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CALENDAR YEAR 1995
GROUNDWATER QUALITY REPORT FOR THE
BEAR CREEK HYDROGEOLOGIC REGIME,
OAK RIDGE Y-12 PLANT,
OAK RIDGE, TENNESSEE

February 1996

Prepared by

Environmental Management Department
Health, Safety, Environment,
and Accountability Organization
Oak Ridge Y-12 Plant
Oak Ridge, Tennessee 37831

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CALENDAR YEAR 1995 GROUNDWATER QUALITY REPORT
FOR THE BEAR CREEK HYDROGEOLOGIC REGIME,
OAK RIDGE Y-12 PLANT, OAK RIDGE, TENNESSEE

1995 Groundwater Quality Data and Calculated Rate
of Contaminant Migration

February 1996

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ACRONYMS AND ABBREVIATIONS

ASO	Analytical Services Organization
ARAR	Applicable, or Relevant and Appropriate Requirement
BCV	Bear Creek Valley
BCK	Bear Creek Kilometer
bgs	below ground surface
CA	Characterization Area
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cfs	cubic feet per second
CY	Calendar Year
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ft	feet
ft/d	feet per day
ft ² /d	feet squared per day
FFA	Federal Facility Agreement
gpm	gallons per minute
GWPP	Groundwater Protection Program
GWQR	Groundwater Quality Report
HSEA	Health, Safety, Environment, and Accountability (Organization)
HSWA	Hazardous and Solid Waste Amendments
MDA	Minimum Detectable Activity
mg/L	milligrams per liter
NT	Northern Tributary (to Bear Creek)
ORNL	Oak Ridge National Laboratory
ORR	Oak Ridge Reservation
OU	Operable Unit
PCPA	Post-Closure Permit Application
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SAP	Sampling and Analysis Plan
SED	K-25 Site Sampling and Environmental Support Department
SWMU	Solid Waste-Management Unit
TDEC	Tennessee Department of Environment and Conservation
TDS	Total Dissolved Solids
TSD	Treatment, Storage, and Disposal (Unit)
VOC	Volatile Organic Compound
WMA	Waste Management Area

1.0 INTRODUCTION

This annual groundwater quality report (GWQR) contains groundwater and surface water quality data obtained during the 1995 calendar year (CY) at several hazardous and nonhazardous waste management facilities associated with the U.S. Department of Energy (DOE) Y-12 Plant located on the DOE Oak Ridge Reservation (ORR) southeast of Oak Ridge, Tennessee (Figure 1). The U.S. Environmental Protection Agency (EPA) identification number for the Y-12 Plant is TN3 89 009 0001.

The sites addressed by this document are located in Bear Creek Valley (BCV) west of the Y-12 Plant complex (directions in this report are in reference to the Y-12 administrative grid system) within the Bear Creek Hydrogeologic Regime (Bear Creek Regime). The Bear Creek Regime is one of three hydrogeologic regimes defined for the purposes of groundwater and surface water quality monitoring at the Y-12 Plant (Figure 2).

The Environmental Management Department of the Y-12 Plant Health, Safety, Environment, and Accountability (HSEA) Organization manages the groundwater monitoring activities in the Bear Creek Regime under the auspices of the Y-12 Plant Groundwater Protection Program (GWPP). The purpose of the GWPP is to characterize the hydrogeology and to monitor groundwater quality at the Y-12 Plant and surrounding area to provide for protection of groundwater resources consistent with federal, state, and local requirements and in accordance with DOE Orders and Lockheed Martin Energy Systems, Inc. (Energy Systems) [formerly Martin Marietta Energy Systems, Inc.] corporate policy.

The annual GWQR for the Bear Creek Regime is completed in two parts. Part 1 (this report) consists primarily of data appendices and serves as a reference for the groundwater quality data obtained each CY under the lead of the Y-12 Plant GWPP. Because it contains information needed to comply with Resource Conservation and Recovery Act (RCRA) corrective action and interim status assessment monitoring and reporting requirements, this report is submitted to the Tennessee Department of Environment and Conservation (TDEC) by the RCRA reporting deadline (March 1 of the following CY). Part 2 of the report, to be issued mid-year, will contain an evaluation of the data with respect to regime-wide groundwater quality, present the findings and status of ongoing hydrogeologic studies, describe changes in monitoring priorities, and present planned modifications to the groundwater sampling and analysis program for the following CY.

Changes to the regulatory status of waste sites in the Bear Creek Regime and the redirection of monitoring priorities have altered the form and content of annual regime-wide GWQRs. Beginning in 1994, the focus of the GWQRs shifted away from RCRA interim status assessment monitoring reporting requirements, which historically have been the chief purpose of the reports. This report contains data to comply with annual reporting requirements of the RCRA post-closure

permit for the Bear Creek Regime (Permit Number TNHW-087) and RCRA interim status annual assessment reporting requirements, which were applicable for part of CY 1995. In addition, this document serves as a regime-wide data reporting mechanism for all other groundwater monitoring programs performed under the lead of the Y-12 Plant GWPP. The Part 2 GWQRs are a forum for presenting regime-wide evaluations of groundwater quality, analysis of laboratory performance, planned monitoring changes, and the status of special groundwater-related projects.

2.0 BACKGROUND INFORMATION

The Bear Creek Regime is bound to the north by Pine Ridge and to the south by Chestnut Ridge, and encompasses the portion of BCV extending from a surface water and shallow groundwater divide at the west end of the Y-12 Plant to the western boundary of the Bear Creek watershed (Figure 2). Groundwater quality monitoring activities at the waste management sites in the Bear Creek Regime have been in progress since the late 1970s. Monitoring programs have evolved in response to changing regulatory requirements and evaluation of monitoring results.

Groundwater quality monitoring during CY 1995 in the Bear Creek Regime was performed at two classes of former waste management facilities:

- sites subject to regulation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); and
- hazardous waste treatment, storage, and disposal (TSD) units subject to regulation under RCRA as well as CERCLA.

In addition, groundwater monitoring was conducted at one active waste storage facility (Above Grade Low-Level Storage Facility) that does not fall within either regulatory class. Monitoring was conducted at this facility as a best management practice. A brief description of the waste management facilities in the Bear Creek Regime, including waste inventories and disposal histories, and a discussion of the regulatory status and groundwater monitoring history of each site, are provided in the following sections.

2.1 Regulatory Framework

In 1984, the EPA and the TDEC determined that a number of the waste management sites at the Y-12 Plant were either hazardous waste TSD units or solid waste management units (SWMUs) subject to regulation under section 3004(u) of RCRA (Welch *et al.* 1987). The RCRA TSDs were granted interim status until operating or post-closure permits were obtained by DOE. Accordingly, interim status assessment monitoring or detection monitoring was initiated in CY 1986. The process to prepare RCRA post-closure permit applications (PCPAs) for these sites was initiated. The DOE began submittal of PCPAs to TDEC in 1987. At designated SWMUs, RCRA Facility Investigations were initiated as required under the Hazardous and Solid Waste Amendments (HSWA) permit issued for the ORR by the EPA in CY 1986.

In November 1989, the ORR was added to the National Priority List. In January 1992, the DOE, the EPA, and the TDEC negotiated a Federal Facility Agreement (FFA) regarding environmental restoration on the ORR under CERCLA. This agreement superseded the HSWA

permit and CERCLA became the primary regulatory driver for several RCRA TSD units and SWMUs at the Y-12 Plant. As such, the DOE appealed the applicability of RCRA post-closure care, corrective action, and groundwater monitoring requirements to CERCLA Operable Units (OUs).

In April 1993, the DOE, TDEC, and Energy Systems signed an Agreed Order for the RCRA post-closure permit for the S-3 Site, thereby resolving the appeal and formally agreeing to proceed with CERCLA as a lead regulatory program with RCRA as an applicable, or relevant and appropriate requirement (ARAR). Under this agreement, RCRA will be applied as an ARAR to the extent that post-closure maintenance and care of former TSD facilities will be conducted in compliance with the terms of RCRA post-closure permits. Groundwater monitoring is to be integrated with the CERCLA remedial investigation/feasibility study (RI/FS) programs, with RCRA corrective action deferred to CERCLA. Accordingly, groundwater monitoring data reporting will comply with RCRA post-closure permit conditions as well as RI/FS requirements. Per agreement with TDEC, three RCRA post-closure permits will be issued for the Y-12 Plant encompassing each of the three hydrogeologic regimes. Specific requirements for interim status sites within each regime will be incorporated into the permits as separate modifications.

Efforts were initiated early in CY 1994 by DOE and Energy Systems to modify the FFA strategy for RI/FS implementation. The FFA originally defined two types of CERCLA OUs for which an RI/FS would be performed: (1) source control OUs comprised of individual or groups of waste management sites, and (2) integrator OUs that encompass groundwater and surface water, independent of the source control OUs that may contribute to the contamination of these media (U.S. Department of Energy 1994a). However, as the RIs for OUs within BCV progressed, it became increasingly evident that separation of source control and integrator OUs was not the most technically feasible approach to implementation of the RI/FS process. An agreement was reached among regulatory agencies and the DOE to proceed, where feasible, with an integrated RI/FS approach. In the integrated approach, source and integrator OUs are addressed concurrently in a Characterization Area (CA) defined by watershed boundaries, and specific sites or locations of highest risk or concern are targeted for focused studies. Additionally, efforts were initiated to develop a conceptual model of groundwater flow and contaminant migration that is tailored to the specific characteristics of the groundwater flow system in BCV. The BCV CA is the currently defined CERCLA integrating administrative unit for the BCV Regime. A number of separate RI/FS activities were ongoing within the BCV CA in CY 1995.

The revised RCRA PCPAs for all interim status TSD units in the BCV Regime (S-3 Site, Oil Landfarm, and Bear Creek Burial Grounds/Walk-in Pits) were submitted to TDEC as of April 1995. Modifications to the Bear Creek Regime post-closure permit addressing the S-3 Site, Oil Landfarm Waste Management Area (WMA), and Bear Creek Burial Grounds/Walk-in Pits WMA

were issued by the TDEC on October 21, 1993; June 28, 1995; and September 12, 1995, respectively. The post-closure permit specifies corrective action monitoring for all of these TSD units. A common background monitoring well network is specified for the entire regime along with a single monitoring well transect located downgradient of the farthest known extent of the groundwater contaminant plume within the geologic formation that functions as the primary groundwater transport pathway (Maynardville Limestone). Selected point of compliance wells specific to each TSD unit are denoted in the permit for long-term evaluation of contaminant trends and cap performance. As modifications were issued for each of the RCRA TSD units, formal interim status assessment monitoring, as defined in the Comprehensive Groundwater Monitoring Plan for the Y-12 Plant (Geraghty and Miller 1990), was discontinued and post-closure corrective action monitoring initiated. As of September 12, 1995, all assessment monitoring under RCRA was discontinued in the BCV Regime and a stable, long-term groundwater quality surveillance and corrective action monitoring program was established. This program will be integrated into the CERCLA Record of Decision (ROD) for the BCV CA upon completion of the ongoing RI/FS. Some modifications or additions to the scope of groundwater monitoring may be required to adequately address specific objectives of the ROD. Specific details for each site regarding the transition from interim status assessment to post-closure and monitoring and reporting requirements are discussed in Section 3.1.1.

2.2 CERCLA Administrative Units

2.2.1 Bear Creek Valley Characterization Area

The BCV CA is comprised of all of a former source control OU (Bear Creek OU1), the Rust Spoil Area (formerly part of Bear Creek OU2), and all groundwater, surface water, and stream sediment/floodplain soils media that received contaminants from the source units (Table 1). Bear Creek OU1 consisted of the S-3 Site, the Oil Landfarm WMA, and the Bear Creek Burial Grounds WMA. Bear Creek OU2 consisted of the Rust Spoil Area, Spoil Area I and the SY 200 Yard. Separate RI/FS initiatives were pursued for these two source OUs prior to establishment of the BCV CA; however, data from these studies have been incorporated into the overall RI/FS for the CA. Field activities for all major components of the integrated RI have been completed and a draft RI report issued (Science Applications International Corporation 1995).

The RI work plan for Bear Creek OU1 was prepared and approved by the EPA (Region IV) and TDEC (U.S. Department of Energy 1993a). Field activities for the RI were completed in March 1995. The RI field work for Bear Creek OU2 was completed in December 1993 (U.S. Department of Energy 1993b) and an RI Report for the OU was completed in August

1994 (U.S. Department of Energy 1994b). An FS/Environmental Assessment was completed in November 1994 (U.S. Department of Energy 1994c) and submitted for regulatory approval. Because activities associated with this OU have progressed significantly and the RI found that the Spoil Area I and SY 200 Yard were not sources of contamination to receptor media, a separate proposed action plan and ROD are being completed for these two sites, rather than deferral to the overall BCV CA RI/FS.

Specific waste management units in each source OU along with activities conducted in association with receptor media are described in the following subsections.

2.2.2 Bear Creek Operable Unit 01

2.2.2.1 S-3 Site

The S-3 Site is located near the west end of the Y-12 Plant (Figure 3), just west of the groundwater and surface water flow divide separating the Bear Creek Regime from the East Fork Regime. Formerly called the S-3 Ponds, the site was constructed in 1951 and consisted of four unlined ponds covering an area of roughly 400 x 400 feet (ft). Each pond was about 17 ft deep (excavations did not extend into bedrock), and had a storage capacity of about 2.5 million gallons (Geraghty & Miller, Inc. 1993).

Wastes discharged into the ponds consisted primarily of nitric and other acids, nitrate wastes, pickling and plating wastes, machine coolants, caustic solutions, depleted uranium in nitric acid solution, technetium in raffinate and condensate, and miscellaneous liquid wastes (mop waters) associated with routine cleanup and operations at the Y-12 Plant. Most of the acid wastes were discharged into the S-3 Ponds from a pipeline (the Nitric Acid Pipeline) connected to operations located in the west-central section of the Y-12 Plant complex. A small section of the Nitric Acid Pipeline lies within the easternmost part of the Bear Creek Regime. The remainder of the pipeline lies east of the groundwater and surface water divide separating the Bear Creek Regime from the East Fork Regime.

Waste disposal at the S-3 Ponds ceased in 1984 and, in 1988, the site was closed in accordance with a closure plan approved by the TDEC (Martin Marietta Energy Systems 1988a). When closed, the ponds contained 2 to 5 ft of sludge produced during in-situ denitrification and neutralization of wastewater in the ponds, and a small volume of contaminated sediments removed from Bear Creek downstream of the site. Laboratory testing showed that the sludge was not leachable in weak acid and water (Geraghty & Miller, Inc. 1993). During closure, the sludge and sediments were stabilized with coarse aggregate and the ponds were covered with a low-

permeability cap. Construction of an asphalt parking lot over the cap completed final closure of the site, which was certified by the TDEC on November 15, 1990.

2.2.2.2 Oil Landfarm Waste Management Area

The Oil Landfarm WMA is located approximately 1 mile west of the Y-12 Plant (Figure 3). The Oil Landfarm, the Boneyard, the Burnyard, the Chemical Storage Area, and Sanitary Landfill I comprise the Oil Landfarm WMA (Figure 4).

The Oil Landfarm consisted of three areas where waste oils and coolants were applied to nutrient-adjusted soil during the dry months of the year (April to October) to enhance Biodegradation. These oils and coolants contained beryllium compounds, depleted uranium, polychlorinated biphenyls, and spent solvents. Approximately 1 million gallons of waste oil were applied to soils at the site between 1973 and 1982 (Geraghty & Miller, Inc. 1994a). In 1989, the site was covered with a low-permeability cap in accordance with a TDEC-approved closure plan (Martin Marietta Energy Systems, Inc. 1988b). The TDEC certified final closure of the Oil Landfarm on December 15, 1990.

The Boneyard (Figure 4) was used for the disposal of magnesium chips and construction debris (e.g., concrete) in unlined shallow trenches. Magnesium chips were placed in the trenches and burned, and residues were covered with soil and compacted. Filled trenches were covered with topsoil and seeded with grass (Geraghty & Miller, Inc. 1988).

The Burnyard (Figure 4) consisted of two unlined trenches about 300 ft long by 40 ft wide. Between 1943 and 1968, various types of refuse (including pesticide containers, metal shavings, solvents, oils, and laboratory chemicals) were burned in the trenches. Some residues may have been buried in the Boneyard (Geraghty & Miller, Inc. 1988).

The Chemical Storage Area (Figure 4) was constructed on top of the Burnyard and used as an area for releasing compressed gas from cylinders with leaking or damaged valves, and for disposal of reactive or explosive laboratory chemicals. Gas in the damaged cylinders was allowed to leak into the atmosphere or was bled off; corrosive gases were bled through neutralizing slurries. Laboratory chemicals disposed at the site included acids, bases, organics, water-reactive compounds, and shock-sensitive compounds such as picric acid. The chemicals were handled to induce the expected reaction or explosion, and remaining liquids were discharged into a small unlined surface impoundment (Geraghty & Miller, Inc. 1988).

Sanitary Landfill I is south of the Oil Landfarm next to Bear Creek (Figure 4). The TDEC permitted the site for disposal of nonhazardous wastes generated at the Y-12 Plant, including paper, cardboard, plastics, rubber, wood, brush, organic refuse, textile products, and asphalt roofing materials. Waste disposal at the site started in 1968 and the site contained about 105,000

tons of waste when disposal activities ceased in 1982 (Geraghty & Miller, Inc. 1988). In 1983, the site was graded and capped in accordance with a TDEC-approved closure plan (Bailey 1983).

2.2.2.3 Bear Creek Burial Grounds Waste Management Area

The Bear Creek Burial Grounds WMA, located approximately 2 miles west of the Y-12 Plant (Figure 3), consists of several waste disposal units designated Burial Grounds A (North and South), B (including the Walk-in-Pits), C, D, E, and J, and two ponds designated Oil Retention Ponds No. 1 and 2 (Figure 5). Only Burial Grounds A and C are regulated as RCRA TSD units. The Walk-in-Pits, recently closed, will also be incorporated into the Burial Grounds post-closure permit modification to monitor effectiveness of corrective actions.

Disposal units at the Bear Creek Burial Grounds WMA consisted of multiple trenches excavated 14 to 25 ft below ground surface (bgs) that were used for disposal of liquid and/or solid wastes. Perforated standpipes installed vertically in some trenches were used for liquid waste disposal; rock and gravel were backfilled around the standpipes for support and to maximize the drainage rate. Oil Retention Ponds No. 1 and 2 were constructed to collect oils seeping from disposal trenches in Burial Ground A South and A North, respectively (Figure 5).

Burial Grounds A (North and South) and C primarily received liquid wastes that generally consisted of waste oils and coolants, spent solvents, and mop waters. Solid wastes disposed at the site included salts, metals (primarily beryllium and uranium) and metal oxides, metal saw fines, and asbestos. The Walk-in-Pits received various chemical wastes, shock-sensitive reagents (picric acid), and uranium metal saw fines. Hazardous waste disposal activities ceased in 1981 (Geraghty & Miller, Inc. 1994b).

Burial Grounds A (North and South) and C, and the Oil Retention Ponds were closed in 1988 and 1989 in accordance with TDEC-approved closure plans (Martin Marietta Energy Systems, Inc. 1988c and 1988d). The TDEC certified final closure of Burial Ground A (North and South) on December 15, 1989. Certification of final closure of Burial Ground C was received from the TDEC on December 27, 1990. The TDEC certified final closure of Oil Retention Ponds No. 1 and 2 on November 15, 1990, and December 11, 1990, respectively. The Walk-in Pits received certification of final closure from TDEC on February 22, 1995.

2.2.3 Bear Creek Operable Unit 02

2.2.3.1 Spoil Area I

Spoil Area I is located on the northern slope of Chestnut Ridge, west of the Y-12 Plant near the intersection of Old Bear Creek Road and West Patrol Road (Figure 3). The 5-acre site was used since about 1980 for disposal of nonradioactive construction debris. The TDEC permitted the site in 1986 (Permit No. DML011030012) for disposal of rubble and other noncombustible, stable solid wastes (Tennessee Department of Health and Environment 1986). Closure of the site began shortly thereafter by placing a minimum 2-ft clay layer over debris as it was emplaced. The site received approximately 100,000 cubic yards of debris, including asphalt, brick, concrete, roofing materials, brush, steel rebar, rock, and tile (Battelle Columbus Division 1989a). Data obtained during the RI indicate that the site has not been a source of contaminants to receptor media (U.S. Department of Energy 1994b). Administrative controls will, therefore, be implemented under the scope of the ROD for Bear Creek OU2.

2.2.3.2 SY-200 Yard

The SY-200 Yard is located south of Bear Creek near the base of the northern slope of Chestnut Ridge, approximately 0.5 mile west of the Y-12 Plant (Figure 3). Operated from the 1950s to 1986, the SY-200 Yard was a 300 x 200 ft gravel-covered area used for temporary storage of equipment, machinery, and miscellaneous items. Records indicate that waste materials were not disposed or stored at the site (Geraghty & Miller, Inc. 1989a). Because the RI showed that the site has not been a source of contaminants to receptor media, administrative controls will be implemented as part of the ROD for Bear Creek OU2.

2.2.3.3 Rust Spoil Area

The Rust Spoil Area is a 5.4-acre site located west of the SY-200 Yard (Figure 3) that was used between 1975 and 1983 for disposal of solid wastes (spoil) generated during various renovation, maintenance, and construction operations at the Y-12 Plant. Waste materials were primarily nonradioactive soil, masonry, and concrete with steel rebar, but also may have included materials containing solvents, asbestos, mercury, and uranium (Battelle Columbus Division 1989b). The total waste volume is estimated at less than 100,000 cubic yards. Closure of the site was completed in 1984 in accordance with a TDEC-approved closure plan (MCI Consulting Engineers 1983). Data obtained during the RI for Bear Creek OU 02 indicate that the Rust Spoil

Area is a source of trichloroethene to shallow groundwater (U.S. Department of Energy 1994b). Additional investigative activities will be conducted as part of the BCV CA RI/FS and a final disposition for the site will be made as part of the ROD for the entire CA.

2.2.4 Receptor Media

Receptor media in the BCV CA include groundwater, surface water, and stream sediments in Bear Creek and its tributaries, and Bear Creek floodplain soils. These media were originally to be addressed as two separate OUs: Bear Creek OU4 (integrator) and Bear Creek OU3 (floodplain soils). With the development of the integrated RI/FS strategy for the Y-12 Plant, aspects of the RIs were renegotiated with the regulatory community. As part of the renegotiation, investigative activities originally planned as separate projects (U.S. Department of Energy 1993c and 1994d), were combined. In addition, aspects of the RI for Bear Creek OU4 relating to groundwater monitoring were redefined to maximize use of the large pool of historical groundwater data. Separate groundwater monitoring efforts related to the RI were eliminated with exception of a single round of sampling to obtain comprehensive radioisotope data. Field activities instead focused on data gaps relating primarily to surface water, stream sediment/floodplain soils, and stormflow characterization. These characterization activities began in September 1993 and were completed in August 1995. The data from these field activities have been incorporated into the BCV CA RI.

2.3 Above Grade Low-Level Waste Storage Facility

The Above Grade Low-Level Waste Storage Facility is located west of the Oil Landfarm WMA (Figure 3). An access road divides the facility into northern and southern sections. Construction of the northern section was completed in the second quarter of CY 1993; construction of the southern section has not yet started. The facility currently consists of six, 52 x 171 ft prefabricated rubber buildings engineered with concrete, slab-on-grade foundations with floor dikes as secondary containment. The facility is used to store low-level radioactive solid wastes including construction/demolition debris, process materials, rubbish, sludge and soil, and beryllium in drums and B-25 boxes.

3.0 1995 GROUNDWATER PROTECTION PROGRAM

The following sections describe the groundwater and surface water sampling activities performed during CY 1995 under the lead of the Y-12 Plant GWPP. Included are brief descriptions of the monitoring programs for which the sampling was performed, as well as details regarding sampling locations and frequencies, sample collection procedures, analytical parameters, quality assurance/quality control (QA/QC) sampling, and data management.

3.1 Sampling Locations

Table 2 provides a detailed listing of CY 1995 monitoring activities by programmatic driver. The table depicts monitoring locations, sampling frequency, and parameters as originally specified in the CY 1995 Sampling and Analysis Plan (SAP) (HSW Environmental Consultants, Inc. 1994). Changes to the SAP during the course of CY 1995 are documented as addenda. Addenda to the SAP are necessary for various reasons, such as changing regulatory requirements at sites or the need to add sites/modify parameters for special projects. Some addenda are issued to document administrative decisions or provide clarification on technical issues.

Groundwater monitoring during CY 1995 involved the collection of groundwater samples from 91 monitoring wells (Table 2 and Figure 6). Data regarding the aquifer zone and the screened or open hole interval monitored by the wells are provided in Table 3. Detailed well construction information is contained in Appendix C.

Additional monitoring during CY 1995 involved the collection of samples from 10 springs, 9 surface water stations, and 3 seeps in the Bear Creek Burial Grounds WMA (Table 2 and Figure 6). The springs, located predominantly along the base of Chestnut Ridge, contribute significant year-round flow to Bear Creek. One spring in the Grassy Creek (Station GCS-01) watershed was sampled. One spring located near the S-3 Site (Station TS) was also sampled. Sampling locations along Bear Creek are designated by the distance (in kilometers) (Bear Creek Kilometer [BCK]) from the confluence of Bear Creek and East Fork Poplar Creek. Four of the surface water sampling stations are located along Bear Creek (BCK-00.63, BCK-04.55, BCK-09.40, and BCK-11.97), and four sampling stations are located on northern tributaries (NT) to Bear Creek (NT-01, NT-01S, NT-01N, and NT-02). One additional surface water station (MS-1) is located in the intermittent reaches of Bear Creek close to the S-3 Site. The seep sampling stations represent groundwater discharging directly from waste disposal trenches in the Bear Creek Burial Grounds WMA.

Groundwater and surface water sampling activities during CY 1995 addressed the objectives of six monitoring programs: (1) RCRA corrective action monitoring; (2) RCRA

assessment monitoring; (3) DOE Order 5400.1 exit-pathway and perimeter monitoring; (4) DOE Order 5400.1 surveillance monitoring; (5) best-management practice monitoring; and (6) CERCLA RI/FS monitoring. These monitoring programs were implemented within the context of the technical approach contained in the Comprehensive Monitoring Plan. However, in light of overlapping regulatory requirements, an increasing number of wells were sampled to meet multiple programmatic goals. For example, data obtained from the westernmost exit pathway well transect satisfied the requirements of both RCRA corrective action monitoring and DOE Order 5400.1 exit-pathway and perimeter monitoring. Descriptions of the monitoring networks used for each program are provided in the following sections.

3.1.1 RCRA Corrective Action Monitoring

As noted previously, RCRA corrective action monitoring was initiated in October 1993 in accordance with the revised permit issued at that time and expanded in response to issuance of permit modifications for the Bear Creek Regime. Corrective action monitoring currently follows the modified permit, dated September 19, 1995.

In CY 1995, RCRA corrective action monitoring involved collection of samples from 23 monitoring wells located throughout the regime as part of current or anticipated RCRA post-closure permit requirements. Well GW-521, a Knox Group background well, is located in the Chestnut Ridge Regime and is not included in Table 2. Construction and analytical data for well GW-521 may be found in the CY 1995 Part 1 GWQR for the Chestnut Ridge Regime (Lockheed Martin Energy Systems, Inc. 1996). Six wells located at the westernmost Maynardville Limestone exit-pathway transect (GW-710, GW-711, GW-712, GW-713, GW-714, and GW-715) were sampled semiannually (Table 2). Background wells for each RCRA TSD were sampled as permit modifications were finalized as follows:

- S-3 Site – GW-115, GW-613, GW-614, and GW-521 (sampled semiannually);
- Oil Landfarm WMA – GW-43, GW-44, and GW-84 (sampled quarterly); and
- Bear Creek Burial Grounds WMA – GW-40, GW-42, GW-79, GW-80, GW-162, GW-372, GW-373, and GW-642 (sampled quarterly).

Designated point of compliance wells included Well GW-276 at the S-3 Site (sampled semiannually), Well GW-363 at the Oil Landfarm WMA (sampled quarterly), and Well GW-069 at the Bear Creek Burial Grounds WMA (sampled quarterly). Wells GW-363 and GW-069 and background wells at the Oil Landfarm and Bear Creek Burial Grounds WMAs were sampled during most of CY 1995 as part of DOE Order 5400.1 surveillance monitoring. However, upon issuance of the RCRA post-closure permit modifications, the analyte lists were modified to reflect

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permit-specified target compounds. The monitoring frequency for all of the RCRA corrective action monitoring wells will be reduced to semiannual beginning in CY 1996.

The RCRA post-closure permit for the Bear Creek Regime requires specific information to be reported in the context of an annual groundwater corrective action monitoring report. The required reporting items and location of these data in this report are as follows:

- Groundwater surface elevations - Appendices E.3 and H;
- Analytical results - Appendices E, F, and G;
- Evaluation of groundwater flow rate and direction - Sections 4.3 and 4.4;
- Evaluation of point of compliance data - Section 4.5; and
- Evaluation of the adequacy of the westernmost exit-pathway transect - Section 4.5.

In accordance with condition II.C of the Bear Creek Regime RCRA post-closure permit, all supporting training, monitoring, testing, and analytical data are maintained in the administrative record at either the Y-12 Plant or the K-25 Analytical Services Organization (ASO) offices.

3.1.2 RCRA Assessment Monitoring

Assessment monitoring in accordance with RCRA interim status requirements was discontinued during CY 1995; however, some monitoring was conducted prior to final post-closure permit issuance at five wells at the Oil Landfarm and Bear Creek Burial Grounds WMAs. (Table 2).

3.1.3 DOE Order 5400.1 Exit-Pathway and Perimeter Monitoring

Exit-pathway monitoring is implemented under the Y-12 Plant GWPP to comply with the DOE Order 5400.1 requirements for monitoring groundwater and surface water that is or could be affected by operations at DOE facilities. Compliance with most of the DOE Order 5400.1 requirements is achieved through continued implementation of ongoing monitoring programs required under TDEC and EPA regulations. Exit pathway monitoring is intended to address the requirements for monitoring groundwater and surface water quality where contamination is most likely to be transported beyond the boundaries of the ORR. A number of these exit-pathway monitoring locations are also denoted as formal ORR perimeter monitoring sites in the Environmental Monitoring Plan for the ORR (U.S. Department of Energy 1995).

In CY 1995, exit-pathway monitoring involved semiannual sampling of groundwater from 19 monitoring wells completed in the Maynardville Limestone, from 9 springs discharging to Bear Creek, and surface water from 6 locations along Bear Creek and its tributaries (Table 2). Six exit-pathway wells were also used for RCRA corrective action monitoring.

