04	464.88	560.53	28.33	0.07	436.56	488.63	24.51	0.00	427.09	465.23	22.54	0.02
4/22/91	481.58	602.15	36.75	-0.03	464.89	560.53	28.33	0.07	436.56	488.63	24.52	0.01	427.09	465.24	22.55	0.03
5/15/91	481.62	602.16	36.73	-0.05	464.93	560.55	28.32	0.06	436.61	488.64	24.50	-0.01	427.15	465.25	22.53	0.01
6/17/91	481.57	602.12	36.73	-0.05	464.88	560.51	28.33	0.07	436.55	488.61	24.51	0.00	427.08	465.22	22.54	0.02
7/16/91	481.61	602.16	36.73	-0.05	464.92	560.54	28.30	0.04	436.62	488.65	24.50	-0.01	427.15	465.26	22.53	0.01
8/14/91	481.60	602.17	36.73	-0.05	464.91	560.54	28.29	0.03	436.61	488.67	24.50	-0.01	427.15	465.26	22.53	0.01
9/19/91	481.60	602.14	36.72	-0.06	464.90	560.51	28.30	0.04	436.60	488.63	24.50	-0.01	427.12	465.23	22.53	0.01
10/21/91	481.58	602.14	36.71	-0.07	464.89	560.50	28.29	0.03	436.58	488.63	24.49	-0.02	427.11	465.23	22.52	0.00
11/15/91	481.59	602.14	36.71	-0.07	464.89	560.50	28.30	0.04	436.59	488.64	24.50	-0.01	427.11	465.24	22.54	0.02
12/16/91	481.59	602.16	36.72	-0.06	464.89	560.52	28.32	0.06	436.60	488.65	24.51	0.00	427.13	465.25	22.54	0.02
1/20/92	481.59	602.17	36.69	-0.09	464.90	560.53	28.28	0.02	436.60	488.66	24.48	-0.03	427.14	465.27	22.51	-0.01
2/18/92	481.53	602.12	36.71	-0.07	464.83	560.48	28.30	0.04	436.53	488.61	24.50	-0.01	427.06	465.22	22.54	0.02
3/20/92	481.60	602.17	36.70	-0.08	464.90	560.52	28.30	0.04	436.61	488.65	24.49	-0.02	427.13	465.25	22.52	0.00
4/28/92	481.59	602.15	36.69	-0.09	464.88	560.50	28.30	0.04	436.59	488.64	24.48	-0.03	427.11	465.24	22.52	0.00
5/14/92	481.59	602.16	36.68	-0.10	464.90	560.51	28.29	0.03	436.59	488.65	24.48	-0.03	427.12	465.24	22.51	-0.01
6/11/92	481.58	602.14	36.67	-0.11	464.89	560.48	28.28	0.02	436.59	488.64	24.47	-0.04	427.12	465.23	22.50	-0.02
8/3/92	481.56	602.12	36.71	-0.07	464.85	560.46	28.31	0.05	436.55	488.62	24.52	0.01	427.08	465.20	22.55	0.03
8/18/92	481.59	602.15	36.67	-0.11	464.89	560.49	28.27	0.01	436.60	488.65	24.47	-0.04	427.12	465.23	22.50	-0.02
9/17/92	481.59	602.14	36.68	-0.10	464.88	560.47	28.26	0.00	436.59	488.67	24.48	-0.03	427.11	465.21	22.51	-0.01
10/21/92	481.57	602.16	36.67	-0.11	464.87	560.50	28.27	0.01	436.49	488.68	24.48	-0.03	427.10	465.25	22.51	-0.01
11/10/92	481.57	602.15	36.67	-0.11	464.86	560.49	28.28	0.02	436.49	488.67	24.49	-0.02	427.10	465.23	22.48	-0.04
12/22/92	481.59	602.16	36.66	-0.12	464.88	560.50	28.28	0.02	436.51	488.69	24.48	-0.03	427.12	465.25	22.47	-0.05
1/19/93	481.56	602.16	36.68	-0.10	464.85	560.49	28.29	0.03	436.48	488.69	24.49	-0.02	427.09	465.26	22.49	-0.03
2/10/93	481.59	602.17	36.66	-0.12	464.88	560.50	28.28	0.02	436.51	488.69	24.48	-0.03	427.12	465.25	22.48	-0.04
3/17/93	481.58	602.17	36.68	-0.10	464.87	560.49	28.29	0.03	436.50	488.69	24.52	0.01	427.12	465.26	22.52	0.00
4/23/93	481.56	602.13	36.66	-0.12	464.84	560.47	28.28	0.02	436.48	488.67	24.48	-0.03	427.09	465.23	22.48	-0.04
5/25/93	481.57	602.14	36.66	-0.12	464.86	560.47	28.29	0.03	436.49	488.67	24.48	-0.03	427.10	465.22	22.48	-0.04
6/23/93	481.58	602.16	36.65	-0.13	464.86	560.48	28.27	0.01	436.50	488.68	24.48	-0.03	427.11	465.24	22.47	-0.05
7/19/93	481.55	602.12	36.70	-0.08	464.84	560.45	28.32	0.06	436.46	488.66	24.54	0.03	427.08	465.20	22.54	0.02
8/13/93	481.58	602.16	36.65	-0.13	464.88	560.48	28.27	0.01	436.51	488.70	24.47	-0.04	427.12	465.24	22.46	-0.06
9/13/93	481.58	602.14	36.64	-0.14	464.87	560.46	28.26	0.00	436.50	488.69	24.46	-0.05	427.12	465.23	22.46	-0.06
10/14/93	481.56	602.14	36.66	-0.12	464.86	560.47	28.26	0.00	436.48	488.69	24.47	-0.04	427.10	465.22	22.47	-0.05
11/17/93	481.60	602.15	36.65	-0.13	464.89	560.48	28.26	0.00	436.51	488.68	24.46	-0.05	427.12	465.23	22.47	-0.05
12/15/93	481.56	602.14	36.66	-0.12	464.85	560.47	28.28	0.02	436.47	488.68	24.48	-0.03	427.09	465.23	22.49	-0.03
1/17/94	481.52	602.11	36.62	-0.16	464.81	560.44	28.25	-0.01	436.42	488.66	24.45	-0.06	427.03	465.20	22.45	-0.07