3.1.4 DOE Order 5400.1 Surveillance Monitoring

During CY 1995, 20 wells were used to satisfy surveillance monitoring objectives to evaluate the impacts of facility operations on groundwater quality (Table 2). The wells are strategically selected near the closed and capped source control OUs to provide data needed to evaluate water-quality trends over time, and near plume peripheries to provide data on groundwater contaminant plume movement within the Bear Creek Regime. Two of these wells (GW-069 and GW-363) were transferred to the RCRA corrective action monitoring program after issuance of post-closure permit modifications for the Oil Landfarm and Bear Creek Burial Grounds WMAs.

3.1.5 Best Management Practice Monitoring

Groundwater samples were collected during CY 1995 from three monitoring wells at the Above Grade Low-Level Storage Facility as a best-management practice of the Y-12 Plant GWPP (Table 2). Groundwater monitoring at this site was requested by the TDEC and has been performed since CY 1991. Sixteen wells located within the interior of groundwater contaminant plumes were sampled once in CY 1995 in order to obtain current data on contaminant concentrations. In addition, a one-time sampling event was conducted at a former production well (assigned well number GW-830) located at a vehicle maintenance facility between the Y-12 Plant and the K-25 Site at the request of the Y-12 Plant underground petroleum storage tank program.

3.1.6 CERCLA RI/FS Monitoring

Two special sampling events were conducted in CY 1995 in support of ongoing CERCLA RI activities in the BCV CA. Three surface water stations and one spring (Station TS) located along the uppermost reaches of Bear Creek were sampled for nitrate analyses in the second quarter (Table 2). A one-time sampling event was conducted in the third quarter in order to obtain comprehensive, contemporaneous radioisotope data for receptor media in the BCV CA. This effort was required because historical radioisotope data collected in the Bear Creek Regime did not meet data quality objectives for CERCLA baseline risk assessment. Additional analytes required characterization and minimum detectable activities of about 80 percent of the historical results

exceeded current risk assessment standards. Thirty-two monitoring wells, springs, seeps, and surface water stations were sampled for a comprehensive suite of radioisotopes (Table 2). Nine of these sites (six wells and three seeps) were not originally scheduled for sampling in CY 1995; the remainder simply represented modifications to the baseline CY 1995 sampling and analysis plan. Analytical protocols for radioisotope analyses were established specifically for this sampling event in order to obtain detection levels low enough to meet risk assessment criteria.

3.2 Sampling Frequency

Groundwater samples were collected during each quarter of CY 1995. First through fourth quarter sampling events were performed from January 23 to March 31, June 1 to June 28, July 19 to September 27, and October 9 to December 10, respectively.

Groundwater samples were collected quarterly from 39 wells; semiannually from 29 wells, 9 springs, and 6 surface water stations; and once from 23 wells, 3 surface water stations, 3 seeps, and 1 spring (Table 2). Quarterly sampling was performed for all wells in the RCRA interim status assessment monitoring, all wells in surveillance monitoring, 3 wells in the best management practice monitoring, and 11 wells in the RCRA corrective action monitoring programs. Semiannual sampling was performed for all sampling locations in the exit-pathway monitoring program and for 10 wells in the RCRA corrective action monitoring program. Seventeen wells in the best management practice monitoring program and 6 wells, 3 surface water stations, 3 seeps, and 1 spring in the CERCLA support monitoring efforts were sampled only once during CY 1995. Fourth quarter samples were not collected from two RCRA assessment monitoring wells and 9 surveillance monitoring wells because sampling was discontinued upon issuance of the final RCRA post-closure permit modification for the Bear Creek Regime. Well GW-069, initially a surveillance well, was sampled twice during the third quarter of CY 1995 to obtain data for newly imposed RCRA corrective action monitoring requirements. No sample was obtained from well GW-311 in the third quarter because it was dry.

3.3 Sample Collection

Groundwater samples were collected by personnel from the Oak Ridge K-25 Site Sampling and Environmental Support Department (SESD); personnel from the Y-12 Plant Compliance Monitoring Services Section of the HSEA Organization also assisted with collection of some surface water, spring, and seep samples. Pre-defined sampling sequences (listed in Appendix D) were followed to minimize the potential for cross-contamination. Sampling sequences were constructed to sample from the least contaminated wells to the most contaminated

wells at a site or in a sampling group (a series of monitoring wells grouped for sampling and data-tracking purposes). Samples from the springs and surface water stations were collected from the farthest downstream (least contaminated) location (BCK-00.63) to the farthest upstream (most contaminated) location (NT-01). At sites where no groundwater contamination exists, samples were collected from the farthest upgradient wells first.

Groundwater sampling was performed in accordance with the technical procedure for groundwater sampling (SESD-TD-8204) approved by the Y-12 Plant GWPP Manager. Descriptions of the field methods and procedures used to collect the groundwater and surface water samples are contained in *Environmental Surveillance Quality Control Program, Martin Marietta Energy Systems, Inc.* (Martin Marietta Energy Systems, Inc. 1988e). The EPA (Region IV) and the TDEC have approved these methods and procedures (U.S. Environmental Protection Agency and Tennessee Department of Environment and Conservation 1988).

3.4 Quality Assurance/Quality Control Sampling

The QA/QC samples included laboratory blanks, trip blanks, equipment rinsates, field blanks, and duplicate groundwater samples. A total of 132 laboratory blanks, 135 trip blanks, 39 equipment rinsate samples, 2 field blanks, and 30 duplicate samples were analyzed during CY 1995. The total number of each QA/QC sample type analyzed during each quarter was similar; the ranges are as follows: 19 to 57 laboratory blanks, 18 to 51 trip blanks, 5 to 15 equipment rinsates, 0 to 1 field blanks, and 5 to 11 duplicate samples.

Laboratory blanks were prepared using deionized water and analyzed along with the groundwater samples. Trip blanks were prepared in the laboratory using deionized water and transported unopened in coolers containing groundwater samples to be analyzed for volatile organic compounds (VOCs). Equipment rinsates were obtained from the deionized water used to decontaminate the groundwater sampling equipment. Equipment rinsate samples were collected after a sampling team had completed sampling at a site or finished a sampling group (typically no more than 10 wells grouped for sampling and data-tracking purposes). If more than one sampling team collected samples at a site or within a sampling group, each team collected an equipment rinsate sample. In addition, if a sampling team used more than one pump at a site or sampling group, an equipment rinsate was collected for each pump. Field blanks were prepared in the field using deionized water and were collected at a frequency of at least 10 percent of the sampling groups. Duplicate groundwater samples were collected at a frequency of at least one per sampling group.

3.5 Laboratory Analysis

Groundwater, spring, and surface water samples were analyzed for:

- principal cations and anions;
- trace metals (a term used to differentiate metals that are typically minor groundwater constituents, such as cobalt and nickel, from metals that are principal ions in groundwater, such as magnesium and sodium);
- VOCs;
- gross alpha activity and gross beta activity;
- total suspended solids, total dissolved solids (TDS), and turbidity;
- field and laboratory determinations of pH and specific conductance; and
- field determinations of temperature, dissolved oxygen, and oxidation-reduction potential.

In addition to the standard suite of analyses, groundwater samples at some sites in the Bear Creek Regime were analyzed for other parameters as required by specific regulations or other program drivers. For example, samples from wells used for corrective action monitoring were analyzed for several additional analytes (e.g. radionuclides) required under the RCRA post-closure permit for the Bear Creek Regime. Analyses for cadmium, chromium, lead, and mercury using atomic absorption methods also were performed on samples from selected wells with historically elevated concentrations of these metals. Samples from wells with elevated gross alpha and/or gross beta activity, as determined from CY 1994 data, were analyzed for selected radionuclides. The parameters measured at each sampling location are denoted in Table 2. The K-25 ASO performed all analyses, with exception of selected radiochemical analyses, which were performed by the Oak Ridge National Laboratory (ORNL) ASO or Y-12 Plant ASO.

All of the laboratory blanks, trip blanks, field blanks, and equipment rinsate samples were analyzed for the suite of VOCs listed in the notes for Table 2. Selected equipment rinsate samples also were analyzed for trace metals (Inductively Coupled Plasma analyses), gross alpha and gross beta activity, and radionuclides depending on the types of contaminants that were known or suspected to be present at a site. Duplicate groundwater samples were analyzed for the same constituents and parameters specified for the well from which the duplicate sample was collected.

3.6 Data Management

Analytical results obtained by the analytical laboratories were verified and entered into the Y-12 Plant GWPP Groundwater Monitoring Data Base. All monitoring data are subjected to a three-step verification, validation, and evaluation process. Brief descriptions of the data verification/validation/evaluation procedures follow; details are provided in the *Y-12 Plant Groundwater Protection Program Groundwater Monitoring Program Data Management Plan* (Martin Marietta Energy Systems, Inc. 1993). The only exception to this process in CY 1995 was for radiochemical data associated with the BCV CA RI/FS. These data were submitted directly to the Y-12 Plant Environmental Restoration Program, and validated according to that project's data quality objectives. Once validated, the data were provided to the GWPP for inclusion in this report.

The majority of analytical results obtained from each quarterly sampling event was downloaded directly into the data base from data files provided by the analytical laboratory. A few data were manually input from hardcopy documentation (laboratory reports and field data sheets). For manually input data, a double-entry procedure was followed whereby the hardcopy data were input twice into separate data files. A computer program then compared the two input data files and identified discrepancies, which were then accounted for and corrected.

When all data from the quarterly sampling event were in the data base, a computer program then verified that all results were received, the parameter names were correct, correct units were reported, and that the results reported for each parameter were within an expected range or were valid numeric values. As a final step in the data verification process, printouts of the data were visually checked against the laboratory reports and field data sheets for completeness and obvious data outliers. The appropriate laboratory was contacted to resolve incomplete data transfers, discrepancies between electronic and hardcopy versions of the data, and questions regarding data outliers.

Data validation consists of calculating ion-charge balances for each sample, comparisons of sample data to corresponding laboratory and field QA/QC data, and validation of VOCs using EPA validation methods. The tabulation of the results of these data processing steps has historically been presented as informational appendices in the Part 1 GWQRs, but not discussed in detail because of time constraints imposed by the March 1 reporting deadline. These results will be evaluated fully in the Part 2 GWQRs issued in mid-year.

Data evaluation consists of trending of environmental data and laboratory performance, redefining plume configurations where required, and detailed review of particular contaminants or sites of concern. The results of data evaluation have historically been presented in the Part 2 GWQRs; the results of evaluation of CY 1995 data will again be presented in these reports.

3.7 Analytical Results

Groundwater quality data obtained during CY 1995 are contained in Appendices E, F, and G. Appendix E contains the analytical results for each groundwater sample and Appendix F contains the results for the field duplicate samples. Radiochemical data are presented in Appendix G. The data presented in these appendices were generated from the following quarterly data sets: first quarter - Q1_95.SD2, second quarter - Q2_95R1.SD2, third quarter - Q3_95R1.SD2, and fourth quarter - Q4_95.SD2 (H&R Technical Associates, Inc. 1995a, 1995b, 1996a, and 1996b). Water level elevations obtained during comprehensive semiannual measurement events are presented in Appendix H, which form the data base for potentiometric surface maps discussed in Section 4.0.

Informational appendices that highlight selected data or present the results of data verification and evaluation processes include ion-charge balances (Appendix I), comparison of trace metals to EPA primary drinking water standards (Appendix J), calculation of annual average nitrate concentrations (Appendix K), tabulation of QA/QC data (Appendix L), and results of VOC validation (Appendix M).



4.0 HYDROGEOLOGIC FRAMEWORK

This section contains a general description of the highly complex hydrogeologic system in the Bear Creek Regime. It provides sufficient descriptive detail needed for RCRA assessment and corrective action monitoring reporting requirements regarding evaluation of groundwater flow directions and estimates of contaminant migration rates. In past GWQRs, the hydrogeologic overview was based primarily on the conceptual model and associated nomenclature presented in: *Status Report - A Hydrologic Framework for the Oak Ridge Reservation* (Solomon *et al.* 1992). However, the overview for this report has been revised because flow in the Maynardville Limestone, a key component of the groundwater flow system in BCV, is not specifically addressed in Solomon *et al.* (1992), and some components of the ORR hydrogeologic framework (e.g., the stormflow zone) appear to be of lesser hydrologic significance at the Y-12 Plant than indicated for other areas on the ORR. In general, the revised description of the hydrogeologic system incorporates: (1) applicable aspects of the conceptual framework described in Solomon *et al.* (1992), (2) hydrologic characteristics evaluated by Moore (1988 and 1989), and (3) findings of the RI for the BCV CA (Science Applications International Corporation 1995).

4.1 Geology

The geology on the ORR is generally characterized by thrust-faulted sequences of southeast-dipping, fractured clastic (primarily shale and siltstone) and carbonate (limestone and dolostone) strata of Lower Cambrian to Lower Ordovician age (Figure 7). Interbedded limestone and shale formations of the Conasauga Group underlie BCV. Shale and siltstone beds of the underlying Rome Formation form Pine Ridge to the north, and the primarily dolostone strata of the overlying Knox Group form Chestnut Ridge to the south. Strike and dip of bedding in the Bear Creek Regime are generally N 55°E, and 45°SE (true direction), respectively.

Bedrock in the Bear Creek Regime is overlain by any of several materials, including alluvium, colluvium, man-made fill, fine-grained residuum from the weathering of the bedrock, and saprolite (weathered bedrock). In many areas, the saprolite retains primary textural features of the bedrock, including fractures (Solomon *et al.* 1992). The overall thickness of these materials in BCV is typically less than 40 ft (Geraghty & Miller, Inc. 1987).

The Maynardville Limestone is partially exposed along the axis of BCV at the base of Chestnut Ridge and the remaining underlying formations of the Conasauga Group are partially exposed successively to the north toward Pine Ridge (Figure 7). The Maynardville Limestone consists of fine- to coarse-grained, thin-bedded to massive limestone and dolostone (King and Haase 1987). Information obtained during 1992 indicates that the thickness of the Maynardville

Limestone varies from about 300 to 620 ft and averages about 490 ft (Shevenell *et al.* 1993). Based on lithologic information obtained during installation of 26 exit-pathway monitoring wells, the thickness of the basal portion of the Maynardville Limestone (the Low Hollow member) varies substantially in an area southeast of the Bear Creek Burial Grounds WMA. The variances seem to reflect both a facies change in the Maynardville and small-scale structural displacements (Shevenell *et al.* 1993; Goldstrand 1995). These thickness variations are postulated to exist throughout BCV and in Union Valley to the east of the ORR.

Underlying formations of the Conasauga Group are, from youngest to oldest, the Nolichucky Shale, Maryville Limestone, Rogersville Shale, Rutledge Limestone, and Pumpkin Valley Shale (Figure 7). For the purposes of this report, these formations are referred to collectively as the Conasauga Shales. The lithologic compositions of the Nolichucky Shale and Maryville Limestone are similar in the Bear Creek Regime. These formations consist primarily of between 350 and 550 ft of massive to thin-bedded mudstone with interbedded limestone (King and Haase 1987). Beneath the Maryville Limestone are the massive mudstones of the Rogersville Shale and the interbedded limestone and shale of the Rutledge Limestone. The thickness of each of these formations ranges from 90 to 120 ft (King and Haase 1987). The Pumpkin Valley Shale consists of 260 to 320 ft of massive shale and mudstone with thin beds of siltstone and sandstone (King and Haase 1987).

The most pervasive structural features in the Bear Creek Regime are extensional, hybrid, and shear fractures (Solomon *et al.* 1992). Three major joint sets are evident in the Bear Creek Regime: one that roughly parallels bedding, one steeply dipping set that parallels geologic strike, and one steeply dipping set that trends perpendicular to strike (Dreier *et al.* 1987). Fracture densities ranging from about 1 to 60 per foot have been observed in rock outcrops near ORNL (Dreier *et al.* 1987; Sledz and Huff 1981). Most fractures are short, ranging from tenths of an inch to a few feet in length (Solomon *et al.* 1992).

Dissolution of carbonates along fractures, particularly in the Maynardville Limestone, has produced solutionally-enlarged features ranging from less than an inch to tens of feet in thickness. Shevenell *et al.* (1993) report that solution cavities occur throughout the Maynardville Limestone, but occur most frequently in the uppermost and lowermost of six stratigraphic zones defined by gamma-log signatures.

4.2 Groundwater System

Solomon *et al.* (1992) divide the groundwater system underlying the ORR into two basic hydrogeologic units with fundamentally different hydrologic characteristics: the Knox Aquifer and the ORR Aquitards. In the vicinity of the Y-12 Plant, the Knox Aquifer consists of the Knox

Group and the underlying Maynardville Limestone formation of the Conasauga Group. The Conasauga Shales, the underlying Rome Formation, and the Chickamauga Group form the ORR Aquitards. Discussions of the groundwater system in this report focus primarily on the Maynardville Limestone and Conasauga Shales, which underlie almost all of the Bear Creek Regime.

In general, both the Knox Aquifer and the ORR Aquitards are divided by Solomon *et al.* (1992) into four parts: (1) the stormflow zone, (2) the vadose zone, (3) the groundwater zone, and (4) the aquiclude (Figure 8). The divisions are based on the amount of water transmitted by each subsystem (i.e., flux), which decreases with depth. The flow system is vertically gradational with no discrete boundaries separating the subsystems. However, the bulk permeability of the Knox Aquifer is about ten times greater than that of the ORR Aquitards (Solomon *et al.* 1992).

4.2.1 Stormflow Zone

Investigations in Bethel Valley and Melton Valley near ORNL show that groundwater occurs intermittently above the water table in a shallow "stormflow zone" that extends from ground surface to a depth of about 6 ft (Moore 1989). Channels for lateral flow in the stormflow zone include macropores and mesopores, which are connected voids created by various processes, including biochanneling, cracking, and soil particle aggregation (Moore 1989). The stormflow zone is thicker and more permeable in forested areas than in grassy or brushy areas, and is more permeable near the ground surface than at deeper intervals (Moore 1989). Lateral flow in the stormflow zone is intermittent, creating a perched water table lasting only a few days or weeks after rainfall (Wilson *et al.* 1990). Most groundwater within the stormflow zone is either lost to evapotranspiration or recharge to the water table. The remaining water discharges at nearby seeps, springs, or streams. As part of the RI/FS in progress for the Bear Creek CA, stormflow tubes installed at six sites (three along the northern flank of Chestnut Ridge) have all showed brief periods of soil saturation in response to rainfall (Science Applications International Corporation 1995). These findings suggest that stormflow also occurs in BCV, although disposal activities and capping of the WMAs have altered the stormflow zone in many areas of the Bear Creek Regime. Additionally, the hydrologic importance of stormflow in BCV is not fully understood but may not be as great as in Bethel Valley and Melton Valley.

4.2.2 Vadose Zone

The vadose zone occurs between the stormflow zone and the water table (Figure 8), which typically occurs at depths less than 20 ft bgs in BCV. The vadose zone in undeveloped areas is

primarily composed of regolith. Water is added to the vadose zone by percolation from the stormflow zone and is removed by transpiration and recharge to the water table. Solomon *et al.* (1992) estimate annual recharge rates through the vadose zone for the Knox Aquifer and ORR Aquitards of about 2.5 and 0.8 inches, respectively. However, ongoing studies on the ORR suggest that recharge to the Knox Aquifer may be higher in BCV.

The vadose zone is unsaturated except in the capillary fringe above the water table and within wetting fronts during periods of vertical percolation from the stormflow zone (Moore 1989). A geometric mean hydraulic conductivity of about 0.006 feet per day (ft/d) was determined from analysis of infiltrometer tests in undisturbed vadose zone in Bethel Valley and Melton Valley (Moore 1989). Moore (1989) estimates the effective porosity (the porosity through which advective transport can occur) for regolith to be 0.01 to 0.15.

4.2.3 Groundwater Zone

Groundwater below the vadose zone in the Conasuaga Shales and Maynardville Limestone occurs within orthogonal sets of permeable, planar fractures that form water-producing zones within an essentially impermeable matrix. Water-producing zones commonly develop within a single layer of rock, and have an average thickness (assuming an average dip of 35°) of 2 ft or less (Dreier *et al.* 1987). Dissolution of carbonates has greatly increased permeability of the water-producing zones in the Maynardville Limestone; enlarged fractures and solution cavities in the Maynardville Limestone yield as much as 200 to 300 gallons per minute (gpm) (Shevenell *et al.* 1993), which is several orders-of-magnitude greater than the typical yield (0.25 gpm) of water-producing zones in the ORR Aquitards (Solomon *et al.* 1992). Additionally, stratiform fractures provide the principal flowpaths in both hydrogeologic units, and groundwater flows primarily in the direction of geologic strike (which may or may not correlate with the maximum hydraulic gradient) toward springs, seeps, and cross-cutting tributary streams (Moore and Toran 1992).

Because the frequency, aperture, and connectivity of permeable fractures decrease with depth, the bulk hydraulic conductivity of the Conasuaga Shales and the Maynardville Limestone is vertically gradational. Most of the groundwater flux in each unit occurs in a highly permeable zone (the water table interval) within the transitional horizon between regolith and unweathered bedrock; lower flux (and longer solute residence times) occurs at successively greater depths in the bedrock. Changes in the geochemistry of the groundwater suggest that active flow in the Conasuaga Shales occurs at depths less than 100 ft bgs. Active groundwater flow occurs deeper in the Maynardville Limestone, as indicated by pressure responses to rainfall that are evident in some wells completed at depths of 200 to 400 ft bgs (Science Applications International Corporation 1995).

The bulk of the groundwater flux in the Conasauga Shales and Maynardville Limestone occurs within the water table interval, which transmits an estimated 90% or more of the groundwater flow below the stormflow/vadose zone (Solomon *et al.* 1992). This highly permeable zone is relatively thin in both units (3 to 15 ft), and is characterized by cyclic seasonal variations of the water table elevation and rapid response to storm events (Moore 1989). Transient saturation of permeable flowpaths in the water table interval during and immediately after rainfall causes rapid lateral groundwater movement (quickflow) toward nearby seeps, springs, and tributaries, particularly in the Maynardville Limestone. Quickflow in the water table interval is reflected by stream hydrographs, which are characterized by rapid responses to rainfall and little or no change in baseflow before and after major storms (Science Applications International Corporation 1995). For some wells screened in the water table interval, substantial decreases in TDS reported for samples collected after rainfall also indicate quickflow recharge.

Groundwater flux below the water table interval in the Conasauga Shales occurs primarily in the shallow bedrock (i.e., <100 ft bgs). Bedrock at shallow depths in the Conasauga Shales is characterized by heterogeneous permeability that varies over several orders-of-magnitude. For instance, results of 82 hydraulic conductivity tests performed in shallow Nolichucky Shale monitoring wells range from 0.001 to 4.6 ft/d (Geraghty & Miller, 1989b). The higher conductivity values represent permeable water-producing intervals and the lower conductivity values represent less permeable matrix intervals (Moore 1989). Additionally, results of aquifer pumping tests suggest strongly anisotropic flow at shallow depths in the Conasauga Shales. Twenty-five aquifer pumping tests have been performed in the Nolichucky Shale, each characterized by an elliptical cone of depression elongated parallel to geologic strike; transmissivity values (determined from Theis drawdown analysis) ranged from about 5 to 530 ft squared per day (ft²/d) and averaged about 62 ft²/d (Law Engineering Testing Company 1983; Geraghty & Miller, Inc. 1986; Golder Associates, Inc. 1987; Golder Associates, Inc. 1988). Results for some of the pumping tests also showed strike-parallel transmissivities as much as 30 times greater than strike-normal transmissivities (Golder Associates, Inc. 1988).

Decreasing groundwater flux with depth in the Conasauga Shales is clearly indicated by distinct changes in groundwater geochemistry, as well as hydraulic conductivity test results. The first transitional decrease generally occurs at a depth of 100 ft bgs and is indicated by a change from calcium-magnesium-bicarbonate groundwater to sodium-bicarbonate groundwater. This geochemical change is probably a function of longer groundwater residence time, which reflects lower hydraulic conductivity related to reduced fracture apertures or increased fracture spacings (Solomon *et al.* 1992). Results of eight hydraulic conductivity tests in wells completed at depths of 132 to 374 ft bgs in the Rutledge Limestone, Maryville Limestone, and Nolichucky Shale, as summarized in Geraghty & Miller, Inc. (1989b), range from 3×10^{-5} to 0.01 ft/d, and average

about 0.004 ft/d. A second transitional decrease in groundwater flux generally occurs at approximately 400 ft bgs and is indicated by a change from sodium-bicarbonate groundwater to sodium-chloride groundwater accompanied by a general increase in specific conductance and TDS. Data obtained from straddle packer tests, slug tests, and slow-recovery analyses indicate that hydraulic conductivity in the deep bedrock of the Conasauga Shales is as low as 2.83×10^{-6} ft/d (Solomon *et al.* 1992).

The permeability of the shallow bedrock in the Maynardville Limestone also varies over several orders-of-magnitude, but overall is significantly greater than in the Conasauga Shales; hydraulic conductivity test results for wells less than 100 ft bgs in the Maynardville Limestone range from 0.13 to 99 ft/d, and average about 22 ft/d (Geraghty & Miller, Inc. 1989b). A comparable flow rate (25 ft/d) also was estimated from results of a dye tracer test performed in the Maynardville Limestone south of the Oil Landfarm WMA (Geraghty & Miller, Inc. 1989c). Additionally, aquifer pumping tests performed in the Maynardville Limestone produced generally symmetrical cones of depression, potentially indicating lower anisotropy compared to the Conasauga Shales. Transmissivity values obtained from these pumping tests (determined from Theis drawdown analysis) ranged from about 372 to 7,690 ft²/d, with storage coefficients between 6×10^{-5} and 0.002 (Golder Associates, Inc. 1988). Results of some of these tests also indicated substantially greater strike-parallel transmissivity than strike-normal transmissivity.

Indications of decreasing groundwater flux in the Maynardville Limestone are less clearly evident than for the Conasauga Shales. For example, changes in groundwater geochemistry that occur with depth in the Conasauga Shales are not evident; calcium-magnesium bicarbonate groundwater is present in the Maynardville Limestone to depths of 1,000 ft bgs (Dreier *et al.* 1993). Moreover, decreased permeability with depth in the Maynardville Limestone has not been characterized because hydraulic conductivity tests have been performed primarily in shallow (<100 ft bgs) monitoring wells. As noted previously, however, active groundwater flow may occur to depths of at least 400 ft bgs in the Maynardville Limestone.

4.2.4 Aquiclude

The aquiclude is generally marked by the presence of saline water with TDS concentrations of 40,000 to 300,000 milligrams per liter (mg/L) (Solomon *et al.* 1992). The water in the aquiclude is a sodium-, calcium-, and chloride-rich brine that is chemically similar to brines associated with major sedimentary basins (Solomon *et al.* 1992). In Melton Valley, saline water typically occurs at depths of about 600 to 700 ft bgs (Solomon *et al.* 1992); however, saline groundwater has not been encountered at depth in BCV. Several wells completed at depths of about 500 to 1,000 ft bgs in the Conasauga Shales in BCV monitor groundwater with TDS

concentrations of several thousand mg/L to several tens of thousand mg/L. This highly mineralized groundwater may represent a mixing zone or diffusion zone between the fresh and saline groundwater, suggesting that the aquiclude is present at greater depth in BCV than in Melton Valley (Solomon *et al.* 1992).

4.3 Groundwater Flow Directions

Directions of groundwater flow in the Bear Creek Regime were evaluated from static water level measurements obtained from 155 monitoring wells during April 1995 (the seasonally high water table) and from 146 wells in October 1995 (the seasonally low water table). These comprehensive water level data are used to generate the potentiometric maps and evaluate groundwater flow directions rather than measurements made prior to sampling. The comprehensive data are most representative because they are contemporaneous and are collected in such a manner so that artificial influences due to purging of adjacent wells are minimized. Depth-to-water measurements and water-level elevations for each well are tabulated in Appendix H. Review of these data shows that seasonal water-level fluctuations averaged about 2 ft in most of the wells, with the largest variances occurring in shallow wells completed in the water table interval. The maximum decline between April and October was 10.7 ft. Additionally, the pattern of water level decrease was the same in all wells; thus, there were no significant changes in groundwater flow directions (i.e., no significant deviation of horizontal hydraulic gradients).

Groundwater elevations in the water table interval and bedrock (shallow and intermediate) intervals during the seasonally high and seasonally low groundwater flow conditions are illustrated on Figures 9 and 10. Under both conditions, the water table is a subdued replica of surface topography, with steep gradients along the flanks of Pine Ridge and Chestnut Ridge and a gentle slope southwest down the axis of BCV. Groundwater in the Bear Creek Regime generally flows southwest. Flow converges on the Maynardville Limestone, the hydrologic drain for the groundwater flow system in the regime. Flow in the Maynardville Limestone is along geologic strike toward the west end of BCV. Horizontal hydraulic gradients in the water table interval determined from CY 1995 data are similar to previous estimates, averaging about 0.038 across strike in the Conasauga Shales and about 0.011 along strike in the Maynardville Limestone. Flow vectors in the water table interval beneath the three RCRA TSDs in post-closure status are southwest at the S-3 Site and Oil Landfarm WMA and almost due south at the Bear Creek Burial Grounds WMA. The strike-parallel horizontal hydraulic gradient in the shallow and intermediate bedrock intervals of the Maynardville Limestone averaged about 0.009. The strike-normal horizontal hydraulic gradient in the shallow and intermediate bedrock intervals of the Conasauga Shales averaged about 0.035.

4.4 Rate of Groundwater Flow and Contaminant Migration

The following estimates of groundwater flow and contaminant migration rates are presented to comply with reporting requirements of RCRA post-closure and RCRA interim status assessment monitoring, which were in force during CY 1995. Groundwater flow rates were estimated only for the water table and shallow bedrock intervals in the groundwater zone. Rates in the stormflow zone were not estimated because most waste sources in the Bear Creek Regime lie below this zone. Estimates of groundwater flow rates in the intermediate and deep intervals of the Conasauga Shales also were not performed, but representative rates are probably as low as a few centimeters per year (Solomon *et al.* 1992). The contaminant migration rates estimated for the water table and shallow bedrock intervals are based on the assumption that contaminants move at the groundwater flow rate unimpeded by various retardation processes. Factors that would reduce transport rates, such as matrix diffusion, degradation, sorption, and chemical precipitation, or factors that may increase transport, such as dispersion, were not explicitly considered. Free product migration, which may occur independent of groundwater flow rates and directions, was also not considered.

The wide range of potential contaminant migration rates presented in this section demonstrates the uncertainty in determining a representative rate of solute transport for the groundwater flow system in the Bear Creek Regime. Long-term transport of solutes in dual porosity and/or highly heterogeneous media is a complex physical and chemical process, and it is probable that at various times and under various conditions, migration rates throughout the given range occur. Nitrate, for instance, may move relatively rapidly through the flow system, while other more highly attenuated constituents, such as trace metals, probably move much more slowly. Moreover, even the highly mobile compounds will diffuse into smaller pores from the large conduits and later, under a reverse concentration gradient, will slowly diffuse back out. Thus, although the actual transport rates may vary over several orders of magnitude, the relatively limited extent of the contaminant plumes in the Bear Creek Regime suggests that slower transport rates may dominate (particularly in the ORR Aquitards) and that attenuation processes such as matrix diffusion are an important controlling factor.

Assuming that saturated regolith and fractured bedrock can be treated as an equivalent porous medium, average groundwater flow rates can be estimated using the modified Darcy equation given by $v = Ki/n$, where; v is the average linear velocity of the groundwater, K is the hydraulic conductivity of the medium, i is the hydraulic gradient, and n is the effective porosity. Although the modified Darcy equation can be used to calculate average flow velocities in fractured rock, the velocities in individual fractures may vary over orders of magnitude, depending on the fracture aperture and wall roughness (Freeze and Cherry 1979).

The following assumptions were used to calculate groundwater flow rates in the water table interval: hydraulic conductivities for regolith (0.03 to 3.25 ft/d) reported by Connell and Bailey (1989), an effective porosity of 0.0042 (Moore 1989), an average strike-parallel (down-valley) gradient of 0.011, and an average strike-normal (cross-valley) gradient of 0.038. Under these assumptions, calculated rates of groundwater flow in the water table interval are as follows:

v (ft/d)	K (ft/d)	i	n
0.08	0.03	0.011	0.0042
0.27	0.03	0.038	0.0042
8.51	3.25	0.011	0.0042
29.40	3.25	0.038	0.0042

Because the bulk of the water mass in the water table interval resides within porous matrix zones between fractures, diffusive exchange between matrix and fractures would reduce contaminant migration rates relative to calculated flow rates (Solomon *et al.* 1992).

Estimates of groundwater flow rates for the shallow bedrock interval in the Conasauga Shales were based on the following assumptions: a geometric mean hydraulic conductivity of 0.0008 ft/d for matrix intervals (Moore 1989), 0.15 ft/d for permeable intervals (Moore 1989), and 0.6 ft/d for the continuum of permeable intervals (Moore and Toran 1992); effective porosity values ranging from 0.00035 (Moore and Toran 1992) to 0.004 (Lozier *et al.* 1987); and an average strike-normal hydraulic gradient of 0.035. As summarized in the following table, estimated flow rates range from 0.07 ft/d to about 60 ft/d.

v (ft/d)	K (ft/d)	i	n
0.80	0.008	0.035	0.00035
0.07	0.008	0.035	0.004
15.0	0.15	0.035	0.00035
1.31	0.15	0.035	0.004
60.0	0.6	0.035	0.00035
5.25	0.6	0.035	0.004

Groundwater flow rates for the shallow bedrock interval in the Maynardville Limestone were calculated using the average hydraulic conductivity (22 ft/d) determined from well test results summarized in Geraghty & Miller, Inc. (1989b), the same range of effective porosity used in

calculations for the Conasauga Shales, and an average strike-parallel hydraulic gradient of 0.009. Using these values, the rate of groundwater flow in the Maynardville Limestone ranges from about 49 to 566 ft/d. Relatively high flow rates in the Maynardville Limestone also are indicated by results of a dye-tracer study performed in the Bear Creek Regime, which yielded a transport rate of about 200 ft/d (Geraghty & Miller, Inc. 1989c).

Contaminant migration rates in the Bear Creek Regime may also be estimated based on the extent of the nitrate plume originating from the S-3 Site. Unlike most of the other groundwater contaminants in the Bear Creek Regime, many of which have multiple source areas, the S-3 Site is the only significant nitrate source in the Bear Creek Regime. Moreover, nitrate salts are highly soluble and generally move with no significant sorption or decay during transport (Geraghty & Miller, Inc. 1989d). In CY 1995, the nitrate plume extended westward (along strike) from the S-3 Site for about 3,650 ft in the water table interval within the Nolichucky Shale, approximately 4,000 ft at shallow depths in the Nolichucky Shale, and about 11,000 ft west at shallow depths in the Maynardville Limestone (HSW Environmental Consultants, Inc. 1995). Given the 44 years between initial waste disposal at the S-3 Site in 1951 and the horizontal extent of the nitrate plume observed in 1995, the rate of nitrate transport ($v = \text{distance/time}$) is about 0.2 ft/d in the water table and shallow bedrock intervals of the Nolichucky Shale, and about 0.7 ft/d in the Maynardville Limestone.

4.5 RCRA Corrective Action Monitoring Evaluation

The Bear Creek Regime RCRA post-closure permit (TNHW-087), as modified September 19, 1995, specifies that data from eligible point of compliance wells that serve to support performance of unit caps shall be evaluated annually. In addition, data from the westernmost Maynardville Limestone exit-pathway transect are to be evaluated and notification provided to TDEC if these wells no longer serve to monitor the downgradient edge of the contaminant plume in the Bear Creek Regime.

Previous detailed evaluations of the effectiveness of the RCRA caps installed over RCRA TSDs at the Y-12 Plant have shown overall that they have had no significant impact on groundwater contaminant concentrations (Shevenell and Goldstrand 1994). One exception appears to be the Chestnut Ridge Security Pits (located in the Chestnut Ridge Regime) where both water levels and contaminant concentrations decreased after capping. The general effectiveness of RCRA caps in BCV is limited because the water table is very shallow in many areas and in some cases actually within buried wastes at some of the TSDs. The caps also do not cover a large enough area to alter groundwater table configurations or shallow groundwater flows from upgradient recharge areas beneath the caps (Shevenell and Goldstrand 1994). The caps are effective in meeting their

primary intended purpose, which is to isolate wastes and reduce the potential for direct human or wildlife exposure. Also, the caps do reduce direct infiltration of rainfall through the waste; thus, some reduction in leachate production likely occurs at some of the units. Based on the evaluations to date and passage of time since closure of these sites, contaminant concentrations in wells located adjacent to the caps should reflect steady-state conditions or a consistent long-term trend either upward or downward depending on contaminant type and chemical degradation/interaction characteristics.

The three selected point of compliance wells for the Bear Creek Regime permit include Wells GW-276, GW-363, and GW-069 at the S-3 Site, Oil Landfarm WMA, and Bear Creek Burial Grounds WMA, respectively. Sufficient data exist to construct trends of selected target compound concentrations in the wells, although analyses for the full suite of constituents in Wells GW-363 and GW-069 were not begun until issuance of the final post-closure permit modifications. As evident from groundwater potentiometric maps and flow directions (Figures 9 and 10), Wells GW-276 and GW-069 are directly downgradient (and downdip) of their respective sites. Well GW-363 is located off of the west edge of the Oil Landfarm WMA cap and monitors groundwater flow along geologic strike based on CY 1995 groundwater flow directions. Trends for selected target compound list constituents are shown in Figures 11 and 12. The selected constituents represent each major type of constituent (VOCs, inorganics, radionuclides) from the target compound list.

The trend charts for Well GW-276 demonstrate fairly stable metals and decreasing VOC concentrations with no evidence of major contaminant breakthroughs indicative of new releases to groundwater or catastrophic failure of the cap (Figure 11). Nitrate concentrations and beta activity appear to be fairly stable, with exception of the fourth quarter CY 1995 increase in the nitrate concentration. Total uranium, gross alpha activities, and the associated primary alpha emitters (U-234 and U-238) exhibit an increasing trend. Technetium-99 activity appears to be slowly decreasing. Contaminant concentrations in Wells GW-363 and GW-069 remained at background levels or detection limits. Specifically, concentrations of VOCs were below detection levels in CY 1995. Nitrate levels fluctuated slightly above detection levels. Of the target metals constituents, only barium and total uranium exceeded detection limits and these two constituents remained at background levels. Gross alpha and gross beta activities also remained at background levels. The results from Well GW-363 at the Oil Landfarm WMA indicate no major increases of contaminant concentrations in groundwater along geologic strike. Results from Well GW-069 indicate no major increases of contaminant concentrations in the shallow flow system down dip/downgradient of the Bear Creek Burial Grounds WMA.

Evaluation of data from the westernmost Maynardville Limestone exit-pathway monitoring transect indicates that the transect continues to serve as an adequate location to monitor the

maximum extent of groundwater contamination in the Bear Creek Regime. Target metals constituents remained below detection limits or established statistical background levels (HSW Environmental Consultants, Inc. *et al.* 1995; Appendix E). Concentrations of VOCs were all less than detection limits. Gross alpha and gross beta analyses were all below minimum detectable activities (MDA) with the exception of gross alpha activity in Wells GW-710 and GW-711 during the first semiannual sampling event (Appendix E). These two results, while greater than the associated MDA of 4.7 picocuries per liter, were less than the associated counting error. Because no associated alpha emitters were observed, the results were less than counting errors, and sampling results before and after the first semiannual sampling event showed no alpha activity, the results are not indicative of plume migration to the vicinity of the westernmost exit-pathway transect.

In the first semiannual sampling event, all radioisotope activities were below MDAs. Data from the second semiannual sampling events showed extremely low activities for U-234, that were slightly above MDAs in Wells GW-710, GW-711, GW-713, and GW-714. The activity values for U-238, Pu-239, and Am-241 were slightly above MDAs. Activity values for Np-237 and Pu-239 were slightly above MDAs in Well GW-715. The activities, while above MDAs, were less than 1 picocurie per liter, with the exception of U-238 in Well GW-714, which was 1.28 ± 0.52 picocuries per liter. No associated gross alpha or gross beta occurred during this sampling event and also the levels observed do not differ noticeably from those in the corresponding Knox Group background well (GW-521). These results, therefore, are not indicative of contaminant plume migration to the vicinity of the western exit-pathway transect.

Nitrate concentrations were elevated slightly above detectable levels in several of the wells. However, nitrate concentrations remained below the most stringent statistical background level of 5.3 mg/L for all groundwater types encountered in these wells (shallow, nonimpacted groundwater system).

4.6 Surface Water System

Surface water in the Bear Creek Regime is drained by Bear Creek and its tributaries. The headwaters of Bear Creek are at the western end of the Y-12 Plant near the S-3 Site (Figure 6). From its headwaters, the creek flows west for approximately 4.5 miles, where it turns north through a gap in Pine Ridge and flows into East Fork Poplar Creek about 6 miles upstream of its confluence with the Clinch River.

Several sections of Bear Creek have been modified since construction of the Y-12 Plant. The channel at the original headwaters was filled with rubble during construction of the S-3 Ponds and moved south to its present location. Sections of the creek north of the Rust Spoil Area, east

and south of the Oil Landfarm WMA, and south of the Bear Creek Burial Grounds WMA were also rerouted. Spring SS-4, which discharges to Bear Creek south of the Bear Creek Burial Grounds WMA (Figure 6), may be a seepage face for groundwater moving through the buried original creek channel located south of the present channel (Geraghty & Miller, Inc. 1989b).

The highest flows in Bear Creek occur in response to precipitation during winter and spring. Low flows occur during late summer and early fall, when several tributaries become dry and parts of the main channel within the Bear Creek Regime are dry. After periods of rainfall, the first several hundred feet of the creek headwaters may contain water from surface runoff, but at other times the headwaters remain dry for about 700 ft downstream of the S-3 Site. Flow in the creek during rainfall events is usually of short duration with rapid recession and no observed overbank flow (Geraghty & Miller, Inc. 1987).

Along much of its course through the Bear Creek Regime, Bear Creek lies entirely within the outcrop area of the Maynardville Limestone, and to a large extent, dissolution along fractures controls the position of the channel (Geraghty & Miller, Inc. 1987). Solution cavities have been encountered during drilling in the Maynardville near Bear Creek, indicating that they are an integral part of the Bear Creek flow system.

Shevenell *et al.* (1993) report evidence of hydraulic communication between subsurface conduits and springs discharging to Bear Creek observed during installation of several exit-pathway monitoring wells. For example, during installation of Well GW-684 in the Maynardville Limestone (Figure 6), production of water from a fracture or cavity encountered at a depth of about 125 ft bgs impacted the turbidity and flow rate of one of two adjacent springs (SS-5 Spring) located about 100 ft north (updip) of the well (Shevenell *et al.* 1993). Surprisingly, hydraulic connection between the other spring at this location and the Copper Ridge Dolomite of the Knox Group was indicated by turbidity impacts observed during installation of an exit-pathway well (GW-683) located about 250 ft south of Well GW-684 (Shevenell *et al.* 1993).

Because of the hydrologic interaction between the creek and the solution cavity system in the Maynardville Limestone and the Copper Ridge Dolomite, Bear Creek contains influent (losing) reaches where water flows from the creek to the groundwater system, and effluent (gaining) reaches where the creek receives groundwater discharge. Reviews of stream flow data indicate that Bear Creek has a number of alternating gaining and losing reaches over its length in the Bear Creek Regime (Geraghty & Miller, Inc. 1989c; Science Applications International Corporation 1995). Detailed data collected as part of the BCV CA RI show that Bear Creek gains flow in the upper reaches between the Rust Spoil Area and Sanitary Landfill I during both high and low flow conditions (Science Applications International Corporation 1995). Between Sanitary Landfill I to just downstream of the Bear Creek Burial WMA (confluence with NT-8) is a net losing reach of the creek during low-flow conditions with little apparent change in net flow during high-flow

conditions. A primary gaining reach exists between NT-8 and NT-9 (see Figure 6). West of about NT-9, Bear Creek becomes a perennial stream with a number of alternating gaining and losing reaches. Flow contributions to Bear Creek are dominated by tributaries and discharges from springs along its length. The amount of direct groundwater contribution is not well known; however, in the primary gaining reach between NT-8 and NT-9, direct groundwater flux has been estimated to be about 0.18 cubic feet per second (cfs) during low-flow conditions and about 0.51 cfs during high-flow conditions. The current conceptual hydrogeologic model postulates also that major springs along the length of Bear Creek may mark areas of general groundwater discharge to the creek (Science Applications International Corporation 1995).

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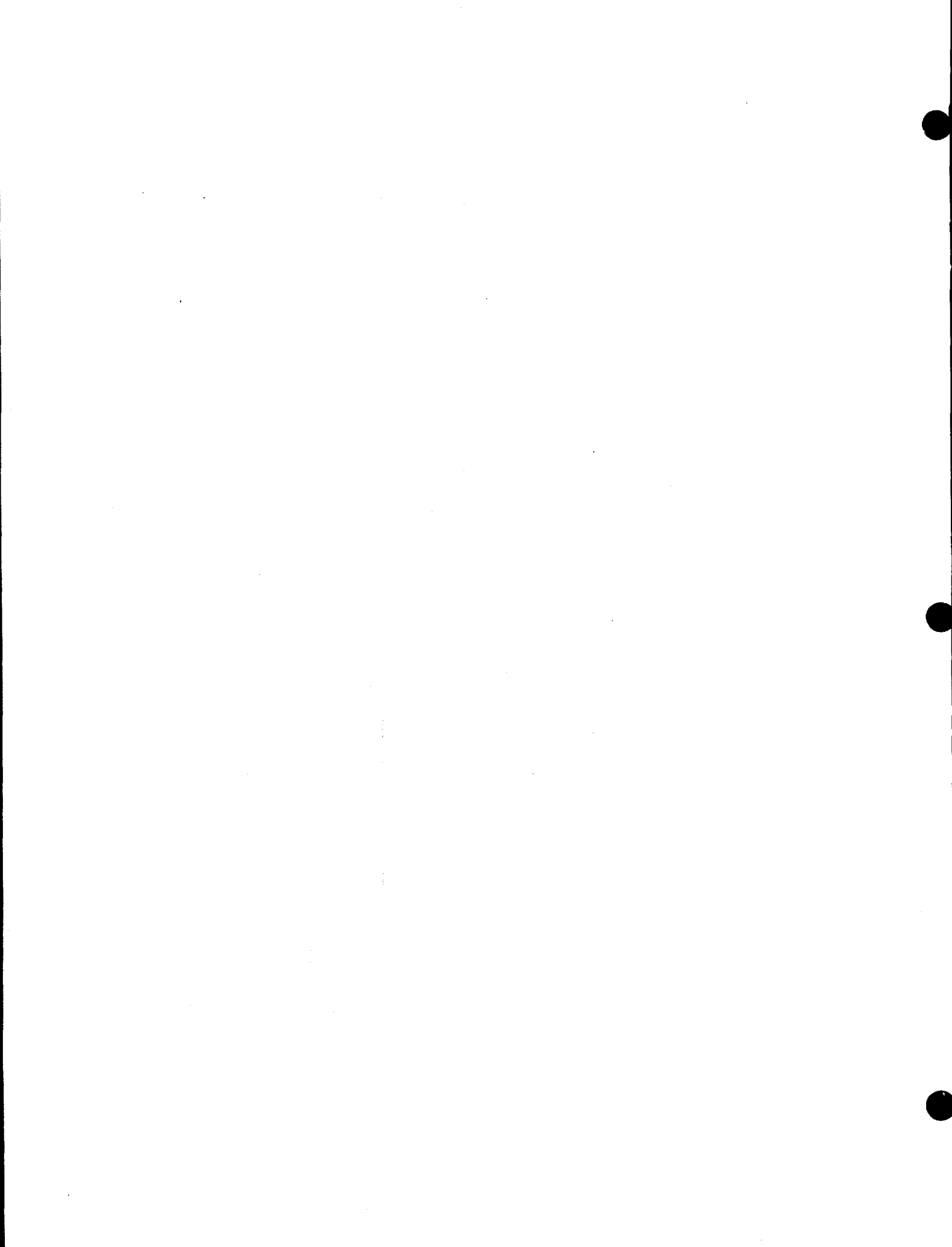
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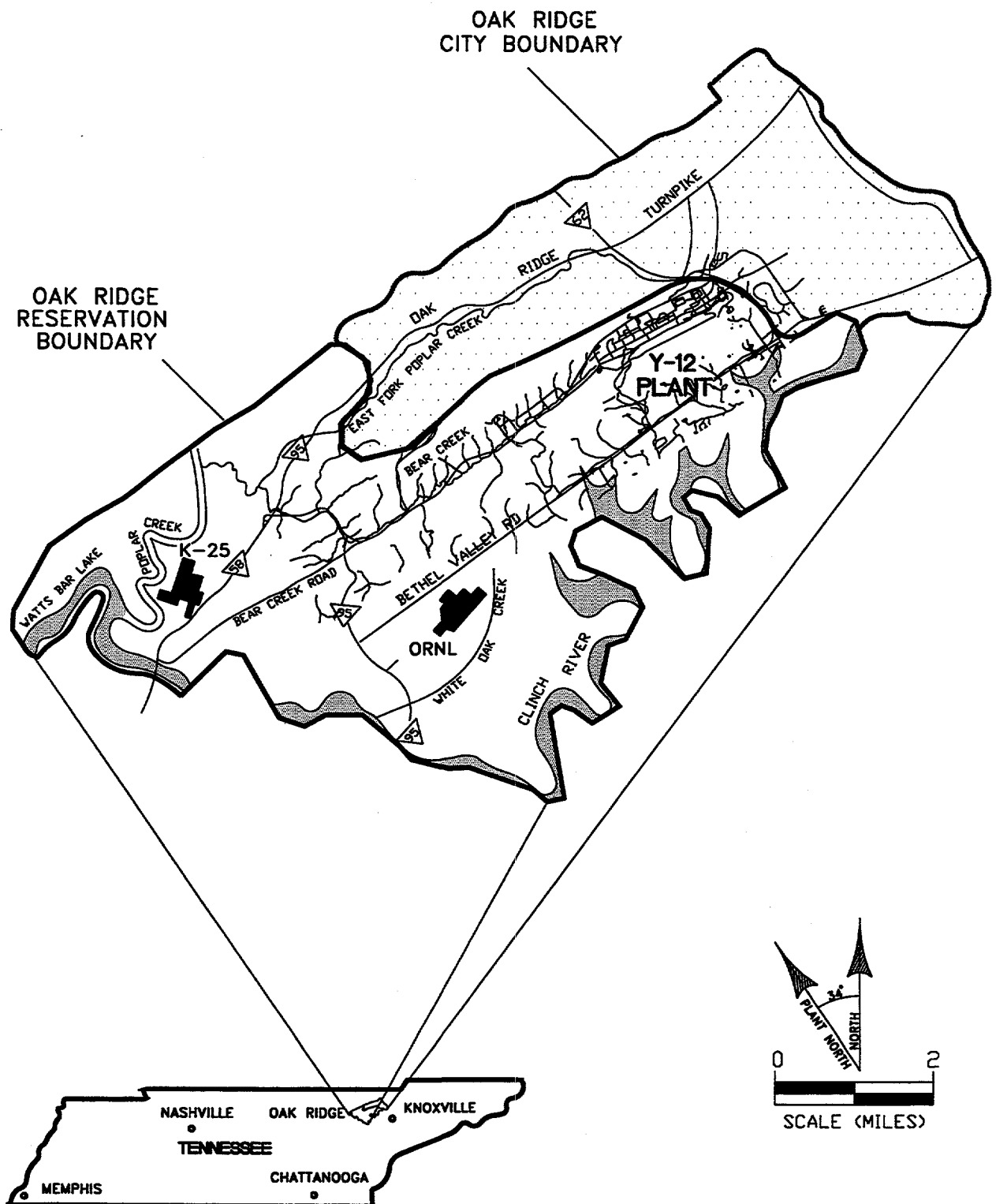
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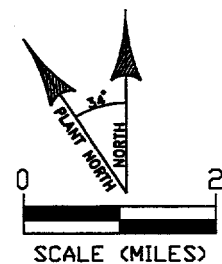
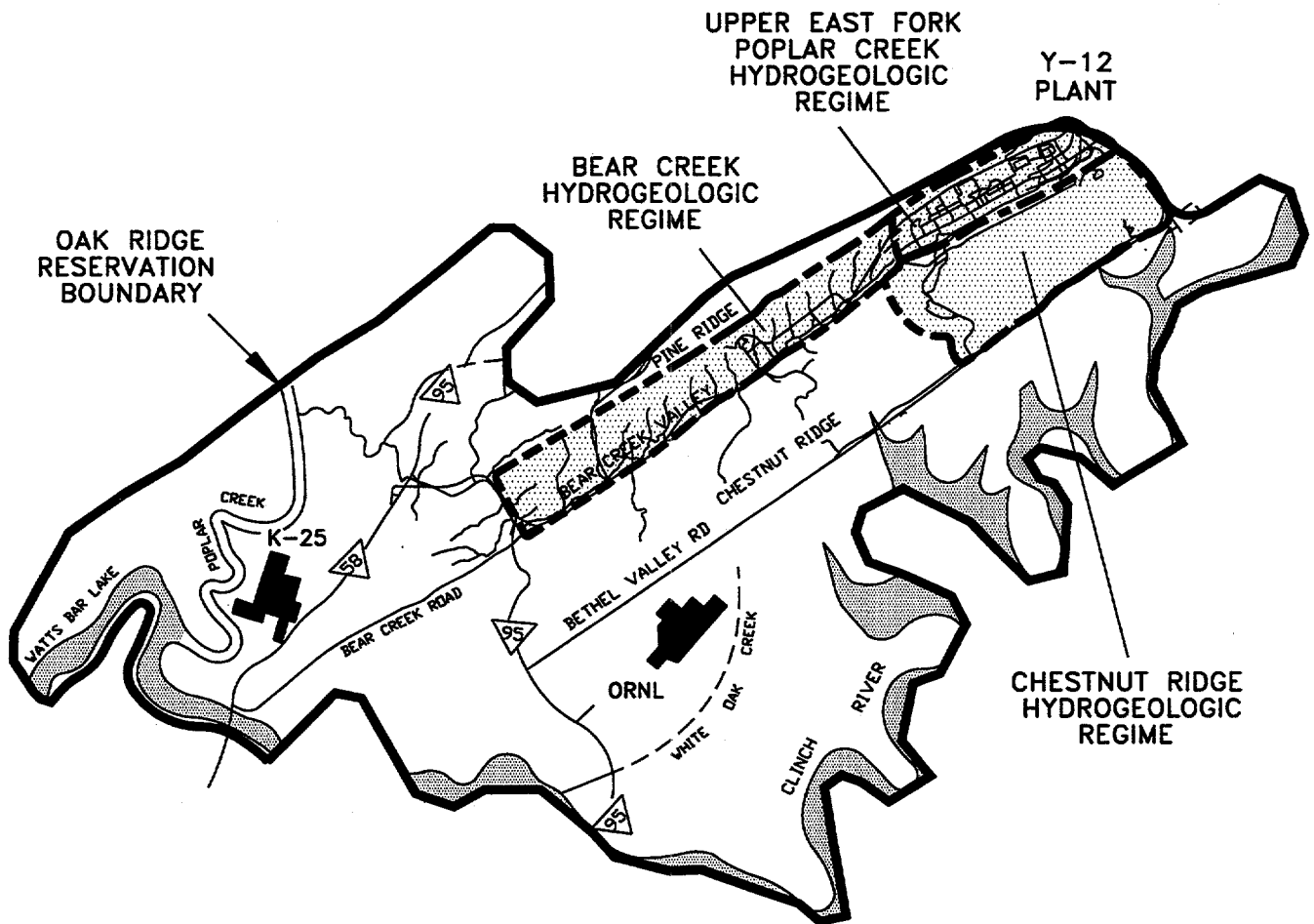
APPENDIX A

FIGURES



LOCATION:	Y-12 PLANT OAK RIDGE, TN.	FIGURE 1 REGIONAL LOCATION OF THE Y-12 PLANT
DATE:	02/13/1996	
DWG ID.:	C:\ACAD\BC_95\BC_FIG1.DWG	