JAN 2 5 1994

RECOMP SETTLEMENT 1/17/94

DATE----	NORTH	POINT A2 EAST	ELEV.	CHANGE ELEV.	NORTH	POINT R1 EAST	ELEV.	CHANGE ELEV.	NORTH	POINT R2 EAST	ELEV.	CHANGE ELEV.	NORTH	POINT R3 EAST	ELEV.	CHANGE ELEV.
7/18/90	264.38	682.00	37.42		248.37	635.55	27.36		224.56	572.27	26.32		216.15	550.70	24.61	
8/28/90	264.36	681.97	37.39	-0.03	248.35	635.53	27.33	-0.03	224.53	572.23	26.30	-0.02	216.13	550.67	24.59	-0.02
9/14/90	264.38	681.97	37.39	-0.03	248.37	635.55	27.33	-0.03	224.55	572.24	26.30	-0.02	216.15	550.68	24.59	-0.02
10/15/90	264.38	681.98	37.39	-0.03	248.35	635.54	27.36	0.00	224.56	572.26	26.31	-0.01	216.15	550.70	24.61	0.00
11/27/90	264.38	681.99	37.38	-0.04	248.36	635.54	27.36	0.00	224.56	572.26	26.31	-0.01	216.16	550.70	24.61	0.00
12/19/90	264.36	681.96	37.38	-0.04	248.32	635.50	27.36	0.00	224.51	572.24	26.31	-0.01	216.09	550.68	24.61	0.00
1/17/91	264.36	681.98	37.36	-0.06	248.31	635.51	27.40	0.04	224.51	572.25	26.31	-0.01	216.11	550.69	24.60	-0.01
2/12/91	264.39	681.99	37.37	-0.05	248.35	635.54	27.40	0.04	224.56	572.28	26.31	-0.01	216.14	550.70	24.60	-0.01
3/14/91	264.37	681.99	37.37	-0.05	248.33	635.53	27.40	0.04	224.53	572.26	26.31	-0.01	216.12	550.68	24.60	-0.01
4/22/91	264.38	681.99	37.37	-0.05	248.34	635.53	27.40	0.04	224.55	572.26	26.32	0.00	216.14	550.69	24.61	0.00
5/15/91	264.41	681.99	37.36	-0.06	248.37	635.53	27.39	0.03	224.58	572.27	26.31	-0.01	216.18	550.69	24.60	-0.01
6/17/91	264.38	681.97	37.36	-0.06	248.34	635.51	27.39	0.03	224.54	572.24	26.32	0.00	216.14	550.66	24.61	0.00
7/19/91	264.40	681.99	37.36	-0.06	248.38	635.55	27.37	0.01	224.58	572.26	26.31	-0.01	216.17	550.69	24.60	-0.01
8/14/91	264.39	681.98	37.35	-0.07	248.37	635.54	27.37	0.01	224.56	572.26	26.31	-0.01	216.16	550.69	24.60	-0.01
9/19/91	264.40	681.98	37.35	-0.07	248.37	635.55	27.37	0.01	224.57	572.25	26.31	-0.01	216.17	550.68	24.60	-0.01
10/21/91	264.38	681.98	37.35	-0.07	248.35	635.55	27.37	0.01	224.55	572.26	26.31	-0.01	216.15	550.69	24.60	-0.01
11/15/91	264.39	681.99	37.35	-0.07	248.35	635.54	27.38	0.02	224.56	572.27	26.31	-0.01	216.15	550.71	24.61	0.00
12/16/91	264.39	681.98	37.35	-0.07	248.35	635.51	27.39	0.03	224.56	572.25	26.32	0.00	216.15	550.69	24.61	0.00
1/20/92	264.38	681.99	37.34	-0.08	248.35	635.54	27.38	0.02	224.56	572.25	26.30	-0.02	216.16	550.69	24.59	-0.02
2/18/92	264.34	681.98	37.34	-0.08	248.29	635.52	27.39	0.03	224.50	572.26	26.31	-0.01	216.09	550.69	24.59	-0.02
3/20/92	264.39	681.99	37.34	-0.08	248.35	635.53	27.38	0.02	224.56	572.25	26.30	-0.02	216.16	550.70	24.60	-0.01