LOCATION:	Y-12 PLANT OAK RIDGE, TN.
DATE:	02/13/1996
DWG ID.:	C:\ACAD\BC_95\BC_FIG2.DWG

FIGURE 2
HYDROGEOLOGIC REGIMES
AT THE Y-12 PLANT



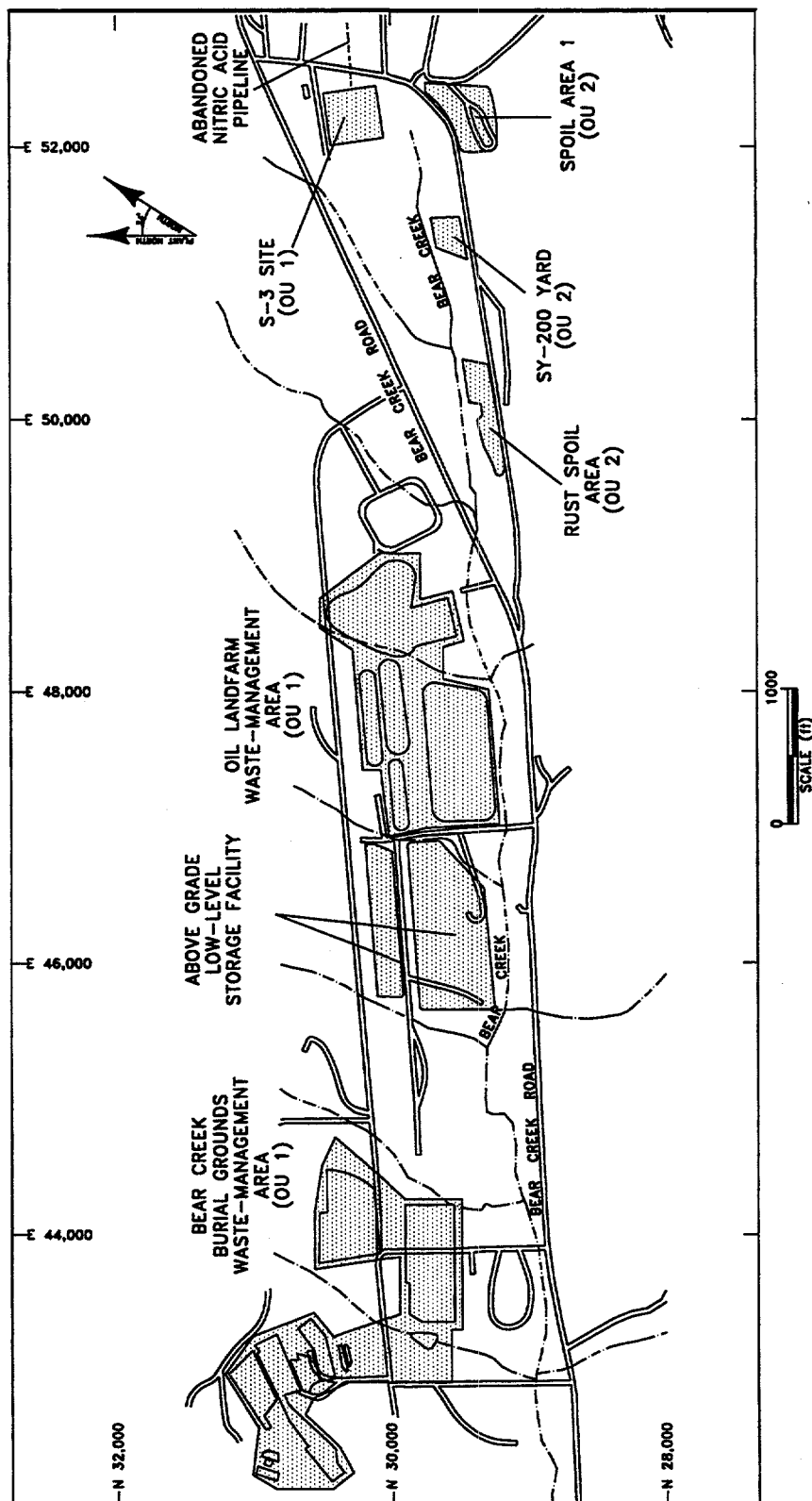


FIGURE 3
WASTE-MANAGEMENT SITES IN THE BEAR
CREEK HYDROGEOLOGIC REGIME

LOCATION:	Y-12 PLANT OAK RIDGE, TN.
DATE:	02/13/1996
DWG ID.:	C:\ACAD\BC_95\BC_FIG3.DWG



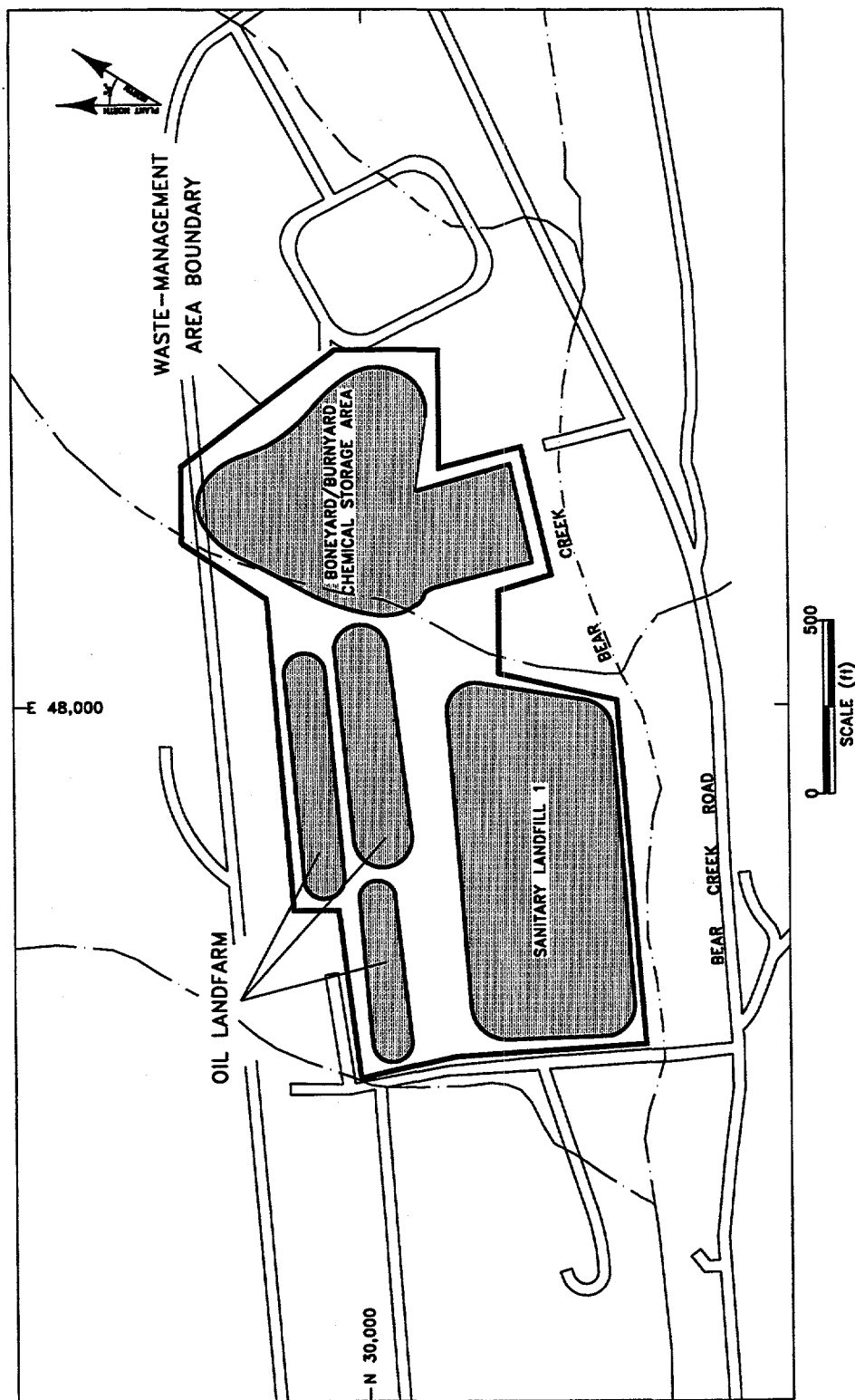


FIGURE 4
COMPONENTS OF THE OIL LANDFARM
WASTE-MANAGEMENT AREA

LOCATION:	Y-12 PLANT OAK RIDGE, TN.
DATE:	02/13/1996
DWG ID.:	C:\ACAD\BC_95\BC_FIG4.DWG

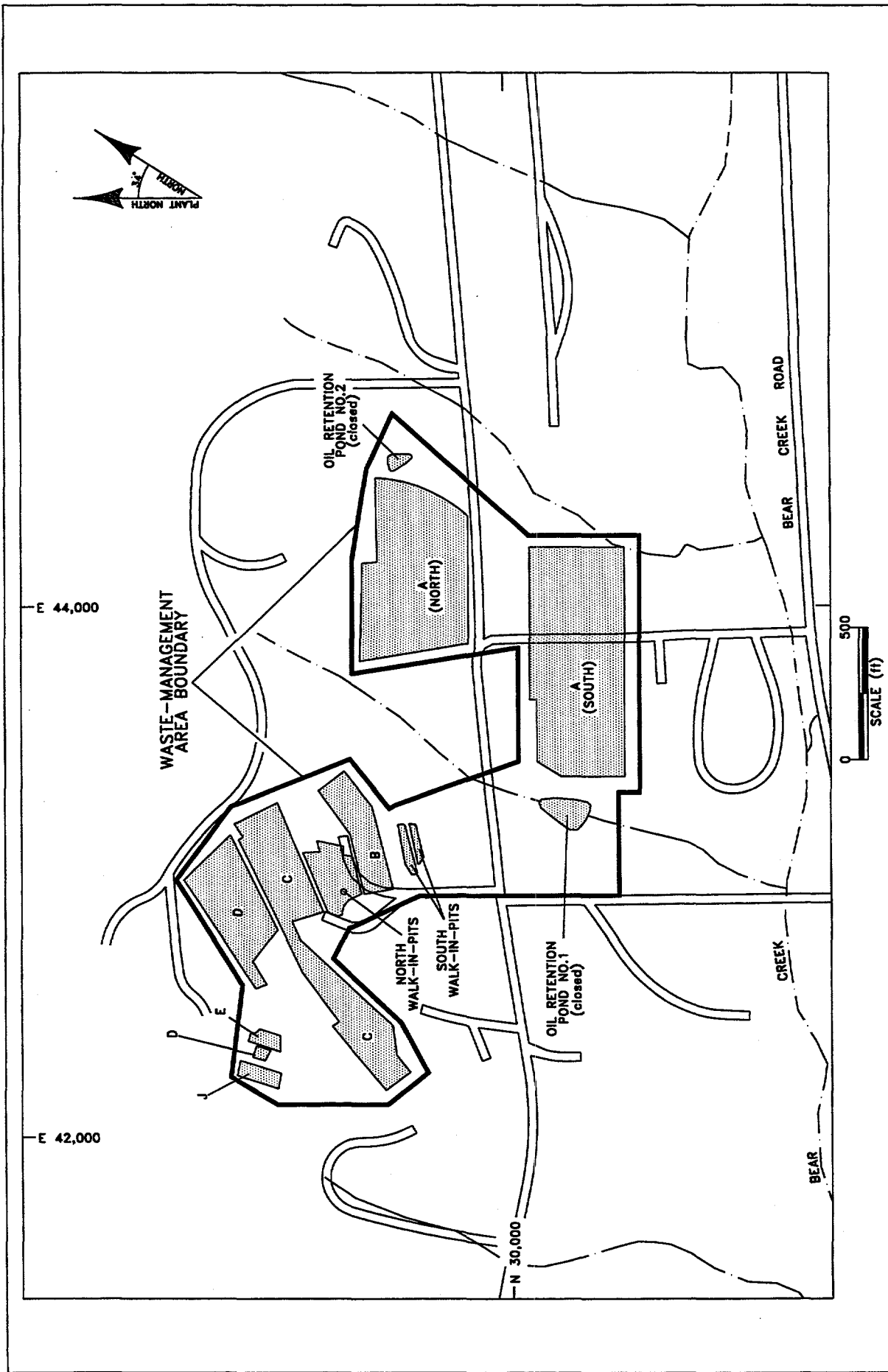
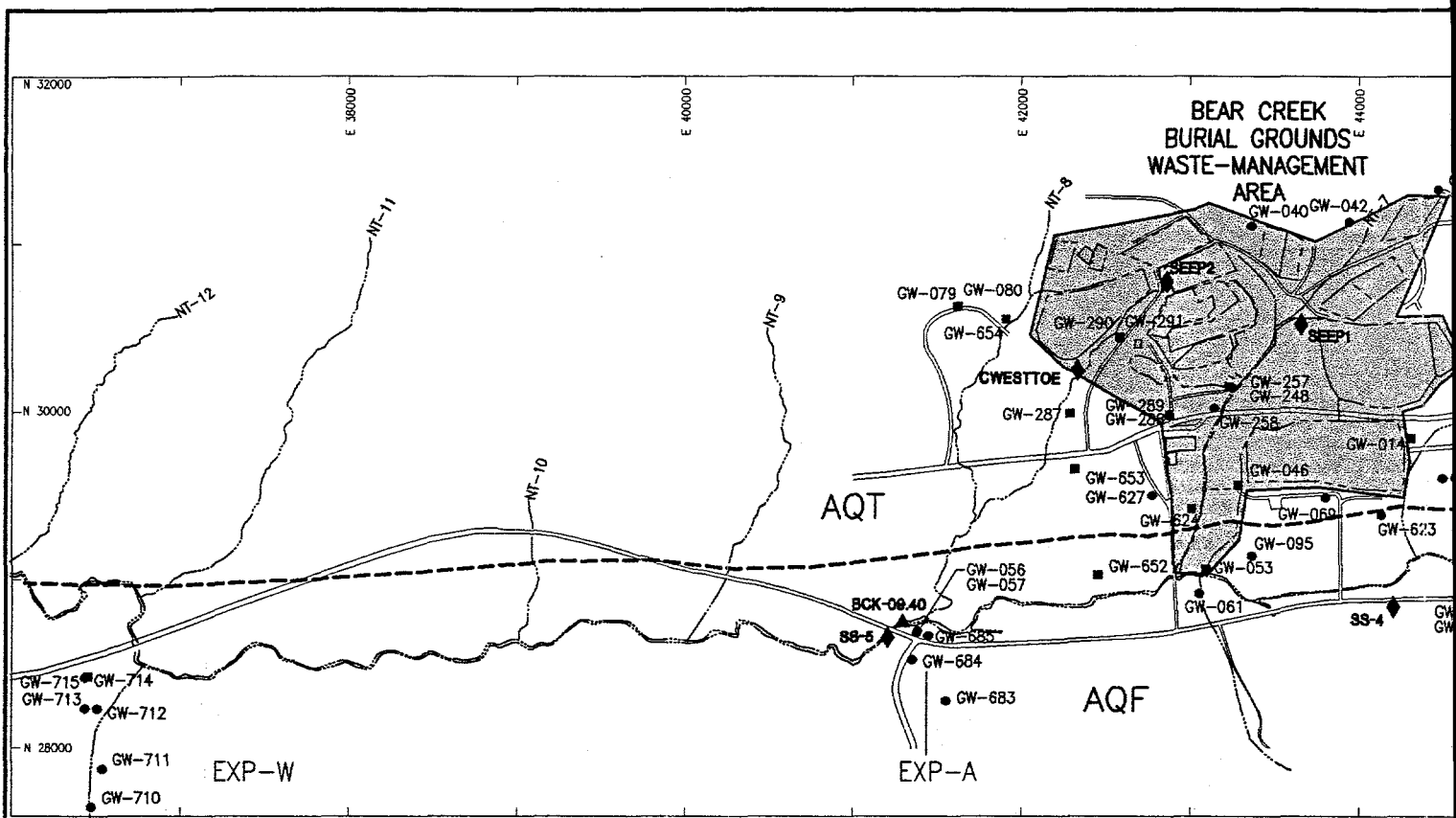
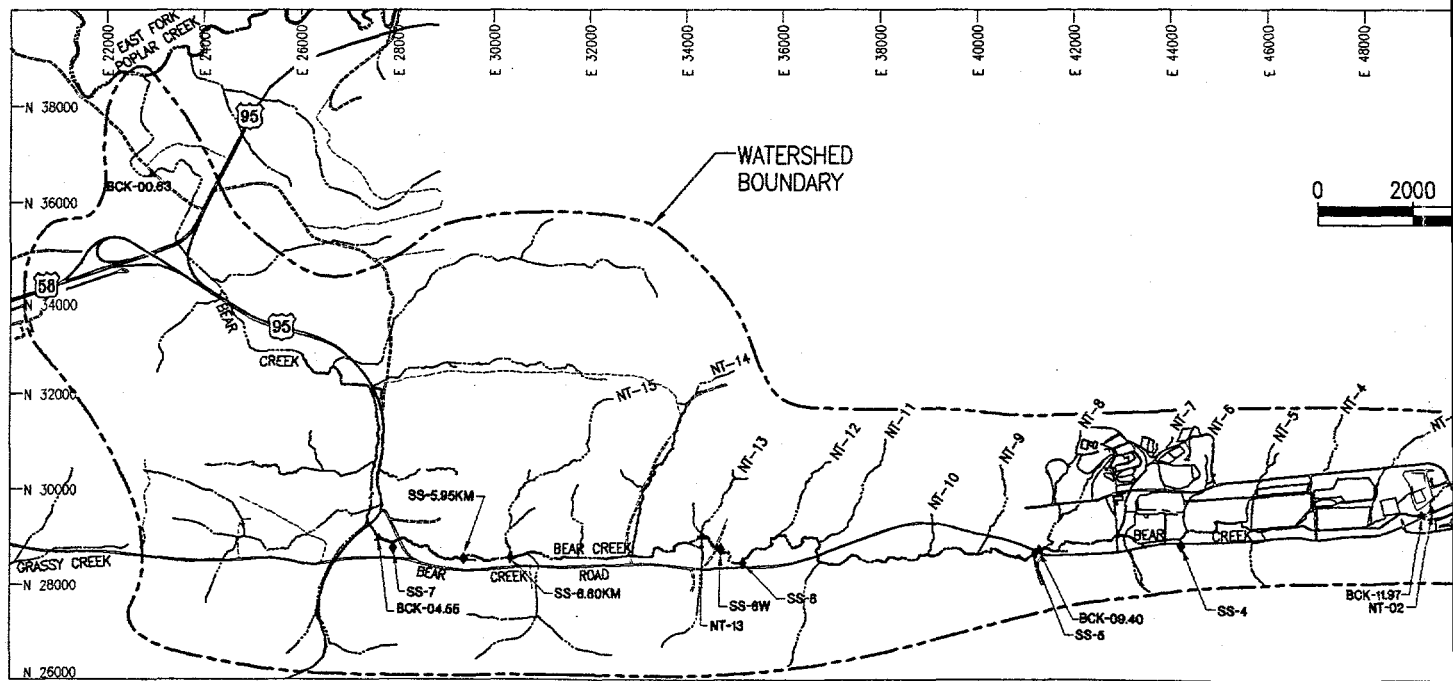


FIGURE 5
COMPONENTS OF THE BEAR CREEK
BURIAL GROUNDS WASTE-MANAGEMENT AREA

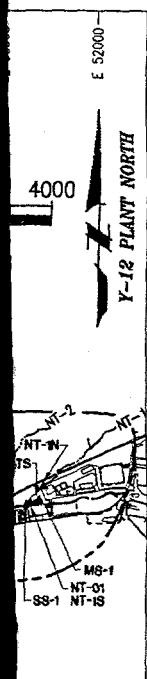
LOCATION:	Y-12 PLANT OAK RIDGE, TN.
DATE:	02/13/1996
DWG ID.:	C:\ACAD\BC_95\BC_FIG5.DWG



NOTE: GCS-01 AND GW-830 NOT SHOWN, THESE
LOCATIONS ARE WEST OF THE WATERSHED
BOUNDARY



SPRING AND SURFACE WATER SAMPLING STATIONS ALONG BEAR CREEK

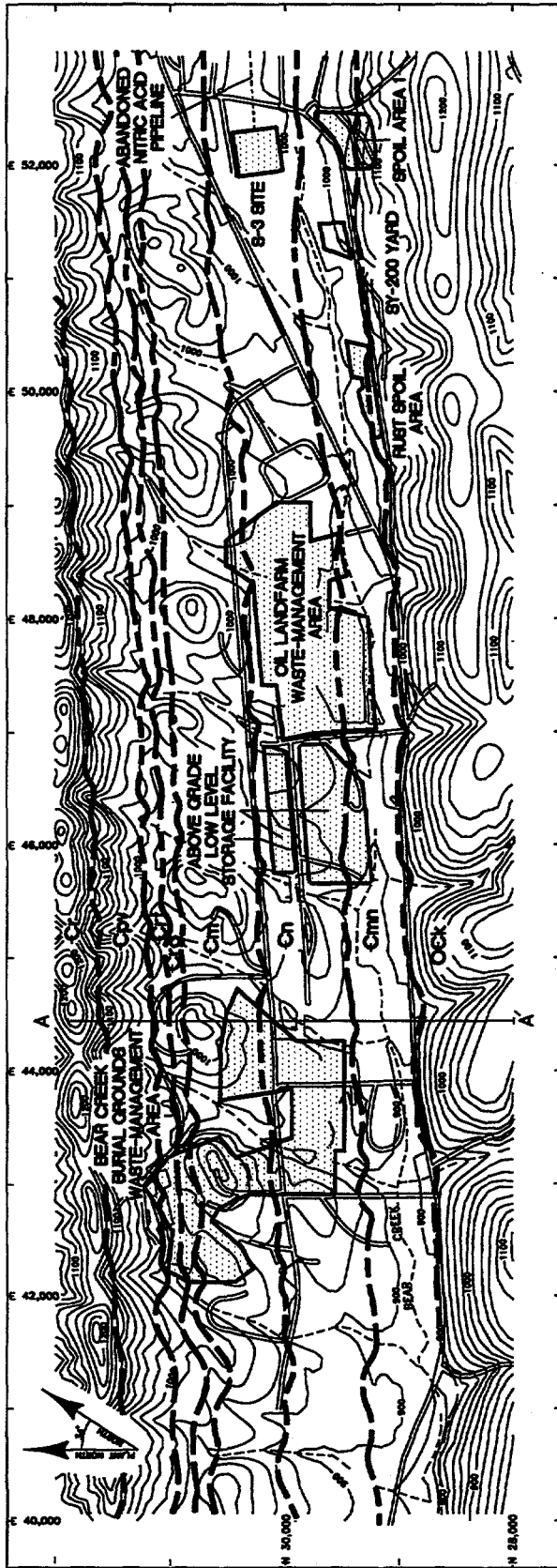


APPROXIMATE NOLICHUCKY SHALE\MAYNARDVILLE
 ----- LIMESTONE CONTACT
 GW-735 ■ WATER TABLE ZONE MONITORING WELL
 GW-770 ● BEDROCK ZONE MONITORING WELL
 SS-1 ♦ SPRING SAMPLING STATION
 BCK-1 ▲ SURFACE WATER SAMPLING STATION
 NT-1
 EXIT PATHWAY, MAYNARDVILLE
 EXP-C LIMESTONE TRANSVERSE
 AQT CONASAUGA SHALES
 AQF MAYNARDVILLE LIMESTONE
 NT-5 NORTH TRIBUTARY

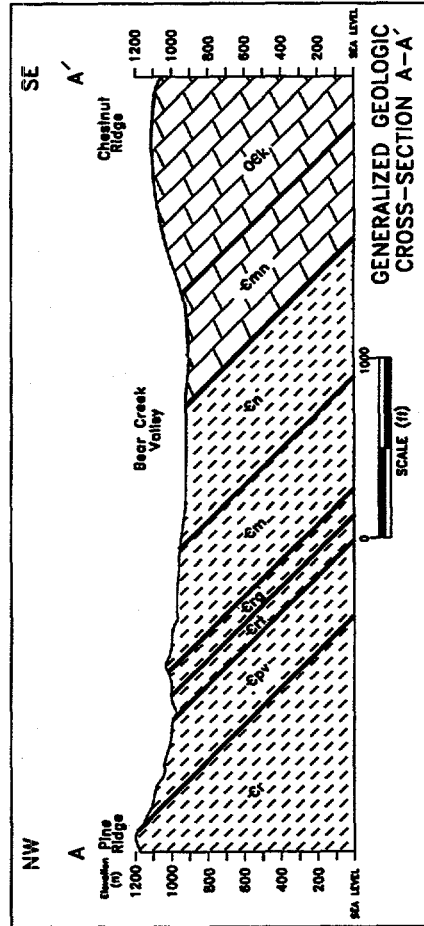
LOCKHEED MARTIN

SAMPLING LOCATIONS FOR GROUNDWATER
AND SURFACE WATER MONITORING
DURING CY 1995

A-6



SOURCE: King and Haase, 1987



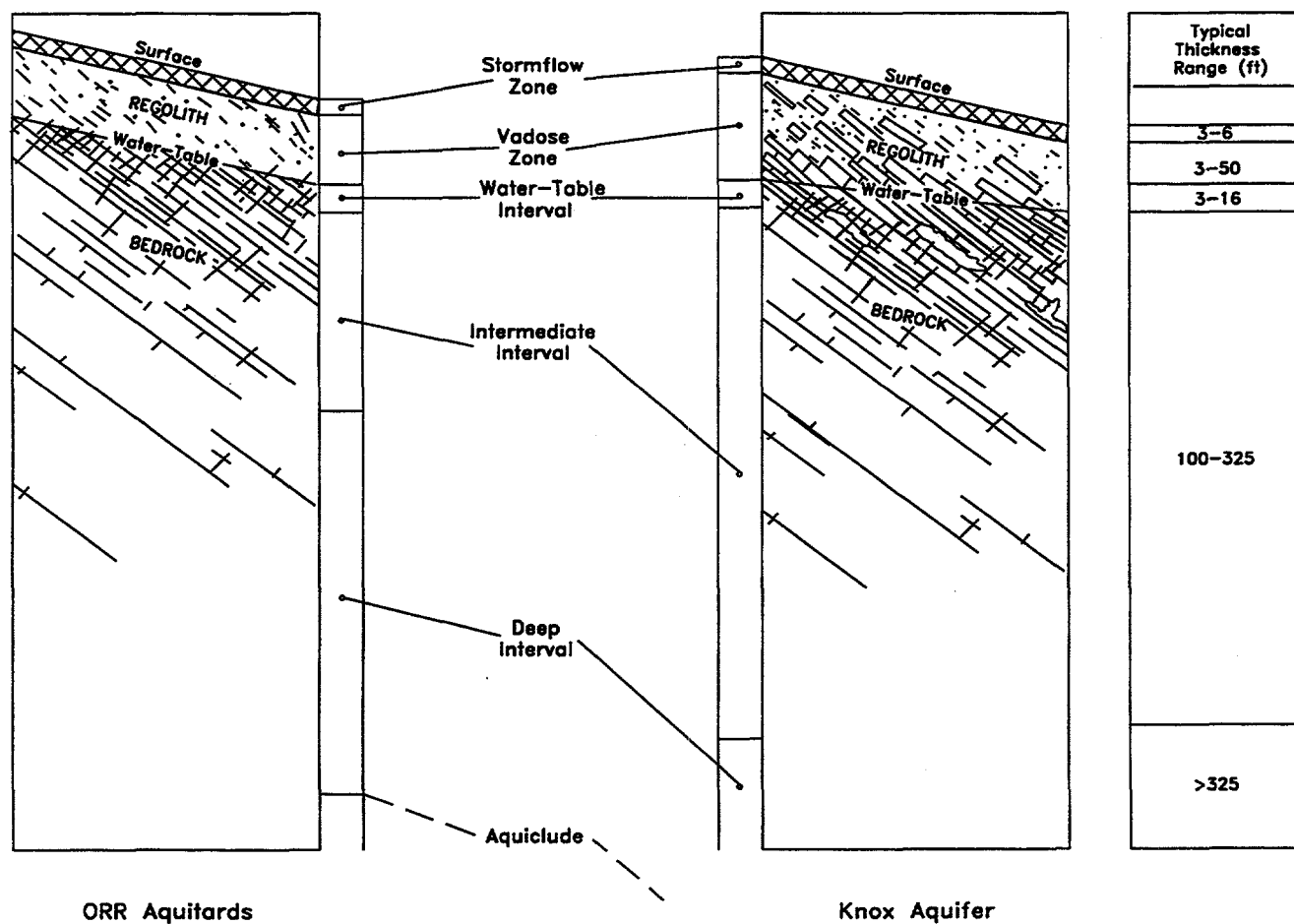
ORR AQUIFERS
 KNOX AQUIFER

SYSTEM GROUP		HYDRO UNIT	FORMATION	MAP SYMBOL	THICKNESS (ft)
CAMBRIAN	UPPER	KNOX AQUIFER	COPPER RIDGE DOLOMITE	Ock	NOT DETERMINED
	MIDDLE		MAYNARDVILLE LIMESTONE	Cmn	418-450
ORR AQUIFERS	CONASAUGA		NOLICHUCKY SHALE	Cn	422-550
			MARYVILLE LIMESTONE	Cm	346-445
			ROGERSVILLE SHALE	Crg	90-120
			RUTLEDGE LIMESTONE	Crl	90-120
LOWER			PUMPKIN VALLEY SHALE	Cpv	260-320
			ROME	Cr	NOT DETERMINED

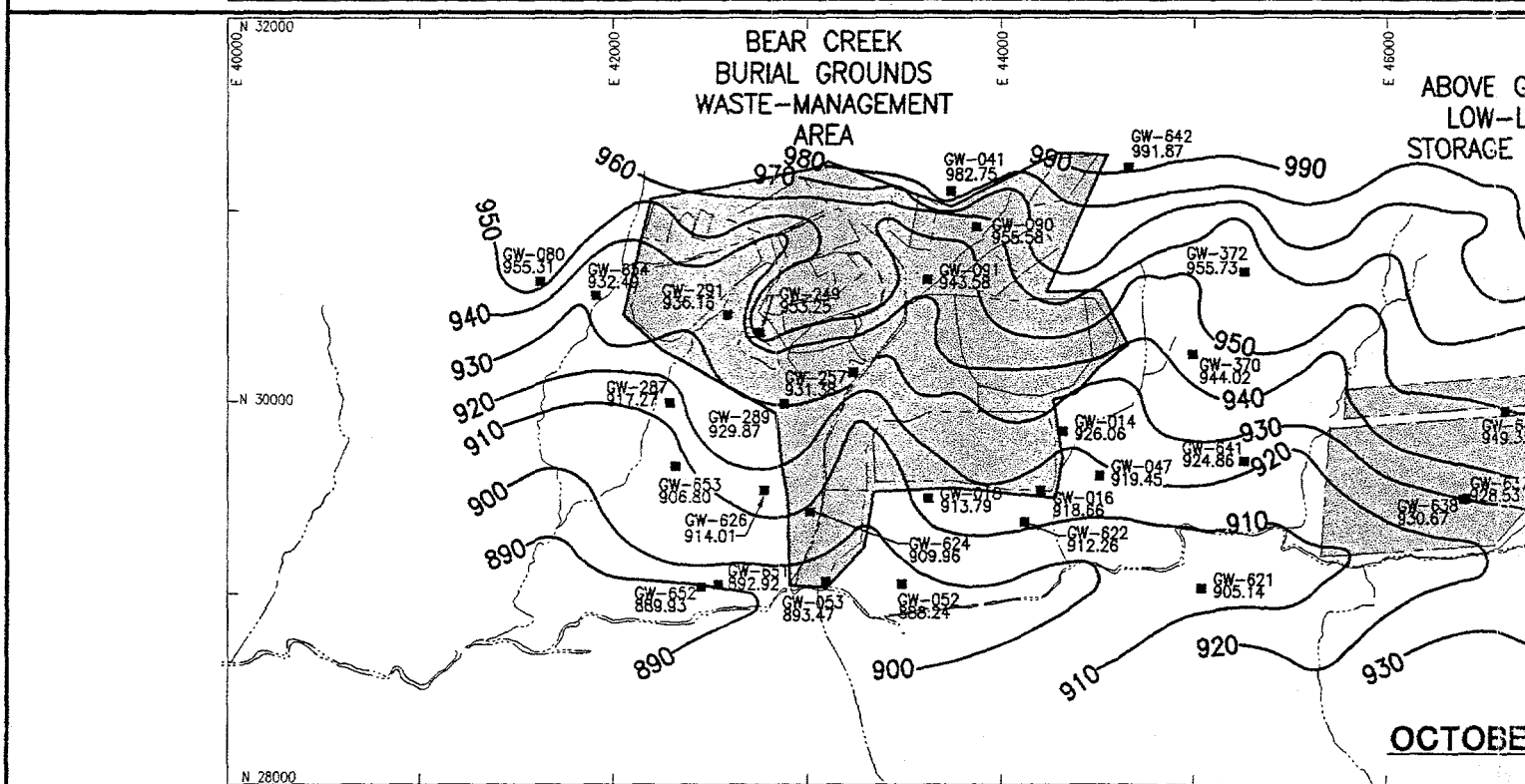
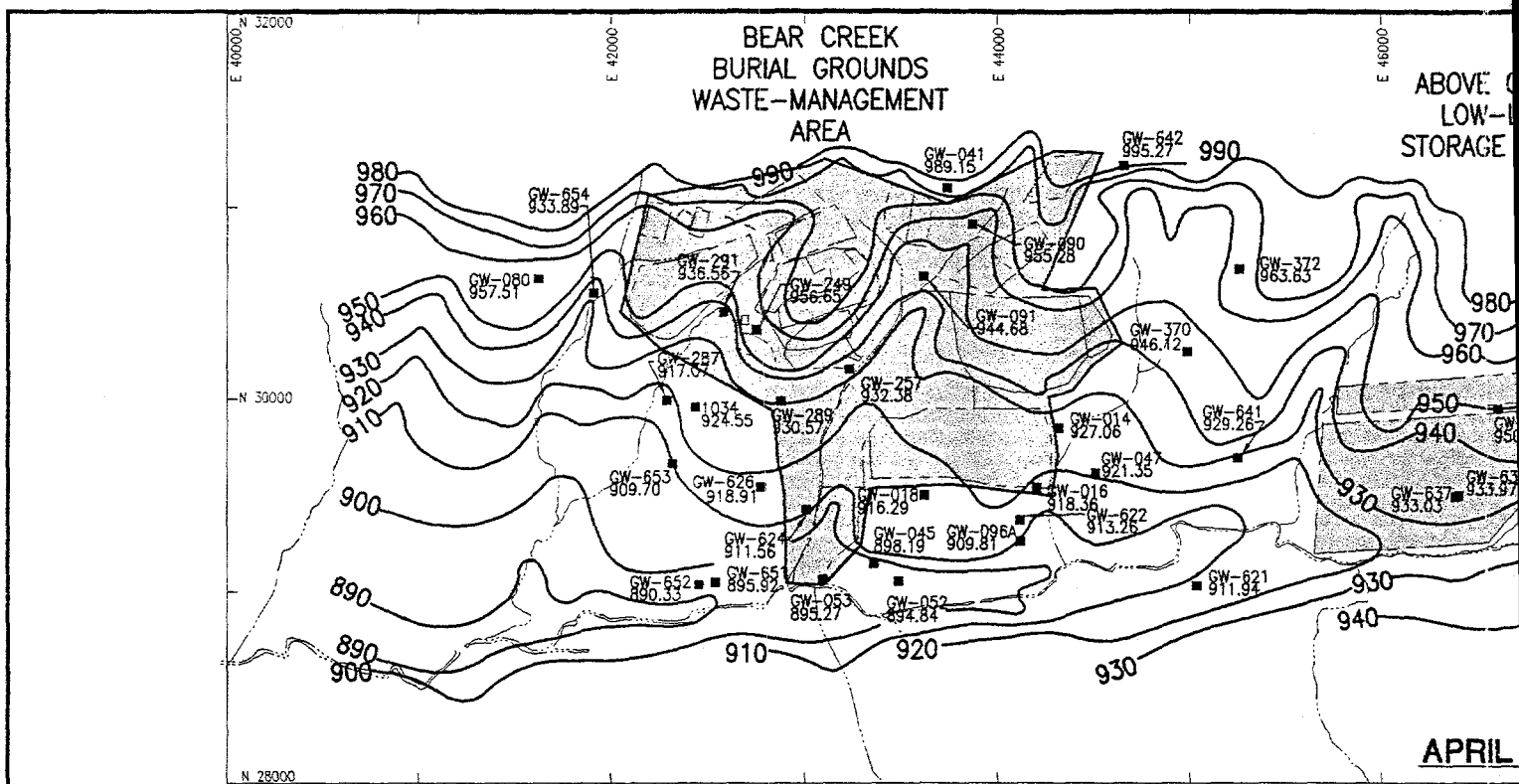
FIGURE 7
 TOPOGRAPHY AND BEDROCK GEOLOGY IN THE
 BEAR CREEK HYDROGEOLOGIC REGIME

LOCATION:	Y-12 PLANT OAK RIDGE, TN.		
DATE:	02/13/1996		
DWG ID.:	C:\ACAD\BC_95\BC_FIG7.DWG		

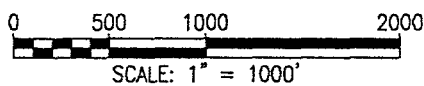
HYDROSTRATIGRAPHIC UNITS
 PROPOSED BY SOLOMON *et al.* (1992)



LOCATION:	Y-12 PLANT OAK RIDGE, TN.	FIGURE 8 SCHEMATIC PROFILE OF HYDROSTRATIGRAPHIC UNITS IN THE BEAR CREEK HYDROGEOLOGIC REGIME
DATE:	02/13/1996	
DWG ID.:	C:\ACAD\BC_95\BC_FIG8.DWG	



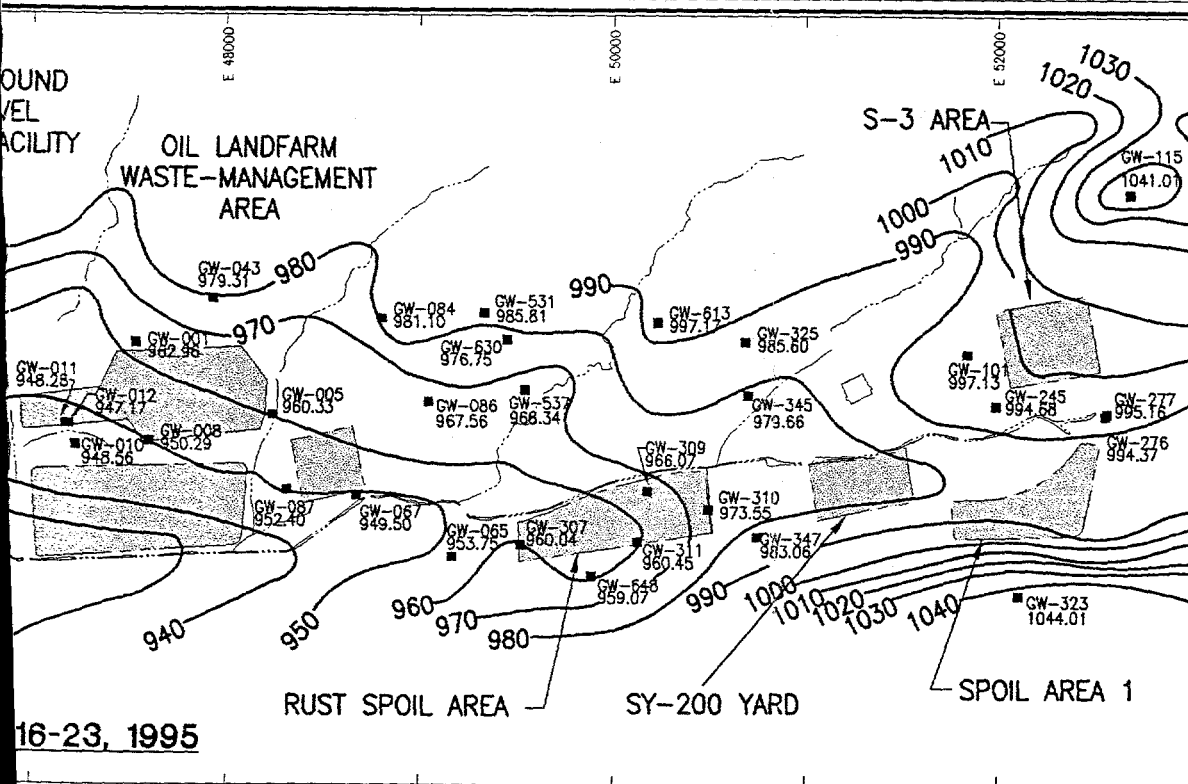
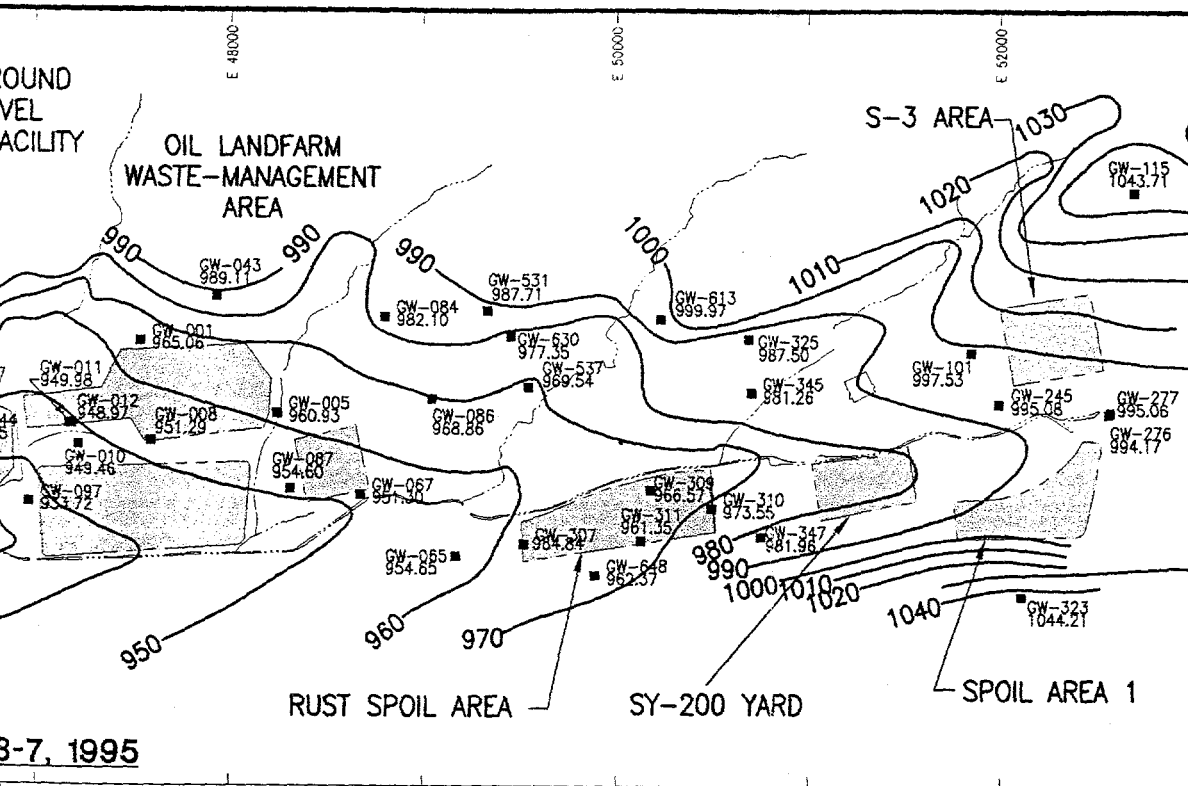
Y-12 PLANT NORTH



95045/DWGS/319FIG10	P. HOLM	K. JAGO
DRAWING FILE:	DRAWN BY:	CHECKED BY:
REV. B / 02-08-96	/XREF/XRBCV	
REV. NO. / DATE:	XREFERENCES:	

LEGEND:

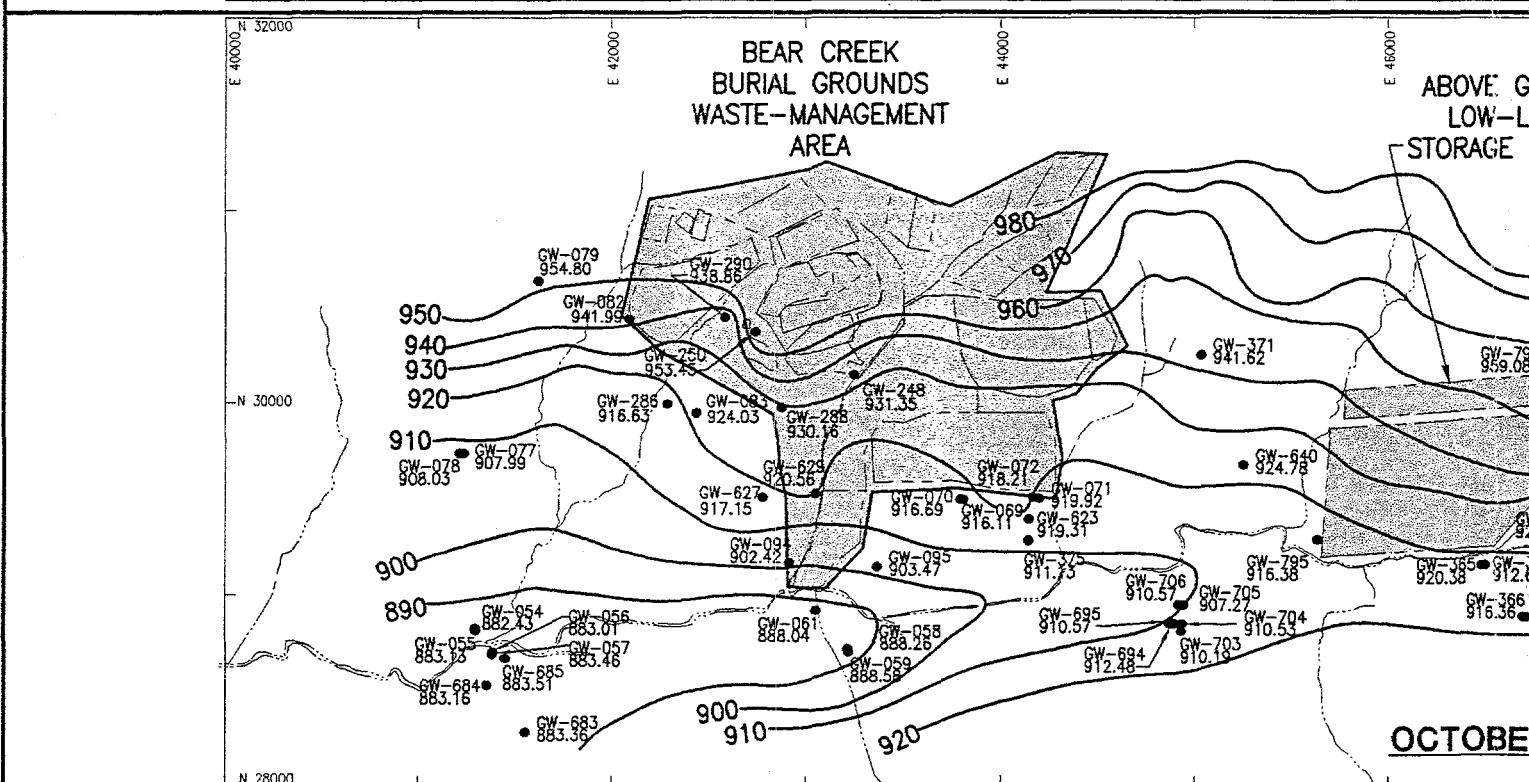
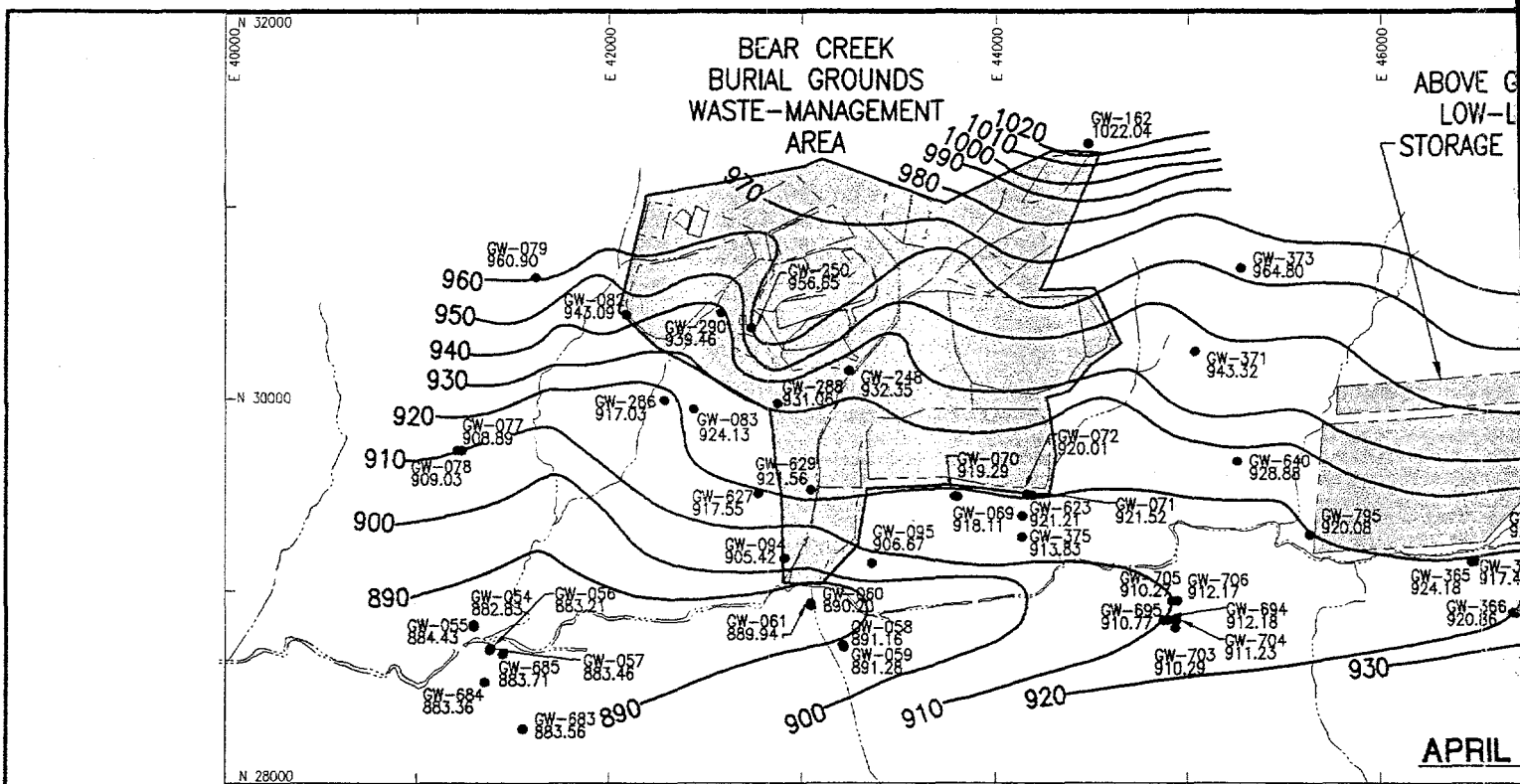
- GW-621 WATER TABLE INTERVAL AND WATER 905.14 ■ LEVEL ELEVATION (ft msl)
- APPROXIMATE WATER-LEVEL
- 900 ISOPLETH (ft msl)
- SURFACE DRAINAGE FEATURE



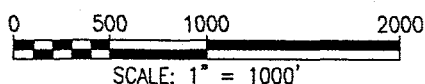
prepared by
Science Applications
International Corporation
for
LOCKHEED MARTIN

FIGURE 9

GROUNDWATER ELEVATIONS
IN THE WATER TABLE INTERVAL



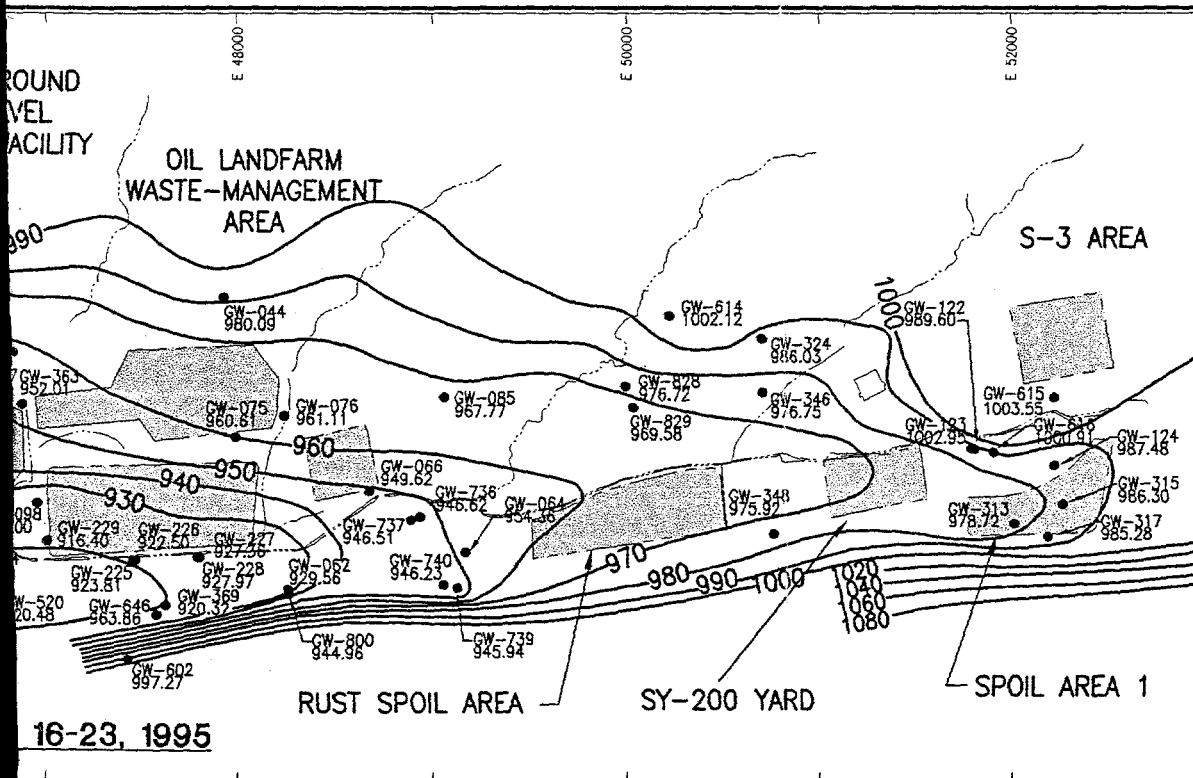
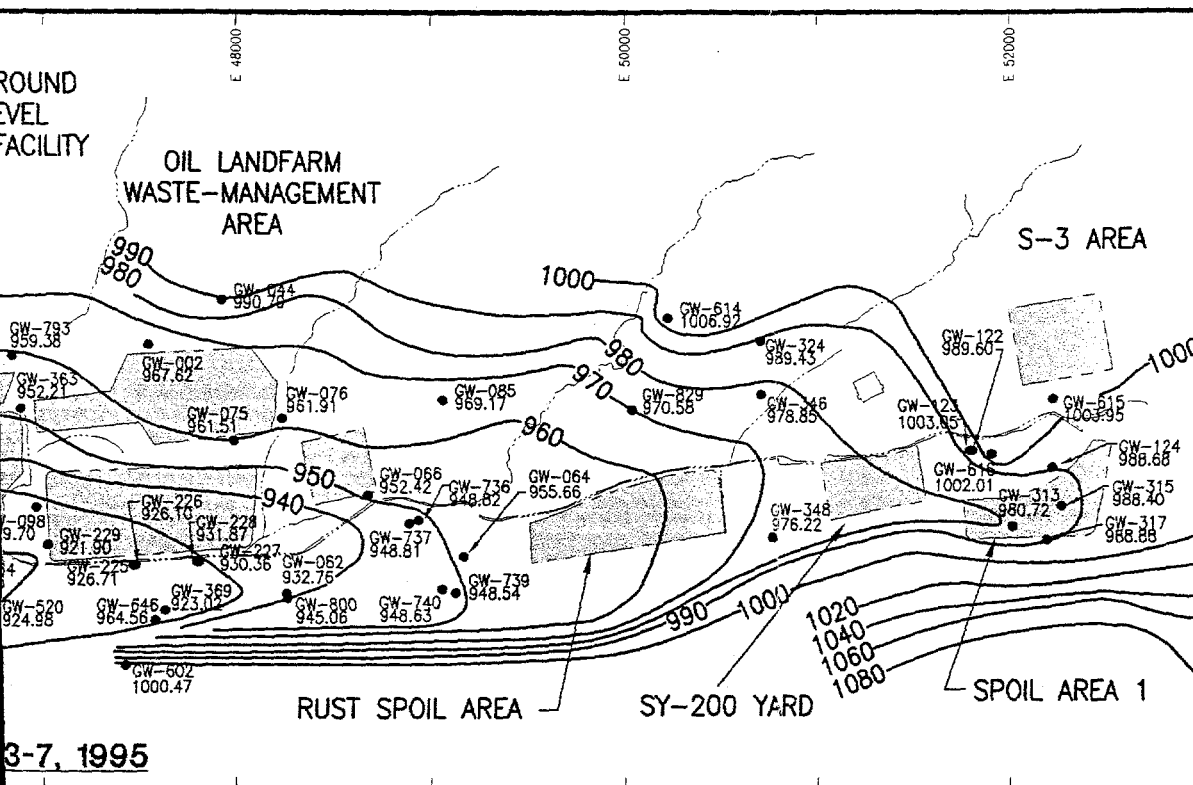
Y-12 PLANT NORTH



95045/DWGS/319FIG11	P. HOLM	K. JAGO
DRAWING FILE:	DRAWN BY:	CHECKED BY:
REV. B / 02-08-96	/XREF/XRBCV	
REV. NO. / DATE:	XREFERENCES:	

LEGEND:

- GW-694 BEDROCK MONITORING WELL
912.48 • AND WATER LEVEL ELEVATIONS
- APPROXIMATE WATER-LEVEL
900 ISOPLETH (ft msl)
- SURFACE DRAINAGE FEATURE



prepared by
Science Applications
International Corporation
for
LOCKHEED MARTIN

FIGURE 10

GROUNDWATER ELEVATIONS IN THE
SHALLOW AND INTERMEDIATE
BEDROCK INTERVALS

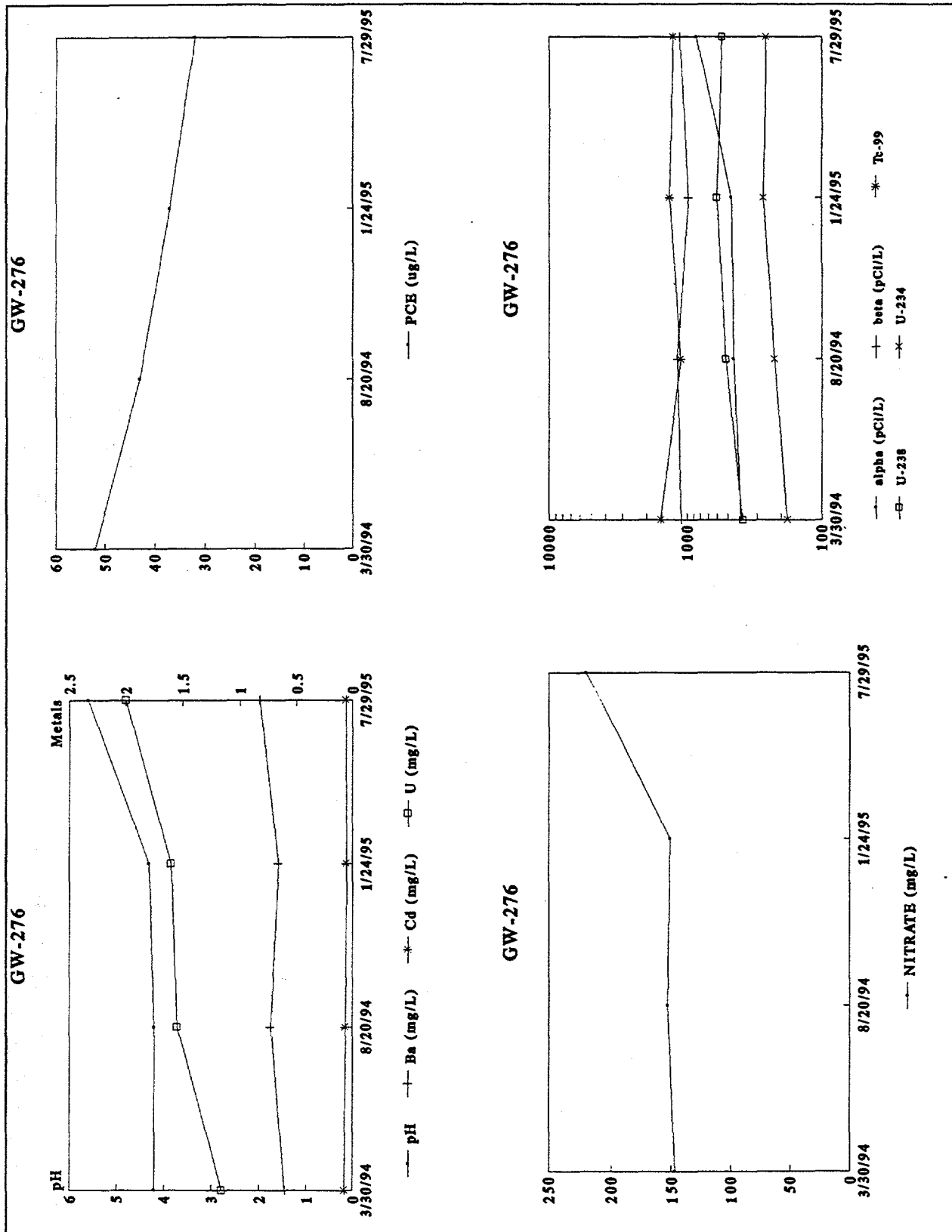


Figure 11. Concentrations of Selected Contaminants in Well GW-276 at the S-3 Site.

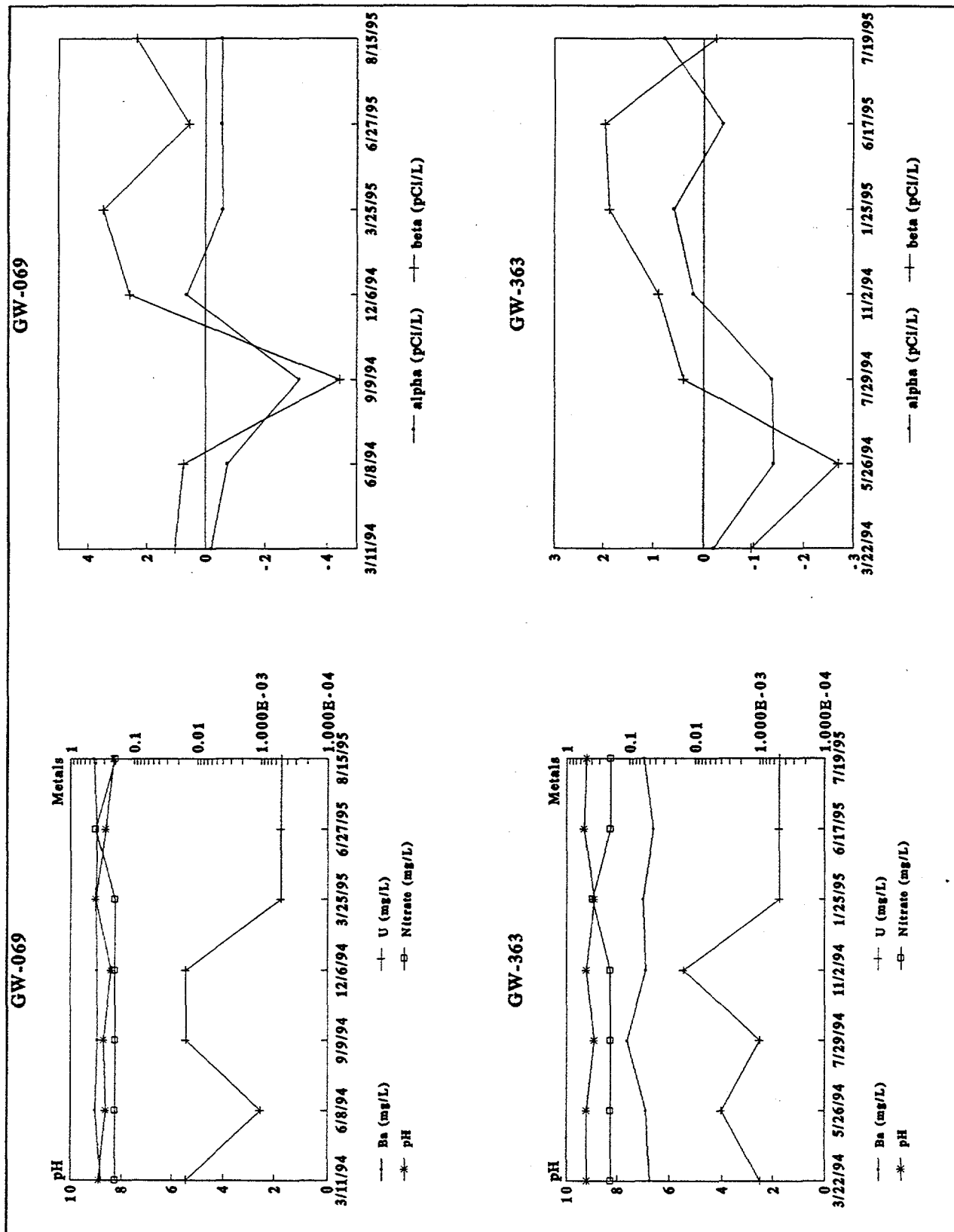


Figure 12. Concentrations of Selected Contaminants in Wells GW-363 and GW-069 at the Oil Landfarm and Bear Creek Burial Grounds Waste Management Areas.