4/28/92	264.39	681.98	37.34	-0.08	248.35	635.52	27.38	0.02	224.56	572.26	26.30	-0.02	216.16	550.70	24.59	-0.02
5/14/92	264.39	681.98	37.34	-0.08	248.35	635.52	27.38	0.02	224.55	572.26	26.30	-0.02	216.14	550.68	24.59	-0.02
6/11/92	264.38	681.97	37.33	-0.09	248.34	635.51	27.37	0.04	224.55	572.24	26.29	-0.01	216.15	550.68	24.58	-0.03
8/3/92	264.36	681.96	37.34	-0.08	248.33	635.51	27.38	0.02	224.53	572.25	26.32	0.00	216.12	550.67	24.61	0.00
8/18/92	264.39	681.98	37.33	-0.09	248.35	635.53	27.37	0.01	224.56	572.25	26.30	-0.02	216.15	550.68	24.59	-0.02
9/17/92	264.39	681.97	37.33	-0.09	248.36	635.52	27.36	0.00	224.56	572.24	26.29	-0.03	216.15	550.67	24.58	-0.03
10/21/92	264.37	681.98	37.32	-0.10	248.34	635.53	27.36	0.00	224.54	572.26	26.29	-0.03	216.15	550.69	24.58	-0.03
11/10/92	264.36	681.97	37.34	-0.08	248.32	635.53	27.38	0.02	224.53	572.26	26.31	-0.01	216.13	550.68	24.60	-0.01
12/22/92	264.38	681.98	37.33	-0.09	248.34	635.53	27.37	0.01	224.55	572.26	26.30	-0.02	216.14	550.68	24.59	-0.02
1/19/93	264.37	681.98	37.36	-0.06	248.33	635.53	27.38	0.02	224.52	572.27	26.31	-0.01	216.12	550.70	24.60	-0.01
2/10/93	264.39	681.99	37.32	-0.10	248.34	635.51	27.37	0.01	224.56	572.27	26.30	-0.02	216.15	550.70	24.58	-0.03
3/17/93	264.38	681.99	37.32	-0.10	248.35	635.54	27.36	0.00	224.56	572.28	26.31	-0.01	216.15	550.68	24.60	-0.01
4/27/93	264.36	681.97	37.32	-0.10	248.30	635.51	27.37	0.01	224.52	572.27	26.30	-0.02	216.11	550.68	24.58	-0.03
5/25/93	264.37	681.97	37.33	-0.09	248.32	635.50	27.38	0.02	224.54	572.25	26.30	-0.02	216.13	550.66	24.59	-0.02
6/23/93	264.37	681.97	37.33	-0.09	248.33	635.51	27.37	0.01	224.55	572.27	26.30	-0.02	216.13	550.67	24.58	-0.03
7/19/93	264.36	681.96	37.32	-0.10	248.31	635.51	27.36	0.00	224.51	572.26	26.32	0.00	216.11	550.67	24.61	0.00
8/13/93	264.38	681.97	37.32	-0.10	248.34	635.52	27.35	-0.01	224.56	572.26	26.29	-0.03	216.15	550.67	24.58	-0.03
9/13/93	264.37	681.97	37.32	-0.10	248.32	635.51	27.35	-0.01	224.54	572.25	26.29	-0.03	216.14	550.67	24.58	-0.03
10/14/93	264.36	681.97	37.32	-0.10	248.32	635.52	27.35	-0.01	224.53	572.27	26.29	-0.03	216.12	550.68	24.58	-0.03
11/17/93	264.37	681.98	37.31	-0.11	248.33	635.52	27.35	-0.01	224.55	572.27	26.29	-0.03	216.14	550.69	24.57	-0.04
12/15/93	264.36	681.98	37.32	-0.10	248.31	635.51	27.36	0.00	224.53	572.27	26.29	-0.03	216.12	550.68	24.58	-0.03
1/17/94	264.34	681.96	37.31	-0.11	248.28	635.50	27.35	-0.01	224.49	572.25	26.28	-0.04	216.08	550.67	24.57	-0.04