APPENDIX B

TABLES



**Table 1. Waste Management Sites and CERCLA Operable Units
in the Bear Creek Hydrogeologic Regime**

Site Name	Regulatory Classification	
	Historical ¹	Current ²
S-3 Site	TSD Unit	TSD/BC OU 01
Oil Landfarm Waste Management Area		
Oil Landfarm	TSD Unit	TSD/BC OU 01
Burnyard, Boneyard, and Hazardous Chemical Storage Area	SWMU	BC OU 01
Sanitary Landfill I	SWMU	BC OU 01
Bear Creek Burial Grounds Waste Management Area		
Burial Grounds A (North and South)	TSD Unit	TSD/BC OU 01
Walk-in Pits	TSD Unit	TSD/BC OU 01
Burial Grounds C	TSD Unit	TSD/BC OU 01
Burial Grounds B, D, E, and J	SWMUs	BC OU 01
Oil Retention Pond No. 1	SWMU	BC OU 01
Oil Retention Pond No. 2	SWMU	BC OU 01
Spoil Area I	SWMU	BC OU 02
SY-200 Yard	SWMU	BC OU 02
Rust Spoil Area	SWMU	BC OU 02
Bear Creek Groundwater, Surface Water, Creek Sediments, and Floodplain Soils	N/A	BCV CA
Above Grade Low-Level Storage Facility	N/A	N/A

Notes:

- 1 Regulatory status before the 1992 Federal Facility Agreement.

TSD Unit - RCRA-regulated land-based treatment, storage, or disposal unit.
SWMU - RCRA-regulated Solid Waste Management Unit.
N/A - Not Applicable (not previously regulated as a separate unit or not currently regulated).

- 2 Modified from: *Oak Ridge Reservation Site Management Plan for the Environmental Restoration Program* (U.S. Department of Energy 1994a)

BC OU 01 - Bear Creek Operable Unit 01 (Former Source Control OU)
BC OU 02 - Bear Creek Operable Unit 02 (Former Source Control OU)
BCV CA - Bear Creek Valley Characterization Area

Table 2. CY 1995 Monitoring Program Summary

Monitoring Program = Exit-Pathway and Perimeter Monitoring						
Sampling Point	Location	Q1	Q2	Q3	Q4	Analytical Parameters
BCK-00.63	EXP	*		*		STD
BCK-04.55	EXP	*		*		STD
BCK-09.40	EXP	*		*		STD, RAD(2)
BCK-11.97	EXP	*		*		STD, MET(2), RAD(2)
GW-056	EXP	*		*		STD, MET(2)
GW-057	EXP	*		*		STD
GW-621	EXP	*		*		STD, MET(2)
GW-683	EXP	*		*		STD
GW-684	EXP	*		*		STD
GW-685	EXP	*		*		STD
GW-694	EXP	*		*		STD, RAD(2)
GW-695	EXP	*		*		STD
GW-703	EXP	*		*		STD
GW-704	EXP	*		*		STD
GW-706	EXP	*		*		STD, RAD(2)
GW-723	EXP	*		*		STD
GW-724	EXP	*		*		STD
GW-725	EXP	*		*		STD
GW-736	EXP	*		*		STD
GW-737	EXP	*		*		STD
GW-738	EXP	*		*		STD
						Program Change

Table 2. CY 1995 Monitoring Program Summary (cont'd)

Monitoring Program = Best-Management Practice Monitoring						
Sampling Point	Location	Q1	Q2	Q3	Q4	Analytical Parameters
GW-014	BG			*		STD, MET(2)
GW-046	BG			*		STD, MET(2)
GW-066	OLF			*		STD, MET(2)
GW-087	OLF			*		STD, MET(2)
GW-100	S3			*		STD, MET(2)
GW-124	S3			*		STD, MET(2)
GW-228	OLF			*		STD, MET(2)
GW-229	OLF			*		STD, MET(2)
GW-236	S3			*		STD, MET(2)
GW-248	BG			*		STD, MET(2)
GW-257	BG			*		STD, MET(2)
GW-288	BG			*		STD, MET(2)
GW-289	BG			*		STD, MET(2)
GW-290	BG			*		STD, MET(2)
GW-291	BG			*		STD, MET(2)
GW-346	S3			*		STD, MET(2)
GW-793	AGLLSF	*	*	*	*	STD
GW-794	AGLLSF	*	*	*	*	STD
GW-795	AGLLSF	*	*	*	*	STD

Table 2. CY 1995 Monitoring Program Summary (cont'd)

Monitoring Program = Exit-Pathway and Perimeter Monitoring (cont'd)						
Sampling Point	Location	Q1	Q2	Q3	Q4	Analytical Parameters
GW-739	EXP	*		*		STD
GW-740	EXP	*		*		STD
NT-01	EXP	*		*		STD, MET(2), RAD(2)
NT-02	EXP	*		*		STD, MET(2)
SS-1	EXP	*		*		STD, MET(2), RAD(2)
SS-4	EXP	*		*		STD, RAD(2)
SS-5	EXP	*		*		STD
SS-6	EXP	*		*		STD

Monitoring Program = RCRA Assessment Monitoring						
Sampling Point	Location	Q1	Q2	Q3	Q4	Analytical Parameters
GW-064	OLF	*	*	*	*	STD
GW-311	RS	*	*	*	*	STD
GW-312	RS	*	*	*	*	STD

Table 2. CY 1995 Monitoring Program Summary (cont'd)

Monitoring Program = RCRA Corrective Action Monitoring

Sampling Point	Location	Q1	Q2	Q3	Q4	Analytical Parameters	Program Change
GW-040	BG	*	*	*	*	COMP	95-21
GW-042	BG	*	*	*	*	COMP	95-21
GW-043	OLF	*	*	*	*	COMP	95-15
GW-044	OLF	*	*	*	*	COMP	95-15
GW-079	BG	*	*	*	*	COMP	95-21
GW-080	BG	*	*	*	*	COMP	95-21
GW-084	OLF	*	*	*	*	COMP	95-15
GW-115	S3	*	*	*	*	COMP, VOC(4)	95-21
GW-162	BG	*	*	*	*	COMP	95-21
GW-276	S3	*	*	*	*	COMP, VOC(4)	95-21
GW-372	BG	*	*	*	*	COMP	95-21
GW-373	BG	*	*	*	*	COMP	95-21
GW-613	S3	*	*	*	*	COMP, VOC(4)	95-21
GW-614	S3	*	*	*	*	COMP, VOC(4)	95-21
GW-642	BG	*	*	*	*	COMP	95-21
GW-710*	EXP	*	*	*	*	COMP, VOC(4)	95-21
GW-711*	EXP	*	*	*	*	COMP, VOC(4)	95-21
GW-712*	EXP	*	*	*	*	COMP, VOC(4)	95-21
GW-713*	EXP	*	*	*	*	COMP, VOC(4)	95-21
GW-714*	EXP	*	*	*	*	COMP, VOC(4)	95-21
GW-715*	EXP	*	*	*	*	COMP, VOC(4)	95-21

Table 2. CY 1995 Monitoring Program Summary (cont'd)

Monitoring Program = Surveillance Monitoring						
Sampling Point	Location	Q1	Q2	Q3	Q4	Analytical Parameters
GW-047	BG	*	*	*	*	STD
GW-053	BG	*	*	*	*	STD
GW-061	BG	*	*	*	*	STD,RAD(2)
GW-069	BG	*	*	*	*	STD
GW-085	OLF	*	*	*	*	STD,RAD(2,3)
GW-095	BG	*	*	*	*	STD
GW-287	BG	*	*	*	*	STD
GW-315	SPI	*	*	*	*	STD
GW-317	SPI	*	*	*	*	STD
GW-347	S3	*	*	*	*	STD
GW-348	S3	*	*	*	*	STD
GW-363	OLF	*	*	*	*	STD
GW-370	BG	*	*	*	*	STD
GW-537	OLF	*	*	*	*	STD,RAD(2,3)
GW-627	BG	*	*	*	*	STD
GW-637	OLF	*	*	*	*	STD
GW-652	BG	*	*	*	*	STD
GW-653	BG	*	*	*	*	STD
GW-654	BG	*	*	*	*	STD
GW-800	OLF	*	*	*	*	STD
						Program Change
						95-23
						95-23
						95-22
						95-23
						95-23
						95-23
						95-15
						95-23
						95-23
						95-23
						95-23
						95-23

Table 2. CY 1995 Monitoring Program Summary (cont'd)

-----Addendum = 95-05-----						
Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date	
GW-828	Add Sampling Point	AMP	Q	STD, MET(2), RAD(2,3)	04/03/95	
GW-829	Add Sampling Point	AMP	Q	STD, MET(2), RAD(2,3)	04/03/95	
-----Addendum = 95-07-----						
Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date	
MS-1	Add Sampling Point	CERCLA	Q2	NO3	05/03/95	
NT-1N	Add Sampling Point	CERCLA	Q2	NO3	05/03/95	
NT-1S	Add Sampling Point	CERCLA	Q2	NO3	05/03/95	
TS	Add Sampling Point	CERCLA	Q2	NO3	05/03/95	
-----Addendum = 95-08-----						
Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date	
GCS-01	Add Sampling Point	EXP	S2&4	STD	05/18/95	
SS-5.95KM	Add Sampling Point	EXP	S2&4	STD	05/18/95	

Table 2. CY 1995 Monitoring Program Summary (cont'd)

Addendum = 95-08 (cont'd)					
Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date
SS-6.60KM	Add Sampling Point	EXP	S2&4	STD	05/18/95
SS-6W	Add Sampling Point	EXP	S2&4	STD	05/18/95
SS-7	Add Sampling Point	EXP	S2&4	STD	05/18/95
Addendum = 95-12					
Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date
BCK-04.55S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
BCK-09.40S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
CWESTTOE	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-005	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-014S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-040S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-044S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-087S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-162S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-243	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-258	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-291S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-537S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-613S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95

Table 2. CY 1995 Monitoring Program Summary (cont'd)

Addendum = 95-12 (cont'd)

Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date
GW-615	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-623	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-624	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-684S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-706S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-710S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-711S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-712S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-713S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-714S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-715S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
GW-794S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
SEEP1	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
SEEP2	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
SS-4S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
SS-5S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
SS-6WS	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95
SS-7S	Add Sampling Point	CERCLA	Q3	RAD(1,2,3,8,9)	07/01/95

Table 2. CY 1995 Monitoring Program Summary (cont'd)

Addendum = 95-15						
Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date	
GW-043	Change Prog.	CMP	Q	COMP, VOC(4)	08/30/95	
GW-044	Change Prog.	CMP	Q	COMP, VOC(4)	08/30/95	
GW-084	Change Prog.	CMP	Q	COMP, VOC(4)	08/30/95	
GW-363	Change Prog.	SMP	Q	COMP, VOC(4)	08/30/95	
Addendum = 95-20						
Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date	
GW-830	Add Sampling Point	BMP	Q3	STD, TPH, BTEX	09/14/95	
Addendum = 95-21						
Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date	
GW-040	Change Prog.	CMP	Q	COMP, VOC(4)	10/01/95	
GW-042	Change Prog.	CMP	Q	COMP, VOC(4)	10/01/95	
GW-079	Change Prog.	CMP	Q	COMP, VOC(4)	10/01/95	

Table 2. CY 1995 Monitoring Program Summary (cont'd)

-----Addendum = 95-21 (cont'd)-----

Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date
GW-080	Change Prog.	CMP	Q	COMP, VOC(4)	10/01/95
GW-162	Change Prog.	CMP	Q	COMP, VOC(4)	10/01/95
GW-372	Change Prog.	CMP	Q	COMP, VOC(4)	10/01/95
GW-373	Change Prog.	CMP	Q	COMP, VOC(4)	10/01/95
GW-642	Change Prog.	CMP	Q	COMP, VOC(4)	10/01/95

-----Addendum = 95-22-----

Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date
GW-069	Change Prog.	SMP	Q	COMP, VOC(4)	10/01/95

-----Addendum = 95-23-----

Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date
GW-047	Drop Sampling Point	SMP	0	STD	10/01/95

Table 2. CY 1995 Monitoring Program Summary (cont'd)

-----Addendum = 95-23 (cont'd) -----

Sampling Point	Action	Program	Sampling Frequency	Analytical Parameters	Effective Date
GW-061	Drop Sampling Point	SMP	0	STD,RAD(2)	10/01/95
GW-064	Drop Sampling Point	AMP	0	STD	10/01/95
GW-312	Drop Sampling Point	AMP	0	STD	10/01/95
GW-317	Drop Sampling Point	SMP	0	STD	10/01/95
GW-347	Drop Sampling Point	SMP	0	STD	10/01/95
GW-348	Drop Sampling Point	SMP	0	STD	10/01/95
GW-370	Drop Sampling Point	SMP	0	STD	10/01/95
GW-637	Drop Sampling Point	SMP	0	STD	10/01/95
GW-652	Drop Sampling Point	SMP	0	STD	10/01/95
GW-800	Drop Sampling Point	SMP	0	STD	10/01/95

Table 2. CY 1995 Monitoring Program Summary (cont'd)

EXPLANATION

SAMPLING POINT:

BCK	-	Bear Creek kilometer
CWESTTOE	-	Burial Ground C-West Southeast Toe French Drain
GCS-01	-	Grassy Creek Spring 01
GW	-	Monitoring well
MS-1	-	Bear Creek Main Stem headwaters (Station 1)
NT	-	Northern tributary (to Bear Creek)
SEEP1	-	Burial Ground A-North Seep Area
SEEP2	-	Burial Ground C-East Seep Area
SS	-	Bear Creek Spring Station
TS	-	Tankfarm Spring (Bear Creek headwaters)
S	-	Special event sampling in addition to routine monitoring
*	-	ORR EMP Perimeter Monitoring Location

LOCATION:

AGLLSF	-	Above Grade Low-Level Storage Facility
BG	-	Bear Creek Burial Grounds WMA
EXP	-	Exit Pathway Monitoring Transect or Station
OLF	-	Oil Landfarm WMA
RS	-	Rust Spoil Area
S3	-	S-3 Site
SPI	-	Spoil Area I

PROGRAM

AMP	-	RCRA Interim Status Assessment Monitoring
CERCLA	-	CERCLA Monitoring
EXP	-	Exit Pathway & Perimeter Monitoring
CMP	-	RCRA Corrective Action Monitoring
SMP	-	Surveillance Monitoring

SAMPLING FREQUENCY:

Q:	Quarterly sampling
Q2:	Annual sample to be taken in second calendar quarter
Q3:	Annual sample to be taken in third calendar quarter
S 2&4:	Semiannual samples to be taken in second and fourth calendar quarters
0:	No samples to be taken

Table 2. CY 1995 Monitoring Program Summary (cont'd)

EXPLANATION

ANALYTICAL PARAMETERS:

STD:	FLD, CHEM, MET(1), VOC(1), RAD(1)
COMP:	STD, MET(2), RAD(2,3,4,5)
BTEX:	Benzene, toluene, ethyl benzene, and xylenes
CHEM:	Anions: Alkalinities(carbonate & bicarbonate), Chloride IC, Fluoride SIE, Nitrate Nitrogen, Sulfate
	Other: pH, Specific conductance, Total dissolved solids, Total suspended solids, Turbidity
FLD:	Field measurements: Depth to water, Dissolved oxygen, pH, Redox, Specific conductance, Temperature
MET(1):	ICP: Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thorium, Vanadium, Zinc Plasma Mass Spectrometry Uranium CVAA Mercury
MET(2):	AAS: Cadmium, Chromium, Lead
NO3:	Nitrate nitrogen
RAD(1):	Gross alpha activity, Gross beta activity
RAD(2):	Strontium, 99-Techneium, Tritium
RAD(3):	234-Uranium, 235-Uranium, 238-Uranium
RAD(4):	241-Americium, 129-Iodine, 237-Neptunium, 238-Plutonium, 239-Plutonium
RAD(5):	Radium
RAD(8):	223-Radium, 224-Radium, 226-Radium, 228-Radium 228-Thorium, 230-Thorium, 232-Thorium, 137-Cesium
RAD(9):	241-Americium, 238-Plutonium, 239/240-Plutonium, 237-Neptunium
TPH:	Total Petroleum Hydrocarbons (Diesel and Gasoline Range)
VOC(1):	1,1,1-trichloroethane 1,1,2,2-tetrachloroethane 1,1,2-trichloroethane 1,1-dichloroethane 1,1-dichloroethene 1,2-dichloroethane 1,2-dichloroethene 1,2-dichloropropane 2-butanone

Table 2. CY 1995 Monitoring Program Summary (cont'd)

EXPLANATION

ANALYTICAL PARAMETERS:

VOC(1):

2-hexanone
4-methyl-2-pentanone
acetone
benzene
bromodichloromethane
bromoform
bromomethane
carbon disulfide
carbon tetrachloride
chlorobenzene
chlorodibromomethane
chloroethane
chloroform
chloromethane
cis-1,3-dichloropropene
ethylbenzene
methylene chloride
styrene
tetrachloroethene
toluene
trans-1,3-dichloropropene
trichloroethene
vinyl acetate
vinyl chloride
xylenes

VOC(4):

trans-1,2-dichloroethene

Table 3. General Construction Information for Monitoring Wells Sampled During 1995

Well No.	Location	<u>Aquifer</u>		<u>Monitored Interval</u>			
		Unit	Formation	Depths (bgs)		Elevations (msl)	
GW-005	OLF	AQT	Cn	3.00	- 12.50	959.37	- 949.87
GW-014	BG	AQT	Cn	5.00	- 13.20	926.39	- 918.19
GW-040	BG	AQT	Cpv	21.00	- 29.00	983.10	- 975.10
GW-042	BG	AQT	Cpv	13.40	- 28.20	986.55	- 971.75
GW-043	OLF	AQT	Cm	10.00	- 40.00	999.80	- 969.80
GW-044	OLF	AQT	Cm	42.50	- 70.00	967.80	- 940.30
GW-046	BG	AQT	Cn	5.00	- 20.30	912.21	- 896.91
GW-047	OLF	AQT	Cn	12.50	- 25.50	913.29	- 900.29
GW-053	BG	AQT	Cn	11.40	- 32.80	888.93	- 867.53
GW-056	EXP	AQF	Cmn	49.10	- 55.20	837.55	- 831.45
GW-057	EXP	AQF	Cmn	17.50	- 22.80	869.33	- 864.03
GW-061	BG	AQF	Cmn	17.50	- 24.60	883.28	- 876.18
GW-064	OLF	AQF	Cmn	46.80	- 52.70	932.37	- 926.47
GW-066	OLF	AQF	Cmn	50.00	- 54.90	907.32	- 902.42
GW-069	BG	AQT	Cn	79.00	- 99.20	845.25	- 825.05
GW-079	BG	AQT	Cn	49.90	- 64.90	927.24	- 912.24
GW-080	BG	AQT	Cn	20.80	- 29.70	956.23	- 947.33
GW-084	OLF	AQT	Cm	18.50	- 27.80	975.87	- 966.57
GW-085	OLF	AQT	Cn	48.40	- 58.80	931.42	- 921.02
GW-087	OLF	AQT	Cn	7.50	- 19.00	949.47	- 937.97
GW-095	BG	AQF	Cmn	130.20	- 156.00	777.78	- 751.98
GW-100	S3	AQF	Cmn	3.80	- 20.70	980.63	- 963.73
GW-115	S3	AQT	Cm	37.60	- 53.00	1014.30	- 998.90
GW-124	S3	AQF	Cmn	100.00	- 150.00	903.50	- 853.50
GW-162	BG	AQT	Cpv	92.00	- 125.00	946.10	- 913.10
GW-228	OLF	AQF	Cmn	80.00	- 100.00	863.85	- 843.85
GW-229	OLF	AQF	Cmn	40.00	- 55.00	905.71	- 890.71
GW-236	S3	AQF	Cmn	10.00	- 18.50	970.39	- 961.89
GW-243	S3	AQT	Cn	43.20	- 77.00	965.40	- 931.60

Table 3. General Construction Information for Monitoring Wells Sampled During 1995 (Cont'd)

Well No.	Location	<u>Aquifer</u>		<u>Monitored Interval</u>			
		Unit	Formation	Depths (bgs)		Elevations (msl)	
GW-248	BG	AQT	Cm	49.10	- 62.00	909.72	- 896.82
GW-257	BG	AQT	Cm	19.00	- 33.70	940.21	- 925.51
GW-258	BCBG	AQF	Cmn	37.00	- 50.00	904.19	- 891.19
GW-276	EXP	AQT	Cn	11.30	- 18.50	987.50	- 980.30
GW-287	BG	AQT	Cm	5.60	- 12.50	919.00	- 912.10
GW-288	BG	AQT	Cm	46.00	- 60.00	900.07	- 886.07
GW-289	BG	AQT	Cm	28.90	- 40.80	917.42	- 905.52
GW-290	BG	AQT	Cm	22.33	- 35.53	923.06	- 909.86
GW-291	BG	AQT	Cm	9.48	- 16.98	935.64	- 928.14
GW-311	RS	AQF	Cmn	25.60	- 40.30	970.83	- 956.13
GW-312	RS	AQF	Cmn	29.60	- 41.00	964.53	- 953.13
GW-315	SPI	AQF	Cmn	90.00	- 104.00	954.80	- 940.80
GW-317	SPI	AQF	Cmn	117.00	- 132.00	943.80	- 928.80
GW-346	S3	AQT	Cn	51.50	- 64.90	943.58	- 930.18
GW-347	S3	AQF	Cmn	9.50	- 27.80	988.26	- 969.96
GW-348	S3	AQF	Cmn	68.10	- 80.90	929.90	- 917.10
GW-363	OLF	AQT	Cn	50.00	- 75.00	905.41	- 880.41
GW-370	BG	AQT	Cm	21.10	- 33.10	936.84	- 924.84
GW-372	BG	AQT	Cm	39.80	- 51.60	940.07	- 928.27
GW-373	BG	AQT	Cm	123.00	- 158.00	857.75	- 822.75
GW-537	OLF	AQT	Cn	4.80	- 23.30	969.39	- 950.89
GW-613	S3	AQT	Cn	30.00	- 42.00	980.20	- 968.20
GW-614	S3	AQT	Cn	71.60	- 90.20	937.80	- 919.20
GW-615	S3	AQT	Cn	222.50	- 245.00	791.70	- 769.20
GW-621	EXP	AQF	Cmn	23.30	- 40.50	899.77	- 882.57
GW-623	BCBG	AQT	Cn	238.10	- 274.20	683.91	- 647.81
GW-624	BCBG	AQT	Cn	14.40	- 27.20	905.12	- 892.32
GW-627	BG	AQT	Cn	254.00	- 270.00	686.39	- 670.39
GW-637	OLF	AQT	Cn	14.50	- 27.50	923.76	- 910.76

Table 3. General Construction Information for Monitoring Wells Sampled During 1995 (Cont'd)

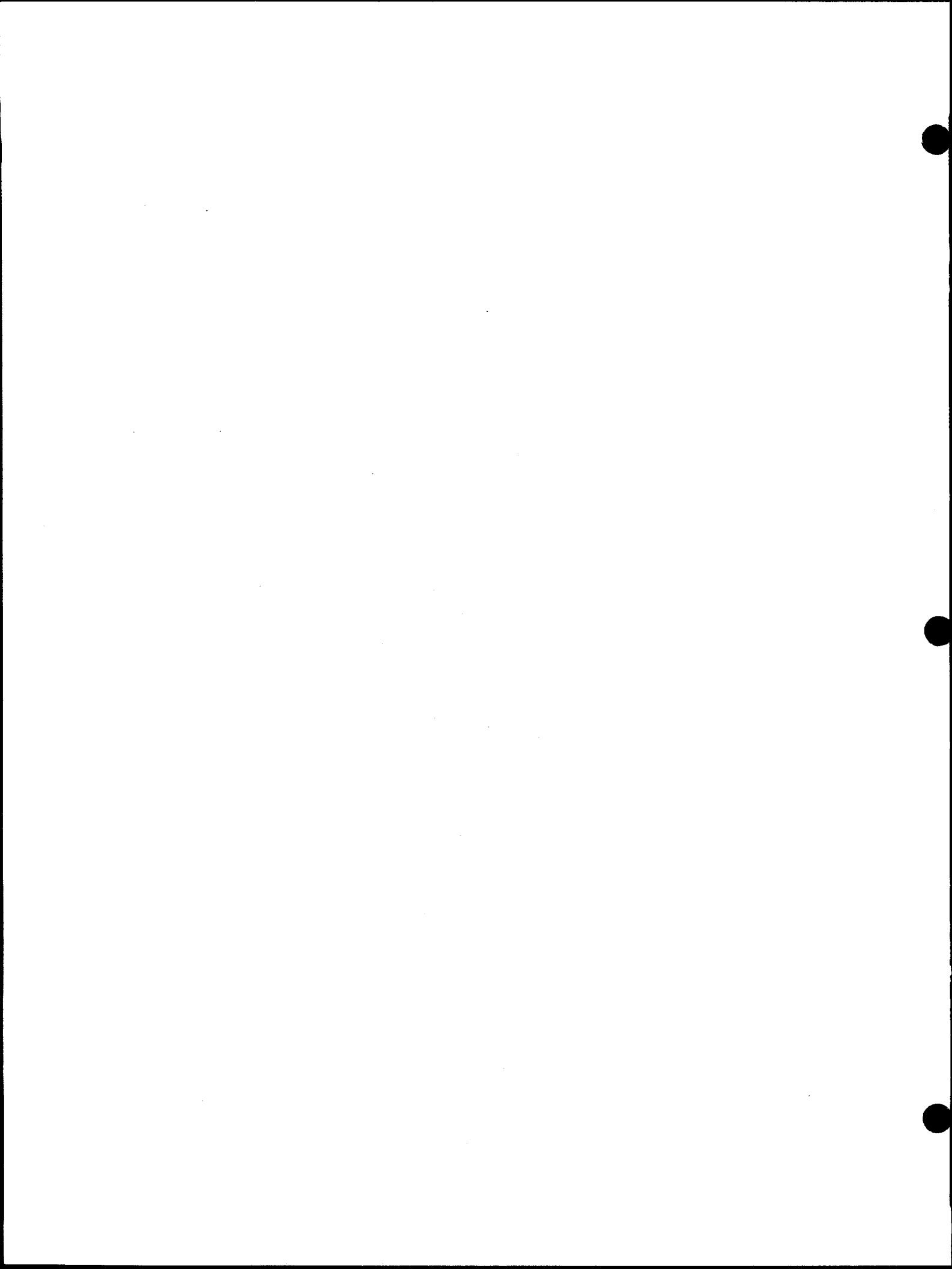
Well No.	Location	Aquifer		Monitored Interval			
		Unit	Formation	Depths (bgs)		Elevations (msl)	
GW-642	BG	AQT	Crg	18.50	- 36.90	993.40	- 975.00
GW-652	BG	AQF	Cmn	13.40	- 31.20	884.58	- 866.78
GW-653	BG	AQT	Cn	26.30	- 39.00	902.55	- 889.85
GW-654	BG	AQT	Cm	4.20	- 15.30	934.06	- 922.96
GW-683	EXP	AQF	OCk	133.90	- 196.80	835.55	- 772.65
GW-684	EXP	AQF	Cmn	106.40	- 128.40	789.13	- 767.13
GW-685	EXP	AQF	Cmn	88.50	- 138.30	800.78	- 750.98
GW-694	EXP	AQF	Cmn	154.00	- 204.50	784.58	- 734.08
GW-695	EXP	AQF	OCk	50.60	- 62.60	886.62	- 874.62
GW-703	EXP	AQF	Cmn	135.00	- 182.00	816.80	- 769.80
GW-704	EXP	AQF	Cmn	246.00	- 256.00	695.99	- 685.99
GW-706	EXP	AQF	Cmn	157.00	- 182.50	768.78	- 743.28
GW-710	EXP	AQF	OCk	539.70	- 744.50	368.33	- 163.53
GW-711	EXP	AQF	Cmn	616.00	- 666.20	285.96	- 235.76
GW-712	EXP	AQF	OCk	441.50	- 457.50	432.11	- 416.11
GW-713	EXP	AQF	Cmn	305.00	- 315.20	572.83	- 562.63
GW-714	EXP	AQF	Cmn	115.10	- 145.00	757.20	- 727.30
GW-715	EXP	AQF	Cmn	32.00	- 44.00	840.17	- 828.17
GW-723	EXP	AQF	Cmn	340.60	- 444.50	678.70	- 574.80
GW-724	EXP	AQF	Cmn	289.60	- 301.60	687.02	- 675.02
GW-725	EXP	AQF	Cmn	132.50	- 142.50	825.76	- 815.76
GW-736	EXP	AQF	Cmn	92.00	- 105.00	865.55	- 852.55
GW-737	EXP	AQF	Cmn	79.00	- 89.50	878.50	- 868.00
GW-738	EXP	AQF	Cmn	63.50	- 88.00	916.86	- 892.36
GW-739	EXP	AQF	Cmn	289.20	- 320.00	731.50	- 700.70
GW-740	EXP	AQF	Cmn	165.60	- 190.00	851.40	- 827.00
GW-793	AGLLSF	AQT	Cn	16.90	- 29.00	948.15	- 936.05
GW-794	AGLLSF	AQT	Cn	25.80	- 39.30	905.11	- 891.61
GW-795	AGLLSF	AQT	Cn	7.50	- 20.10	915.42	- 902.82

Table 3. General Construction Information for Monitoring Wells Sampled During 1995 (Cont'd)

Well No.	Location	<u>Aquifer</u>		<u>Monitored Interval</u>				
		Unit	Formation	Depths (bgs)			Elevations (msl)	
GW-800	OLF	AQF	Ock	19.30	-	31.50	942.10	- 929.90
GW-828	OLF	AQT	Cn	153.00	-	168.00	826.08	- 811.08
GW-829	OLF	AQT	Cn	102.90	-	114.60	879.02	- 867.32
GW-830	TSD				-	387.40		- 455.14

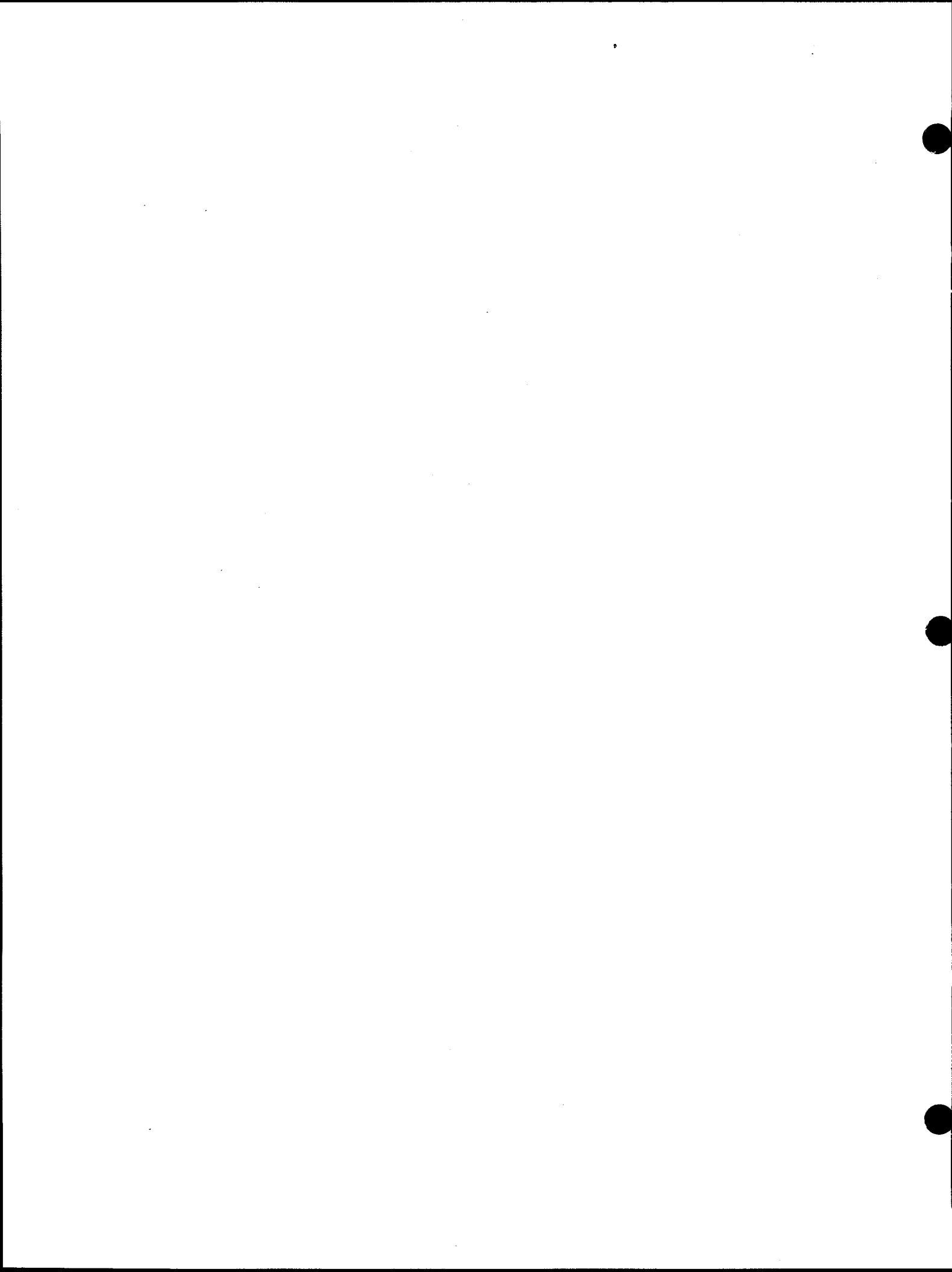
Footnotes:

AGLLSF	- Above Grade Low Level Storage Facility
BCBG	- Bear Creek Burial Grounds
BG	- Burial Grounds
EXP	- Exit Pathway
OLF	- Oil Landfarm
RS	- Rust Spoil Area
S3	- S-3 Site
SPI	- Spoil Area I
TSD	- Y-12 Transportation Safeguards Division Garage Facility (Building 9714)
AQF	- Knox Aquifer
AQT	- ORR Aquatards
Cm	- Maryville Limestone
Cmn	- Maynardville Limestone
Cn	- Nolichucky Shale
Cpv	- Pumpkin Valley Shale
Crg	- Rogersville Shale
Ock	- Knox Group
bgs	- (feet) below ground surface
msl	- (feet) above mean sea level



APPENDIX C

MONITORING WELL CONSTRUCTION DETAILS



EXPLANATION

LOCATION:

AGLLSF	-	Above Grade Low-Level Storage Facility
BG	-	Bear Creek Burial Grounds WMA
EXP	-	Exit Pathway Monitoring Location
OLF	-	Oil Landfarm WMA
RS	-	Rust Spoil Area
S3	-	S-3 Site
SPI	-	Spoil Area I
TSD	-	Y-12 TSD Garage Facility (Building 9714)

GENERAL INFORMATION:

Coordinates	-	Y-12 Plant grid system
Elevations	-	Feet above mean sea level
Depths	-	Feet below ground surface
AQF	-	Knox Aquifer
AQT	-	ORR Aquitards
B	-	Bedrock Interval
U	-	unconsolidated
wB	-	weathered bedrock
Ock	-	Knox Group
Cm	-	Maryville Limestone
Cn	-	Nolichucky Shale
Cmn	-	Maynardville Limestone
Cpv	-	Pumpkin Valley Shale
Crg	-	Rogersville Shale
.	-	Not Applicable or not available

CASING:

OD (in)	-	Outside diameter, in inches
Borehole Diameter	-	Nominal diameter, in inches
Casing Material:		
PVC/#40	-	Polyvinyl chloride, schedule 40
SS/#304	-	Stainless steel, schedule 304
Steel	-	Carbon steel
F-25/J-55	-	American Petroleum Institute Grade

MONITORED INTERVAL:

Top	-	Depth to top of filter pack or open-hole
Bottom	-	Depth to bottom of filter pack or open-hole
Screen Material:		
PVC/sl	-	PVC/slotted
PVC/sw/.01	-	PVC, spiral wound, 0.01 inch slot size
SS/sw/.01	-	Stainless steel, spiral wound, 0.01 inch slot size
SS/pp/.01	-	Stainless steel prepack screen, spiral wound, 0.01 inch slot size

Length of screen and open hole interval is in feet.

EXPLANATION (cont'd)

NOTE:

Data Compiled from *Updated Subsurface Data Base for Bear Creek Valley, Chestnut Ridge, and parts of Bethel Valley on the U.S. Department of Energy Oak Ridge Reservation* (Jones et al. 1995).

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-005	GW-014	GW-040	GW-042	GW-043	GW-044	GW-046
Sample Group	BCV OU	BC 12	BC 5	BC 5	BC 3	BC 3	BC 12
Location	OLF	BG	BG	BG	OLF	OLF	BG
GENERAL INFORMATION							
East Coordinate	48242.00	44311.00	43358.00	43938.00	47932.00	47928.00	43284.00
North Coordinate	29921.00	29843.00	31111.00	31137.00	30522.00	30526.00	29562.00
Measuring Pt. Elevation	965.13	933.76	1008.00	1003.40	1011.50	1013.50	919.61
Ground Elevation	962.37	931.39	1004.10	999.95	1009.80	1010.30	917.21
Hydrostratigraphic Unit	AQT	AQT	AQT	AQT	AQT	AQT	AQT
Geologic Formation	Cn	Cn	Cpv	Cpv	Cm	Cm	Cn
Aquifer Zone	U	U/wB	wB	wB	wB	wB	U/wB
Weathered Rock - Depth	9.7	4.0	.	3.5	1.0	1.0	7.7
Weathered Rock - Elevation	955.43	929.76	.	999.90	1010.50	1012.50	911.91
Fresh Rock - Depth	.	.	.	.	38.0	38.0	.
Fresh Rock - Elevation	.	.	.	.	973.50	975.50	.
Total Depth Drilled	12.50	13.20	35.00	30.00	40.00	70.00	20.50
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	.	.	.	.	.	.	.
Conductor Casing OD (in)	.	.	.	.	.	.	.
Conductor Casing Type	none	none	none	none	none	unknown	none
WELL CASING							
Borehole Diameter	6.00	6.00	6.00	6.00	6.00	4.00	6.00
Well Casing Depth	5.3	10.0	25.7	24.9	22.8	48.0	8.1
Well Casing OD (in)	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Well Casing Type	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304
MONITORED INTERVAL							
Top Monitored Interval - Depth	3.0	5.0	21.0	13.4	10.0	42.5	5.0
Top Monitored Interval - Elevation	959.37	926.39	983.10	986.55	999.80	967.80	912.21
Midpoint - Depth	7.8	9.1	25.0	20.8	25.0	56.3	12.7
Midpoint - Elevation	954.62	922.29	979.10	979.15	984.80	954.05	904.56
Bottom Monitored Interval - Depth	12.5	13.2	29.0	28.2	40.0	70.0	20.3
Bottom Monitored Interval - Elevation	949.87	918.19	975.10	971.75	969.80	940.30	896.91
Screen Material	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01
Screen Length	5.0	2.0	2.0	2.0	10.0	10.0	10.0
Open-Hole Length	.	.	.	.	.	.	.
Open-Hole Diameter	.	.	.	.	.	.	.

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-047	GW-053	GW-056	GW-057	GW-061	GW-064	GW-066
Sample Group	BC 6	BC 8	BC 9	BC 9	BC 8	BC 3	BC 11
Location	OLF	BG	EXP	EXP	BG	OLF	OLF
GENERAL INFORMATION							
East Coordinate	44503.00	43091.00	41384.00	41380.00	43048.00	49168.00	48677.00
North Coordinate	29609.00	29061.00	28698.00	28688.00	28917.00	29195.00	29513.00
Measuring Pt. Elevation	928.25	902.67	890.71	889.36	904.44	981.56	961.72
Ground Elevation	925.79	900.33	886.65	886.83	900.78	979.17	957.32
Hydrostratigraphic Unit	AQT	AQT	AQF	AQF	AQF	AQF	AQF
Geologic Formation	Cn	Cn	Cmn	Cmn	Cmn	Cmn	Cmn
Aquifer Zone	wB	U/wB	wB	wB	wB	wB	wB
Weathered Rock - Depth	4.0	4.0	.	.	.	.	.
Weathered Rock - Elevation	924.25	898.67	.	.	.	.	.
Fresh Rock - Depth	.	.	6.4	3.4	15.7	34.7	16.2
Fresh Rock - Elevation	.	.	884.31	885.96	888.74	946.86	945.52
Total Depth Drilled	25.50	39.70	55.20	25.00	25.00	57.00	55.80
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	.	4.00	32.00	14.00	.	.	.
Conductor Casing OD (in)	.	6.50	4.50	4.50	.	.	.
Conductor Casing Type	none	PVC/#40	PVC/#40	PVC/#40	none	unknown	unknown
WELL CASING							
Borehole Diameter	6.00	4.00	4.00	4.00	4.75	4.00	4.00
Well Casing Depth	18.5	26.6	53.2	20.8	19.6	50.7	52.9
Well Casing OD (in)	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Well Casing Type	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304
MONITORED INTERVAL							
Top Monitored Interval - Depth	12.5	11.4	49.1	17.5	17.5	46.8	50.0
Top Monitored Interval - Elevation	913.29	888.93	837.55	869.33	883.28	932.37	907.32
Midpoint - Depth	19.0	22.1	52.2	20.2	21.1	49.8	52.5
Midpoint - Elevation	906.79	878.23	834.50	866.68	879.73	929.42	904.87
Bottom Monitored Interval - Depth	25.5	32.8	55.2	22.8	24.6	52.7	54.9
Bottom Monitored Interval - Elevation	900.29	867.53	831.45	864.03	876.18	926.47	902.42
Screen Material	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01
Screen Length	5.0	5.0	2.0	2.0	5.0	2.0	2.0
Open-Hole Length	.	.	.	.	.	.	.
Open-Hole Diameter	.	.	.	.	.	.	.

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-069	GW-079	GW-080	GW-084	GW-085	GW-087	GW-095
Sample Group	BC 8	BC 8	BC 8	BC 3	BC 3	BC 11	BC 8
Location	BG	BG	BG	OLF	OLF	OLF	BG
GENERAL INFORMATION							
East Coordinate	43803.00	41619.00	41622.00	48801.00	49058.00	48313.00	43363.00
North Coordinate	29490.00	30632.00	30624.00	30421.00	30002.00	29534.00	29142.00
Measuring Pt. Elevation	927.01	980.50	980.31	996.60	982.87	960.50	910.87
Ground Elevation	924.25	977.14	977.03	994.37	979.82	956.97	907.98
Hydrostratigraphic Unit	AQT	AQT	AQT	AQT	AQT	AQT	AQF
Geologic Formation	Cn	Cn	Cn	Cm	Cn	Cn	Cmn
Aquifer Zone	wB/B	wB	wB	wB	wB	U	B
Weathered Rock - Depth	3.0	4.0	3.5	4.0	2.0	19.0	15.0
Weathered Rock - Elevation	924.01	976.50	976.81	992.60	980.87	941.50	895.87
Fresh Rock - Depth	24.0	26.5	23.5	.	40.0	.	24.0
Fresh Rock - Elevation	903.01	954.00	956.81	.	942.87	.	886.87
Total Depth Drilled	100.00	65.00	30.00	34.00	62.00	19.00	156.00
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	.	.	.	.	.	.	15.00
Conductor Casing OD (in)	.	.	.	.	.	.	10.63
Conductor Casing Type	unknown	none	none	none	unknown	none	PVC/#40
WELL CASING							
Borehole Diameter	7.88	6.50	6.50	6.50	4.00	6.50	9.00
Well Casing Depth	89.0	59.9	24.7	22.8	53.8	9.0	134.8
Well Casing OD (in)	2.37	2.37	2.37	2.37	2.37	2.37	4.50
Well Casing Type	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304
MONITORED INTERVAL							
Top Monitored Interval - Depth	79.0	49.9	20.8	18.5	48.4	7.5	130.2
Top Monitored Interval - Elevation	845.25	927.24	956.23	975.87	931.42	949.47	777.78
Midpoint - Depth	89.1	57.4	25.3	23.2	53.6	13.3	143.1
Midpoint - Elevation	835.15	919.74	951.78	971.22	926.22	943.72	764.88
Bottom Monitored Interval - Depth	99.2	64.9	29.7	27.8	58.8	19.0	156.0
Bottom Monitored Interval - Elevation	825.05	912.24	947.33	966.57	921.02	937.97	751.98
Screen Material	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01
Screen Length	10.2	5.0	5.0	5.0	5.0	10.0	21.0
Open-Hole Length	.	.	.	.	.	.	.
Open-Hole Diameter	.	.	.	.	.	.	.

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-100	GW-115	GW-124	GW-162	GW-228	GW-229	GW-236
Sample Group	BC 11	BC 1	BC 11	BC 5	BC 11	BC 11	BC 11
Location	S3	S3	S3	BG	OLF	OLF	S3
GENERAL INFORMATION							
East Coordinate	50957.00	52685.00	52223.00	44480.91	47791.00	47017.00	50453.00
North Coordinate	29758.00	31073.00	29656.00	31330.75	29171.00	29256.00	29712.00
Measuring Pt. Elevation	986.66	1054.40	1006.80	1040.40	946.47	949.00	983.21
Ground Elevation	984.43	1051.90	1003.50	1038.10	943.85	945.71	980.39
Hydrostratigraphic Unit	AQF	AQT	AQF	AQT	AQF	AQF	AQF
Geologic Formation	Cmn	Cm	Cmn	Cpv	Cmn	Cmn	Cmn
Aquifer Zone	U/wB	wB	B	B	B	wB	wB
Weathered Rock - Depth	14.0	.	.	.	.	.	9.0
Weathered Rock - Elevation	972.66	.	.	.	.	.	974.21
Fresh Rock - Depth	.	.	30.0	12.0	24.0	32.0	18.5
Fresh Rock - Elevation	.	.	976.80	1028.40	922.47	917.00	964.71
Total Depth Drilled	20.70	53.00	150.00	125.00	100.00	55.00	18.50
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	0.30	.	30.50	26.00	32.00	37.00	.
Conductor Casing OD (in)	7.00	.	10.75	10.75	10.75	10.75	.
Conductor Casing Type	steel/gal	none	steel/F25	steel/F25	steel/	steel/	none
WELL CASING							
Borehole Diameter	6.50	.	9.87	10.00	10.00	10.00	8.00
Well Casing Depth	10.2	42.0	100.0	92.0	80.0	40.0	13.0
Well Casing OD (in)	2.37	2.37	4.50	6.62	4.50	4.50	4.50
Well Casing Type	SS/#304	SS/#304	steel/F25	steel/F25	steel/	steel/	PVC/#40
MONITORED INTERVAL							
Top Monitored Interval - Depth	3.8	37.6	100.0	92.0	80.0	40.0	10.0
Top Monitored Interval - Elevation	980.63	1014.30	903.50	946.10	863.85	905.71	970.39
Midpoint - Depth	12.3	45.3	125.0	108.5	90.0	47.5	14.3
Midpoint - Elevation	972.18	1006.60	878.50	929.60	853.85	898.21	966.14
Bottom Monitored Interval - Depth	20.7	53.0	150.0	125.0	100.0	55.0	18.5
Bottom Monitored Interval - Elevation	963.73	998.90	853.50	913.10	843.85	890.71	961.89
Screen Material	SS/sw/.01	SS/sw/.01	.	.	.	.	PVC/sw/.01
Screen Length	4.0	10.0	.	.	.	.	5.0
Open-Hole Length	.	.	50.0	33.0	20.0	15.0	.
Open-Hole Diameter	.	.	4.00	6.00	4.00	4.00	.

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-243	GW-248	GW-257	GW-258	GW-276	GW-287	GW-288
Sample Group	BCV OU	BC 12	BC 12	BCV OU	BC 1	BC 8	BC 12
Location	S-3	BG	BG	BCBG	EXP	BG	BG
GENERAL INFORMATION							
East Coordinate	51990.00	43246.00	43230.00	43141.00	52557.00	42288.00	42874.00
North Coordinate	30155.00	30143.00	30148.00	30022.00	29926.00	29989.00	29975.00
Measuring Pt. Elevation	1011.60	961.25	961.68	943.66	1001.30	926.87	948.36
Ground Elevation	1008.60	958.82	959.21	941.19	998.80	924.60	946.07
Hydrostratigraphic Unit	AQT	AQT	AQT	AQF	AQT	AQT	AQT
Geologic Formation	Cn	Cm	Cm	Cmn	Cn	Cm	Cm
Aquifer Zone	wB	B	wB	B	wB	wB/B	B
Weathered Rock - Depth	.	.	.	.	18.5	4.5	25.0
Weathered Rock - Elevation	.	.	.	.	982.80	922.37	923.36
Fresh Rock - Depth	.	36.0	33.7	30.0	.	11.0	42.0
Fresh Rock - Elevation	.	925.25	927.98	913.66	.	915.87	906.36
Total Depth Drilled	77.00	62.00	33.70	50.00	18.50	12.50	60.00
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	37.80	43.00	.	32.00	.	.	43.00
Conductor Casing OD (in)	12.50	10.75	.	10.75	.	.	10.75
Conductor Casing Type	PVC/#40	Black Steel	none	Black steel	none	none	Black steel
WELL CASING							
Borehole Diameter	11.00	9.00	9.00	9.00	8.00	9.00	9.00
Well Casing Depth	45.0	50.7	23.0	38.6	13.0	7.3	49.1
Well Casing OD (in)	6.50	4.50	4.50	4.50	4.50	4.50	4.50
Well Casing Type	PVC/#40	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304
MONITORED INTERVAL							
Top Monitored Interval - Depth	43.2	49.1	19.0	37.0	11.3	5.6	46.0
Top Monitored Interval - Elevation	965.40	909.72	940.21	904.19	987.50	919.00	900.07
Midpoint - Depth	60.1	55.6	26.4	43.5	14.9	9.1	53.0
Midpoint - Elevation	948.50	903.27	932.86	897.69	983.90	915.55	893.07
Bottom Monitored Interval - Depth	77.0	62.0	33.7	50.0	18.5	12.5	60.0
Bottom Monitored Interval - Elevation	931.60	896.82	925.51	891.19	980.30	912.10	886.07
Screen Material	PVC/sw.01	SS/sw.01	SS/sw.01	SS/sw.01	SS/sw.01	SS/sw.01	SS/sw.01
Screen Length	27.9	11.0	10.7	10.7	5.3	5.0	10.0
Open-Hole Length	.	.	.	.	.	.	.
Open-Hole Diameter	.	.	.	.	.	.	.

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-289	GW-290	GW-291	GW-311	GW-312	GW-315	GW-317
Sample Group	BC 12	BC 12	BC 12	BC 3	BC 3	BC 2	BC 2
Location	BG	BG	BG	RS	RS	SPI	SPI
GENERAL INFORMATION							
East Coordinate	42875.00	42580.23	42583.00	50126.00	49778.00	52268.00	52192.00
North Coordinate	29982.00	30444.80	30449.03	29267.00	29216.00	29455.00	29285.00
Measuring Pt. Elevation	948.47	948.46	948.36	999.35	996.49	1047.30	1063.00
Ground Elevation	946.32	945.39	945.12	996.43	994.13	1044.80	1060.80
Hydrostratigraphic Unit	AQT	AQT	AQT	AQF	AQF	AQF	AQF
Geologic Formation	Cm	Cm	Cm	Cmn	Cmn	Cmn	Cmn
Aquifer Zone	wB/B	B	wB	U	U	B	B
Weathered Rock - Depth	24.0	.	10.8	40.3	.	54.0	.
Weathered Rock - Elevation	924.47	.	937.58	959.05	.	993.30	.
Fresh Rock - Depth	38.0	20.0	.	.	.	71.0	48.0
Fresh Rock - Elevation	910.47	928.43	.	.	.	976.30	1015.00
Total Depth Drilled	40.80	35.53	16.98	40.30	41.00	104.00	132.00
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	.	20.53	.	.	.	84.40	49.30
Conductor Casing OD (in)	.	10.75	.	.	.	10.75	10.75
Conductor Casing Type	none	Black steel	none	none	none	steel/F25	steel/F25
WELL CASING							
Borehole Diameter	9.00	9.00	9.00	10.00	12.00	10.00	10.00
Well Casing Depth	30.6	25.1	11.5	29.7	30.5	93.3	119.5
Well Casing OD (in)	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Well Casing Type	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304
MONITORED INTERVAL							
Top Monitored Interval - Depth	28.9	22.3	9.5	25.6	29.6	90.0	117.0
Top Monitored Interval - Elevation	917.42	923.06	935.64	970.83	964.53	954.80	943.80
Midpoint - Depth	34.9	28.9	13.2	33.0	35.3	97.0	124.5
Midpoint - Elevation	911.47	916.46	931.89	963.48	958.83	947.80	936.30
Bottom Monitored Interval - Depth	40.8	35.5	17.0	40.3	41.0	104.0	132.0
Bottom Monitored Interval - Elevation	905.52	909.86	928.14	956.13	953.13	940.80	928.80
Screen Material	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01
Screen Length	10.0	10.0	5.0	10.6	10.0	10.0	11.0
Open-Hole Length	.	.	.	.	.	.	.
Open-Hole Diameter	.	.	.	.	.	.	.

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-346	GW-347	GW-348	GW-363	GW-370	GW-372	GW-373
Sample Group	BC 11	BC 2	BC 2	BC 6	BC 5	BC 5	BC 5
Location	S3	S3	S3	OLF	BG	BG	BG
GENERAL INFORMATION							
East Coordinate	50703.00	50750.00	50763.00	46872.00	44989.00	45257.00	45271.00
North Coordinate	30030.00	29292.00	29294.00	29961.00	30241.00	30673.00	30679.00
Measuring Pt. Elevation	995.65	1001.60	1000.10	957.91	960.62	983.53	982.80
Ground Elevation	995.08	997.76	998.00	955.41	957.94	979.87	980.75
Hydrostratigraphic Unit	AQT	AQF	AQF	AQT	AQT	AQT	AQT
Geologic Formation	Cn	Cmn	Cmn	Cn	Cm	Cm	Cm
Aquifer Zone	B	U/wB	B	wB	wB/B	wB/B	B
Weathered Rock - Depth	11.0	26.5	35.8	9.0	11.0	14.5	21.0
Weathered Rock - Elevation	984.65	975.10	964.30	948.91	949.62	969.03	961.80
Fresh Rock - Depth	22.8	.	36.6	21.0	25.0	47.0	75.0
Fresh Rock - Elevation	972.85	.	963.50	936.91	935.62	936.53	907.80
Total Depth Drilled	65.30	27.80	80.90	75.00	33.10	51.60	158.00
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	22.80	.	46.40	36.00	.	.	34.50
Conductor Casing OD (in)	10.75	.	10.75	10.75	.	.	10.75
Conductor Casing Type	unknown	none	unknown	unknown	none	none	unknown
WELL CASING							
Borehole Diameter	9.50	9.50	9.50	9.50	9.50	9.50	9.50
Well Casing Depth	54.6	11.7	70.2	50.0	22.5	41.0	123.0
Well Casing OD (in)	4.50	4.50	4.50	6.62	4.50	4.50	6.62
Well Casing Type	SS/#304	SS/#304	SS/#304	steel/F25	SS/#304	SS/#304	steel/F25
MONITORED INTERVAL							
Top Monitored Interval - Depth	51.5	9.5	68.1	50.0	21.1	39.8	123.0
Top Monitored Interval - Elevation	943.58	988.26	929.90	905.41	936.84	940.07	857.75
Midpoint - Depth	58.2	18.7	74.5	62.5	27.1	45.7	140.5
Midpoint - Elevation	936.88	979.11	923.50	892.91	930.84	934.17	840.25
Bottom Monitored Interval - Depth	64.9	27.8	80.9	75.0	33.1	51.6	158.0
Bottom Monitored Interval - Elevation	930.18	969.96	917.10	880.41	924.84	928.27	822.75
Screen Material	SS/sw/.01	SS/sw/.01	SS/sw/.01	.	SS/sw/.01	SS/sw/.01	.
Screen Length	10.0	15.8	10.4	.	10.0	10.0	.
Open-Hole Length	.	.	.	25.0	.	.	35.0
Open-Hole Diameter	.	.	.	6.00	.	.	6.00

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-537	GW-613	GW-614	GW-615	GW-621	GW-623	GW-624
Sample Group	BC 3	BC 1	BC 1	BCV OU	BC 7	BCV OU	BCV OU
Location	OLF	S3	S3	S-3	EXP	BCBG	BCBG
GENERAL INFORMATION							
East Coordinate	49539.23	50231.77	50223.05	52223.78	45032.91	44137.84	43007.38
North Coordinate	30057.19	30406.77	30425.77	30009.32	29023.30	29388.47	29421.33
Measuring Pt. Elevation	976.24	1013.40	1012.20	1016.80	925.24	925.21	921.96
Ground Elevation	974.19	1010.20	1009.40	1014.20	923.07	922.01	919.52
Hydrostratigraphic Unit	AQT	AQT	AQT	AQT	AQF	AQT	AQT
Geologic Formation	Cn	Cn	Cn	Cn	Cmn	Cn	Cn
Aquifer Zone	U/wB	wB	B	B	wB	B	wB
Weathered Rock - Depth	14.9	15.0	12.5	15.0	22.0	16.0	12.0
Weathered Rock - Elevation	961.34	998.40	999.70	1001.80	903.24	909.21	909.96
Fresh Rock - Depth	.	.	50.8	40.0	.	38.0	.
Fresh Rock - Elevation	.	.	961.40	976.80	.	887.21	.
Total Depth Drilled	24.50	42.00	90.20	245.00	43.00	349.00	27.20
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	.	16.80	44.40	84.50	24.00	26.00	.
Conductor Casing OD (in)	.	10.75	10.75	11.75	10.75	10.75	.
Conductor Casing Type	none	steel/J-55	steel/J-55	steel/J-55	steel/J-55	steel/J-55	none
WELL CASING							
Borehole Diameter	8.75	9.50	9.50	10.63	7.88	6.00	9.50
Well Casing Depth	8.0	31.7	75.2	222.5	24.8	244.0	16.9
Well Casing OD (in)	4.50	4.50	4.50	7.00	4.50	2.37	4.50
Well Casing Type	SS/#304	SS/#304	SS/#304	steel/F25	SS/#304	SS/#304	SS/#304
MONITORED INTERVAL							
Top Monitored Interval - Depth	4.8	30.0	71.6	222.5	23.3	238.1	14.4
Top Monitored Interval - Elevation	969.39	980.20	937.80	791.70	899.77	683.91	905.12
Midpoint - Depth	14.1	36.0	80.9	233.8	31.9	256.2	20.8
Midpoint - Elevation	960.14	974.20	928.50	780.45	891.17	665.86	898.72
Bottom Monitored Interval - Depth	23.3	42.0	90.2	245.0	40.5	274.2	27.2
Bottom Monitored Interval - Elevation	950.89	968.20	919.20	769.20	882.57	647.81	892.32
Screen Material	SS/sw/.01	SS/sw/.01	SS/sw/.01	.	SS/sw/.01	SS/sw/.01	SS/sw/.01
Screen Length	15.0	10.3	15.0	.	15.7	30.2	10.3
Open-Hole Length	.	.	.	22.5	.	.	.
Open-Hole Diameter	.	.	.	6.25	.	.	.

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-627	GW-637	GW-642	GW-652	GW-653	GW-654	GW-683
Sample Group	BC 8	BC 6	BC 5	BC 8	BC 8	BC 8	BC 9
Location	BG	OLF	BG	BG	BG	BG	EXP
GENERAL INFORMATION							
East Coordinate	42774.10	46402.39	44654.05	42452.49	42317.29	41907.28	41552.33
North Coordinate	29505.05	29492.81	31215.27	29029.46	29660.39	30548.76	28281.78
Measuring Pt. Elevation	942.85	941.83	1014.70	900.83	931.60	940.79	972.06
Ground Elevation	940.39	938.26	1011.90	897.98	928.85	938.26	969.45
Hydrostratigraphic Unit	AQT	AQT	AQT	AQF	AQT	AQT	AQF
Geologic Formation	Cn	Cn	Crg	Cmn	Cn	Cm	OCk
Aquifer Zone	B	wB	B	wB	wB	wB	wB
Weathered Rock - Depth	3.0	10.0	1.0	9.5	3.5	4.0	22.0
Weathered Rock - Elevation	939.85	931.83	1013.70	891.33	928.10	936.79	950.06
Fresh Rock - Depth	43.0	.	20.0	.	.	.	26.0
Fresh Rock - Elevation	899.85	.	994.70	.	.	.	946.06
Total Depth Drilled	270.00	27.50	36.90	31.20	39.00	15.50	197.50
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	47.50	15.00	21.50	12.60	.	.	82.00
Conductor Casing OD (in)	11.75	10.75	10.75	10.75	.	.	11.75
Conductor Casing Type	steel/J-55	steel/J-55	steel/J-55	steel/J-55	none	none	steel/J-55
WELL CASING							
Borehole Diameter	10.63	10.00	9.50	9.50	9.50	9.50	10.63
Well Casing Depth	254.0	17.2	20.3	14.6	29.0	5.3	146.0
Well Casing OD (in)	7.00	4.50	4.50	4.50	4.50	4.50	4.50
Well Casing Type	steel/F25	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304
MONITORED INTERVAL							
Top Monitored Interval - Depth	254.0	14.5	18.5	13.4	26.3	4.2	133.9
Top Monitored Interval - Elevation	686.39	923.76	993.40	884.58	902.55	934.06	835.55
Midpoint - Depth	262.0	21.0	27.7	22.3	32.7	9.8	165.4
Midpoint - Elevation	678.39	917.26	984.20	875.68	896.20	928.51	804.10
Bottom Monitored Interval - Depth	270.0	27.5	36.9	31.2	39.0	15.3	196.8
Bottom Monitored Interval - Elevation	670.39	910.76	975.00	866.78	889.85	922.96	772.65
Screen Material	.	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/pp/.01
Screen Length	.	10.0	16.2	16.2	10.0	10.0	50.8
Open-Hole Length	16.0	.	.	.	.	.	.
Open-Hole Diameter	6.25	.	.	.	.	.	.

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-684	GW-685	GW-694	GW-695	GW-703	GW-704	GW-706
Sample Group	BC 9	BC 9	BC 7	BC 7	BC 7	BC 7	BC 7
Location	EXP	EXP	EXP	EXP	EXP	EXP	EXP
GENERAL INFORMATION							
East Coordinate	41353.53	41447.78	44893.28	44868.30	44930.51	44934.98	44943.63
North Coordinate	28524.52	28667.40	28844.77	28844.73	28806.34	28844.67	28946.41
Measuring Pt. Elevation	898.66	891.51	941.38	939.37	954.69	944.73	928.67
Ground Elevation	895.53	889.28	938.58	937.22	951.80	941.99	925.78
Hydrostratigraphic Unit	AQF	AQF	AQF	AQF	AQF	AQF	AQF
Geologic Formation	Cmn	Cmn	Cmn	Ock	Cmn	Cmn	Cmn
Aquifer Zone	B	B	B	B	B	B	B
Weathered Rock - Depth	.	5.0	11.0	6.0	7.0	16.0	17.0
Weathered Rock - Elevation	.	886.51	930.38	933.37	947.69	928.73	911.67
Fresh Rock - Depth	9.0	15.5	21.0	18.0	10.0	23.0	27.0
Fresh Rock - Elevation	889.66	876.01	920.38	921.37	944.69	921.73	901.67
Total Depth Drilled	129.60	138.30	204.50	62.60	182.00	256.00	182.50
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	87.00	.	25.80	22.50	.	21.00	40.30
Conductor Casing OD (in)	11.75	.	11.75	11.75	.	11.75	11.75
Conductor Casing Type	steel/J-55	none	steel	steel/J-55	none	steel/J-55	steel/J-55
WELL CASING							
Borehole Diameter	10.50	10.63	10.60	9.88	10.63	10.63	10.60
Well Casing Depth	113.8	88.3	153.0	52.4	133.8	244.5	156.1
Well Casing OD (in)	4.50	7.00	7.00	4.50	7.00	7.00	7.00
Well Casing Type	SS/#304	steel/F25	steel/F-25	SS/#304	steel/F25	steel/F25	steel/F25
MONITORED INTERVAL							
Top Monitored Interval - Depth	106.4	88.5	154.0	50.6	135.0	246.0	157.0
Top Monitored Interval - Elevation	789.13	800.78	784.58	886.62	816.80	695.99	768.78
Midpoint - Depth	117.4	113.4	179.3	56.6	158.5	251.0	169.8
Midpoint - Elevation	778.13	775.88	759.33	880.62	793.30	690.99	756.03
Bottom Monitored Interval - Depth	128.4	138.3	204.5	62.6	182.0	256.0	182.5
Bottom Monitored Interval - Elevation	767.13	750.98	734.08	874.62	769.80	685.99	743.28
Screen Material	SS/pp/.01	.	.	SS/sw/.01	.	.	.
Screen Length	14.6	.	.	10.0	.	.	.
Open-Hole Length	.	49.8	50.5	.	47.0	10.0	25.5
Open-Hole Diameter	.	6.63	6.25	.	6.25	6.50	6.25

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-710	GW-711	GW-712	GW-713	GW-714	GW-715	GW-723
Sample Group	BC 1	BC 1	BC 1	BC 1	BC 1	BC 1	BC 4
Location	EXP	EXP	EXP	EXP	EXP	EXP	EXP
GENERAL INFORMATION							
East Coordinate	36470.81	36535.38	36506.87	36434.40	36435.09	36453.11	49088.55
North Coordinate	27645.05	27872.80	28232.52	28235.95	28421.56	28424.58	29006.44
Measuring Pt. Elevation	911.26	905.20	877.09	880.63	875.08	874.72	1022.20
Ground Elevation	908.03	901.96	873.61	877.83	872.30	872.17	1019.30
Hydrostratigraphic Unit	AQF	AQF	AQF	AQF	AQF	AQF	AQF
Geologic Formation	OCK	Cmn	OCK	Cmn	Cmn	Cmn	Cmn
Aquifer Zone	B	B	B	B	B	U/wB	B
Weathered Rock - Depth	.	15.0	12.0	26.8	27.0	34.0	26.7
Weathered Rock - Elevation	.	890.20	865.09	853.83	848.08	840.72	995.50
Fresh Rock - Depth	3.5	20.5	66.0	63.8	35.0	.	29.7
Fresh Rock - Elevation	907.76	884.70	811.09	816.83	840.08	.	992.50
Total Depth Drilled	744.50	666.20	457.50	315.20	145.00	44.60	444.50
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	83.40	17.00	44.80	50.00	40.50	.	39.00
Conductor Casing OD (in)	11.75	11.75	11.75	11.75	11.75	.	11.75
Conductor Casing Type	steel/J-55	steel/J-55	steel/J-55	steel/J-55	steel/J-55	none	steel/J-55
WELL CASING							
Borehole Diameter	10.60	10.60	10.60	10.60	10.60	10.60	10.60
Well Casing Depth	539.7	616.0	440.2	305.0	115.1	33.1	340.6
Well Casing OD (in)	7.00	7.00	7.00	7.00	7.00	4.25	7.00
Well Casing Type	steel/F25	steel/F25	steel/F25	steel/F25	steel/F25	SS/#304	steel/F25
MONITORED INTERVAL							
Top Monitored Interval - Depth	539.7	616.0	441.5	305.0	115.1	32.0	340.6
Top Monitored Interval - Elevation	368.33	285.96	432.11	572.83	757.20	840.17	678.70
Midpoint - Depth	642.1	641.1	449.5	310.1	130.1	38.0	392.6
Midpoint - Elevation	265.93	260.86	424.11	567.73	742.25	834.17	626.75
Bottom Monitored Interval - Depth	744.5	666.2	457.5	315.2	145.0	44.0	444.5
Bottom Monitored Interval - Elevation	163.53	235.76	416.11	562.63	727.30	828.17	574.80
Screen Material	.	.	.	.	.	SS/sw/.01	.
Screen Length	.	.	.	.	.	10.0	.
Open-Hole Length	204.8	50.2	16.0	10.2	29.9	.	103.9
Open-Hole Diameter	6.25	6.25	6.25	6.25	6.25	.	6.25

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-724	GW-725	GW-736	GW-737	GW-738	GW-739	GW-740
Sample Group	BC 4	BC 4	BC 4	BC 4	BC 4	BC 4	BC 4
Location	EXP	EXP	EXP	EXP	EXP	EXP	EXP
GENERAL INFORMATION							
East Coordinate	48995.17	48989.13	48936.00	48890.00	49026.00	49125.60	49055.00
North Coordinate	29198.24	29405.44	29381.00	29365.00	29150.00	29010.00	29027.00
Measuring Pt. Elevation	979.27	961.05	960.12	959.91	983.08	1023.70	1019.60
Ground Elevation	976.62	958.26	957.55	957.50	980.36	1020.70	1017.00
Hydrostratigraphic Unit	AQF	AQF	AQF	AQF	AQF	AQF	AQF
Geologic Formation	Cmn	Cmn	Cmn	Cmn	Cmn	Cmn	Cmn
Aquifer Zone	B	B	B	B	B	B	B
Weathered Rock - Depth	33.5	14.0	7.5	.	12.0	34.0	38.1
Weathered Rock - Elevation	945.77	947.05	952.62	.	971.08	989.70	981.50
Fresh Rock - Depth	40.0	17.5	12.0	14.0	15.1	42.0	45.1
Fresh Rock - Elevation	939.27	943.55	948.12	945.91	967.98	981.70	974.50
Total Depth Drilled	301.60	142.50	105.00	89.50	90.10	320.00	190.00
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	40.00	21.00	21.50	22.00	16.50	60.30	46.90
Conductor Casing OD (in)	11.75	11.75	11.75	11.75	11.75	11.75	11.75
Conductor Casing Type	steel/J-55	steel/J-55	steel/J-55	steel/J-55	steel/J-55	steel/J-55	steel/J-55
WELL CASING							
Borehole Diameter	10.60	10.60	10.60	10.60	10.60	10.60	10.60
Well Casing Depth	289.6	132.5	92.4	79.4	67.3	289.2	165.6
Well Casing OD (in)	7.00	7.00	4.50	4.50	4.50	7.00	7.00
Well Casing Type	steel/F25	steel/F25	SS/#304	SS/#304	SS/#304	steel/F25	steel/F25
MONITORED INTERVAL							
Top Monitored Interval - Depth	289.6	132.5	92.0	79.0	63.5	289.2	165.6
Top Monitored Interval - Elevation	687.02	825.76	865.55	878.50	916.86	731.50	851.40
Midpoint - Depth	295.6	137.5	98.5	84.3	75.8	304.6	177.8
Midpoint - Elevation	681.02	820.76	859.05	873.25	904.61	716.10	839.20
Bottom Monitored Interval - Depth	301.6	142.5	105.0	89.5	88.0	320.0	190.0
Bottom Monitored Interval - Elevation	675.02	815.76	852.55	868.00	892.36	700.70	827.00
Screen Material	.	.	SS/sw/.01	SS/sw/.01	SS/sw/.01	.	.
Screen Length	.	.	10.1	10.1	20.2	.	.
Open-Hole Length	12.0	10.0	.	.	.	30.8	24.4
Open-Hole Diameter	6.25	6.25	.	.	.	6.25	6.25

APPENDIX C
Monitoring Well Construction Details

Well No.	GW-793	GW-794	GW-795	GW-800	GW-828	GW-829	GW-830
Sample Group	BC 6	BC 6	BC 6	BC 3	BC 2	BC 2	.
Location	AGLLSF	AGLLSF	AGLLSF	OLF	OLF	OLF	TSD
GENERAL INFORMATION							
East Coordinate	46831.52	46392.92	45630.06	48260.30	49995.02	50035.53	33332.61
North Coordinate	30235.82	29273.17	29286.69	28981.60	30059.52	29952.81	18280.35
Measuring Pt. Elevation	968.18	934.17	925.98	964.36	982.92	985.78	842.54
Ground Elevation	965.05	930.91	922.92	961.40	979.08	981.92	842.32
Hydrostratigraphic Unit	AQT	AQT	AQT	AQF	AQT	AQT	.
Geologic Formation	Cn	Cn	Cn	OCK	.	.	.
Aquifer Zone	B	B	wB/B	B	B	B	.
Weathered Rock - Depth	11.0	3.5	5.0	10.0	7.50	1.30	.
Weathered Rock - Elevation	957.18	930.67	920.98	954.36	975.42	984.48	.
Fresh Rock - Depth	14.0	13.3	12.0	18.5	38.70	29.00	.
Fresh Rock - Elevation	954.18	920.87	913.98	945.86	944.22	956.78	.
Total Depth Drilled	29.00	39.30	20.10	32.00	82.70	115.00	387.40
SURFACE/CONDUCTOR CASING							
Conductor Casing Depth	.	.	.	.	19.20	.	.
Conductor Casing OD (in)	.	.	.	.	10.75	.	6.00
Conductor Casing Type	none	none	none	none	Steel	none	Steel/?
WELL CASING							
Borehole Diameter	9.87	9.87	9.87	10.63	9.87	9.87	.
Well Casing Depth	18.4	28.7	9.8	19.9	155.50	104.70	.
Well Casing OD (in)	4.50	4.50	4.50	4.50	4.50	4.50	.
Well Casing Type	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304	SS/#304	.
MONITORED INTERVAL							
Top Monitored Interval - Depth	16.9	25.8	7.5	19.3	153.00	102.90	.
Top Monitored Interval - Elevation	948.15	905.11	915.42	942.10	826.08	879.02	.
Midpoint - Depth	23.0	32.6	13.8	25.4	160.5	108.75	.
Midpoint - Elevation	942.10	898.36	909.12	936.00	818.58	873.17	.
Bottom Monitored Interval - Depth	29.0	39.3	20.1	31.5	168.00	114.60	387.40
Bottom Monitored Interval - Elevation	936.05	891.61	902.82	929.90	811.08	867.32	455.14
Screen Material	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	SS/sw/.01	.
Screen Length	10.0	10.1	10.0	10.0	10.40	9.90	.
Open-Hole Length	.	.	.	.	.	.	.
Open-Hole Diameter	.	.	.	.	.	.	.



APPENDIX D
SAMPLING SEQUENCES



EXPLANATION

SAMPLING GROUP:

Series of sampling locations grouped for data tracking and accounting purposes.

SAMPLE IDENTITY:

Dupe	-	Field Duplicate Sample
ER	-	Equipment Rinsate Sample
FB	-	Field Blank
BCK	-	Bear Creek Kilometer
CWESTTOE	-	Burial Ground C -West Toe Seep
GCS-01	-	Grassy Creek Spring 01
GW	-	Monitoring Well
MS-1	-	Bear Creek Main Stem Headwaters (Station 1)
NT	-	Northern Tributary
SEEP 1	-	Burial Ground A-North Seep
SEEP 2	-	Burial Ground C-East Seep
SS	-	(Bear Creek) Spring Station
TS	-	Tankfarm Spring (Bear Creek Headwaters)

LOCATION:

AGLLSF	-	Above Grade Low-Level Storage Facility
BG	-	Bear Creek Burial Grounds WMA
EXP	-	Exit Pathway Monitoring Location
OLF	-	Oil Landfarm WMA
RS	-	Rust Spoil Area
S3	-	S-3 Site
SPI	-	Spoil Area I

PUMP NUMBER:

Denotes identification number of gas-piston pump used to purge the well and collect nonvolatile samples. If pump number is denoted by a "W", this indicates that the well has a dedicated sampling system (i.e., well wizard).

PURGE TIME:

The time (in hours:minutes) that groundwater was purged from the monitoring well before samples were collected. If missing (indicated by a "."), purging took place over more than one day or purging was not required for a location/sample type (i.e., spring station).

NOTE:

Data compiled from sample tracking datasets (H&R Technical Associates, Inc. 1995a, 1995b, 1996a, and 1996b).

APPENDIX D
Sampling Sequence, First Quarter 1995

-----Sampling Group= BC 1 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
FB BC 1		8	.	01/11/95	12:52
GW-613	S3	8	0:42	01/11/95	12:52
GW-614	S3	8	1:54	01/11/95	15:24
GW-614 Dupe	S3	8	1:54	01/11/95	15:24
GW-712	EXP	8	.	01/13/95	8:18
GW-711	EXP	11	.	01/13/95	11:54
GW-713	EXP	8	.	01/14/95	12:59
GW-714	EXP	11	3:35	01/14/95	13:00
GW-715	EXP	11	0:27	01/14/95	13:42
GW-115	S3	W	0:22	01/14/95	14:07
ER BC 1		11	.	01/14/95	14:30
ER BC 1		.	.	01/15/95	15:15
GW-710	EXP	2	.	01/15/95	15:30
ER BC 1		8	.	01/24/95	14:15
GW-276	S3	8	0:08	01/24/95	14:30

-----Sampling Group= BC 2 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-317	SPI	5	0:46	03/14/95	16:25
GW-347	S3	5	0:11	03/15/95	10:10
GW-348	S3	5	1:06	03/15/95	11:41
GW-348 Dupe	S3	5	1:06	03/15/95	11:41
ER BC 2		5	.	03/15/95	14:25
GW-315	SPI	5	0:57	03/15/95	14:27

APPENDIX D
Sampling Sequence, First Quarter 1995

-----Sampling Group= BC 3 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-044		OLF	W	0:41	03/16/95	13:36
GW-044	Dupe	OLF	W	0:41	03/16/95	13:36
GW-043		OLF	W	0:07	03/16/95	14:30
GW-084		OLF	W	0:14	03/23/95	13:29
GW-800		OLF	7	0:15	03/25/95	9:15
GW-311		RS	7	0:05	03/25/95	11:00
GW-312		RS	7	0:05	03/25/95	13:30
GW-064		OLF	7	0:09	03/26/95	8:30
GW-085		OLF	7	0:15	03/26/95	9:27
ER BC 3			7	.	03/26/95	10:15
GW-537		OLF	7	0:24	03/26/95	10:18

-----Sampling Group= BC 4 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-740		EXP	2	7:33	02/16/95	17:33
GW-739		EXP	11	.	02/17/95	15:40
GW-738		EXP	11	1:22	02/18/95	10:17
GW-738	Dupe	EXP	11	1:22	02/18/95	10:17
GW-724		EXP	11	.	02/19/95	15:00
GW-723		EXP	11	.	02/20/95	12:00
GW-725		EXP	2	.	02/28/95	11:15
GW-736		EXP	2	2:34	02/28/95	17:09
ER BC 4		EXP	2	.	03/01/95	14:50
GW-737		EXP	2	2:15	03/01/95	15:00
ER BC 4		EXP	11	.	03/06/95	14:45

APPENDIX D
Sampling Sequence, First Quarter 1995

-----Sampling Group= BC 5 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-162	BG	11	2:30	01/26/95	15:00
GW-642	BG	11	0:27	01/31/95	11:30
GW-372	BG	11	0:26	01/31/95	13:15
GW-373	BG	11	2:30	01/31/95	17:30
GW-373 Dupe	BG	11	2:31	01/31/95	17:30
ER BC 5		11	.	02/01/95	12:15
GW-370	BG	11	0:20	02/01/95	12:20
GW-040	BG	B	.	02/01/95	14:50
GW-042	BG	W	0:04	02/01/95	17:00

-----Sampling Group= BC 6 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-793	AGLLSF	11	0:31	01/23/95	13:03
GW-793 Dupe	AGLLSF	11	0:31	01/23/95	13:03
GW-363	OLF	11	1:20	01/23/95	15:30
GW-637	OLF	11	0:29	01/24/95	14:24
GW-794	AGLLSF	11	0:26	01/24/95	15:45
ER BC 6		11	.	01/25/95	13:35
GW-795	AGLLSF	11	0:22	01/25/95	13:42
GW-047	BG	W	0:10	01/25/95	14:47

-----REGIME= BC Sampling Group= BC 7 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-621	EXP	10	0:45	03/29/95	10:00
GW-621 Dupe	EXP	10	0:45	03/29/95	10:00
GW-695	EXP	10	0:39	03/29/95	16:30
GW-703	EXP	7	3:20	03/29/95	19:20

APPENDIX D
Sampling Sequence, First Quarter 1995

-----Sampling Group= BC 7 (continued) -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-694	EXP	7	8:42	03/30/95	18:42
ER BC 7		7	.	03/30/95	19:05
GW-704	EXP	10	.	03/30/95	19:15
GW-706	EXP	10	9:36	03/31/95	18:06
ER BC 7		10	.	03/31/95	18:30

-----Sampling Group= BC 8 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-080	BG	W	0:20	03/25/95	9:30
GW-069	BG	W	0:45	03/25/95	11:00
GW-079	BG	10	0:12	03/26/95	8:46
GW-654	BG	10	0:07	03/26/95	10:09
GW-287	BG	10	0:04	03/26/95	12:26
GW-653	BG	7	0:25	03/27/95	13:43
GW-652	BG	7	0:30	03/27/95	14:38
GW-095	BG	10	3:47	03/27/95	16:12
GW-053	BG	10	0:07	03/28/95	15:07
ER BC 8		10	.	03/28/95	17:20
GW-061	BG	B	.	03/28/95	17:30
GW-061 Dupe	BG	B	.	03/28/95	17:30
ER BC 8		7	.	03/28/95	19:45
GW-627	BG	7	.	03/28/95	19:51

-----Sampling Group= BC 9 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-056	EXP	W	0:33	03/05/95	14:00

APPENDIX D
Sampling Sequence, First Quarter 1995

-----Sampling Group= BC 9 (continued) -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-057	EXP	W	.	03/05/95	14:29
GW-685	EXP	10	.	03/08/95	13:35
GW-683	EXP	10	2:38	03/09/95	14:53
GW-683 Dupe	EXP	10	2:38	03/09/95	14:53
ER BC 9		10	.	03/10/95	14:10
GW-684	EXP	10	2:34	03/10/95	14:21

-----Sampling Group= BC 10 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
NT-01	EXP	.	.	03/09/95	10:40
SS-1	EXP	.	.	03/09/95	11:00
BCK-11.97	EXP	.	.	03/09/95	11:20
BCK-00.63	EXP	.	.	03/09/95	13:15
BCK-04.55	EXP	.	.	03/09/95	13:45
SS-6	EXP	.	.	03/09/95	13:55
NT-02	EXP	.	.	03/09/95	14:06
SS-5	EXP	.	.	03/09/95	14:15
SS-4	EXP	.	.	03/09/95	14:23
BCK-09.40	EXP	.	.	03/09/95	14:25

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Sampling Sequence, Second Quarter 1995

-----Sampling Group= BC 2 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-317		SPI	4	0:39	06/21/95	13:09
GW-317	Dupe	SPI	4	0:39	06/21/95	13:09
GW-347		S3	4	0:11	06/21/95	14:45
GW-348		S3	4	1:11	06/26/95	10:36
GW-315		SPI	4	0:55	06/26/95	14:10
GW-828		OLF	4	.	06/27/95	11:05
ER BC 2			4	.	06/27/95	16:05
GW-829		OLF	4	1:10	06/27/95	16:10

-----Sampling Group= BC 3 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-800		OLF	10	0:23	05/31/95	13:08
GW-044		OLF	W	1:18	06/01/95	11:05
GW-043		OLF	W	0:06	06/01/95	11:30
GW-311		RS	10	0:02	06/06/95	13:01
GW-312		RS	10	0:03	06/06/95	14:15
GW-084		OLF	W	0:07	06/07/95	13:06
GW-064		OLF	10	0:07	06/07/95	14:15
GW-085		OLF	10	0:15	06/08/95	10:50
GW-537		OLF	10	0:25	06/08/95	13:40
GW-537	Dupe	OLF	10	0:25	06/08/95	13:40
ER BC 3			10	.	06/08/95	14:50

-----Sampling Group= BC 5 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-162		BG	6	1:57	05/31/95	12:05
GW-642		BG	6	0:15	06/02/95	11:05

APPENDIX D
Sampling Sequence, Second Quarter 1995

-----Sampling Group= BC 5 (continued) -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-372	BG	6	0:24	06/02/95	14:00
GW-373	BG	6	3:30	06/05/95	14:35
ER BC 5		6	.	06/05/95	15:35
GW-370	BG	6	0:20	06/05/95	15:40
GW-370 Dupe	BG	6	0:20	06/05/95	15:40
GW-040	BG	B	.	06/06/95	10:15
GW-042	BG	W	0:10	06/06/95	12:45

-----Sampling Group= BC 6 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-793	AGLLSF	4	0:28	06/17/95	10:42
GW-793 Dupe	AGLLSF	4	0:28	06/17/95	10:42
GW-363	OLF	4	1:10	06/17/95	13:00
GW-637	OLF	4	0:17	06/17/95	14:07
ER BC 6		4	.	06/18/95	8:30
GW-794	AGLLSF	4	0:22	06/18/95	10:06
GW-795	AGLLSF	4	0:18	06/18/95	10:53
GW-047	BG	4	0:13	06/18/95	12:39

-----Sampling Group= BC 8 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-079	BG	10	0:14	06/19/95	11:40
GW-080	BG	W	0:08	06/19/95	12:40
GW-654	BG	10	0:13	06/19/95	13:24
GW-287	BG	10	0:03	06/20/95	12:30
GW-653	BG	10	0:22	06/20/95	13:12

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Sampling Sequence, Second Quarter 1995

-----Sampling Group= BC 8 (continued) -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-652	BG	10	0:27	06/20/95	14:07
GW-095	BG	10	3:06	06/20/95	17:36
GW-095	Dupe BG	10	3:06	06/20/95	17:36
GW-627	BG	10	5:10	06/22/95	15:53
GW-069	BG	W	3:12	06/27/95	14:37
GW-053	BG	10	0:03	06/28/95	10:15
GW-061	BG	W	0:09	06/28/95	14:30
ER BC 8		10	.	06/28/95	14:45

-----Sampling Group= BC 10 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
SS-6W	EXP	.	.	05/23/95	12:48
SS-6.6K	EXP	.	.	05/23/95	14:45
SS-5.95K	EXP	.	.	05/23/95	15:05
SS-7	EXP	.	.	05/23/95	15:25
GCS1	EXP	.	.	05/23/95	15:50

-----Sampling Group= BCOU1 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
NT-1N	S3	.	.	05/03/95	9:50
TS	S3	.	.	05/03/95	9:53
MS1	S3	.	.	05/03/95	9:53
NT-1S	S3	.	.	05/03/95	10:00

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-----Sampling Group= BC 1 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-613	S3	2	0:44	07/24/95	10:14
GW-614	S3	2	2:07	07/24/95	12:57
GW-614 Dupe	S3	2	2:07	07/24/95	12:57
GW-712	EXP	4	.	07/24/95	13:05
GW-710	EXP	2	1:20	07/24/95	17:04
GW-713	EXP	4	.	07/27/95	12:08
GW-711	EXP	6	.	07/27/95	13:30
ER BC 1 Dupe		6	.	07/27/95	13:50
ER BC 1 Dupe		2	.	07/27/95	17:45
FB BC 1		4	.	07/29/95	8:20
GW-714	EXP	4	.	07/29/95	11:50
GW-715	EXP	4	0:20	07/29/95	13:35
ER BC 1		4	.	07/29/95	15:15
GW-276	S3	4	0:08	07/29/95	15:15
GW-115	S3	W	0:24	07/30/95	14:48
GW-115 Dupe	S3	W	0:26	08/03/95	12:54

-----Sampling Group= BC 2 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-317	SPI	2	0:42	08/15/95	12:00
GW-347	S3	2	0:06	08/15/95	15:30
GW-348	S3	2	1:33	08/21/95	10:48
GW-315	SPI	2	1:10	08/21/95	13:50
GW-828	OLF	2	2:17	08/24/95	12:45
GW-828 Dupe	OLF	2	2:17	08/24/95	12:45
GW-829	OLF	2	1:20	08/30/95	11:50
ER BC 2		.	.	08/30/95	13:00

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-----Sampling Group= BC 3 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-537	OLF	W	0:20	08/03/95	11:15
GW-044	OLF	W	0:35	08/04/95	11:20
GW-043	OLF	W	0:20	08/04/95	14:05
GW-311	RS	10	.	08/05/95	.
GW-084	OLF	W	0:13	08/05/95	9:30
GW-084 Dupe	OLF	W	0:13	08/05/95	9:30
GW-800	OLF	10	0:16	08/05/95	11:05
GW-312	RS	10	0:03	08/06/95	9:30
GW-064	OLF	10	0:08	08/06/95	11:00
ER BC 3		10	.	08/06/95	13:05
GW-085	OLF	10	0:19	08/06/95	13:11

-----Sampling Group= BC 4 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-723	EXP	2	3:30	09/13/95	15:33
GW-739	EXP	10	5:30	09/16/95	11:55
GW-739 Dupe	EXP	10	5:30	09/16/95	11:55
GW-740	EXP	10	2:30	09/17/95	11:43
GW-738	EXP	10	1:19	09/17/95	14:54
ER BC 4 Dupe	EXP	2	.	09/17/95	15:30
GW-724	EXP	10	2:20	09/24/95	13:52
GW-725	EXP	10	6:21	09/25/95	15:21
GW-736	EXP	10	2:00	09/26/95	12:25
ER BC 4	EXP	10	.	09/26/95	14:35
GW-737	EXP	10	1:42	09/26/95	14:42

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-----Sampling Group= BC 5 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-162		BG	W	0:40	08/03/95	10:50
GW-642		BG	10	0:20	08/07/95	12:30
GW-642	Dupe	BG	10	0:20	08/07/95	12:30
GW-372		BG	10	0:29	08/07/95	15:30
GW-373		BG	10	2:55	08/08/95	13:30
ER BC 5			10	.	08/08/95	15:10
GW-370		BG	10	0:13	08/08/95	15:15
GW-042		BG	W	0:04	08/09/95	15:35
GW-040		BG	W	0:37	08/10/95	12:10

-----Sampling Group= BC 6 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-363	Dupe	OLF	8	1:21	07/19/95	.
GW-793		AGLLSF	8	0:32	07/19/95	10:52
GW-793	Dupe	AGLLSF	8	0:32	07/19/95	10:52
GW-363		OLF	8	1:21	07/19/95	14:15
GW-637		OLF	8	0:26	07/19/95	15:19
GW-794		AGLLSF	8	0:23	07/24/95	10:53
ER BC 6			8	.	07/24/95	11:55
GW-795		AGLLSF	8	0:18	07/24/95	12:03
GW-047		BG	W	0:14	07/24/95	13:39

-----Sampling Group= BC 7 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-706		EXP	11	6:39	08/30/95	9:50
ER BC 7			11	.	08/30/95	10:10
GW-621		EXP	7	0:26	08/30/95	10:31

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Sampling Sequence, Third Quarter 1995

-----Sampling Group= BC 7 (continued) -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-695	EXP	7	0:21	08/30/95	12:15
GW-694	EXP	7	2:42	08/30/95	14:39
GW-703	EXP	7	3:20	08/30/95	17:00
GW-704	EXP	11	8:10	08/31/95	12:50