JAN 2 5 1994

A-7
DIOXIN LABORATORY RESULTS

ALTA

PCDD & PCDF
EPA METHOD 8290

Sample ID: Ash Comp
Lab ID: 13272-001-SA
Matrix: Ash

Date Received: 3/10/94
Date Extracted: 3/21/94
Sample Amount: 5.07 g

ICAL ID: I1613A
QC Lot: LC0305A
Units: pg/g

Compound	Conc.	D.L.	Ratio	S/N Ratio	Qualifier
2,3,7,8-TCDD	2.5		0.77	>10:1	
Total TCDD	46		0.81	>10:1	
1,2,3,7,8-PeCDD	13		1.59	>10:1	
Total PeCDD	140		1.44	>10:1	
1,2,3,4,7,8-HxCDD	24		1.25	>10:1	
1,2,3,6,7,8-HxCDD	44		1.19	>10:1	
1,2,3,7,8,9-HxCDD	47		1.19	>10:1	
Total HxCDD	430		1.19	>10:1	
1,2,3,4,6,7,8-HpCDD	1000		1.03	>10:1	
Total HpCDD	2000		1.01	>10:1	
OCDD	7300		0.86	>10:1	
2,3,7,8-TCDF	8.1		0.73	>10:1	
Total TCDF	94		0.70	>10:1	
1,2,3,7,8-PeCDF	4.7		1.48	>10:1	
2,3,4,7,8-PeCDF	8.9		1.64	>10:1	
Total PeCDF	73		1.50	>10:1	
1,2,3,4,7,8-HxCDF	10		1.27	>10:1	
1,2,3,6,7,8-HxCDF	6.9		1.18	>10:1	
2,3,4,6,7,8-HxCDF	14		1.24	>10:1	
1,2,3,7,8,9-HxCDF	3.9		1.16	>10:1	
Total HxCDF	140		1.27	>10:1	
1,2,3,4,6,7,8-HpCDF	81		1.03	>10:1	
1,2,3,4,7,8,9-HpCDF	14		0.98	>10:1	
Total HpCDF	250		1.03	>10:1	
OCDF	190		0.83	>10:1	

Analyst:

Reviewer: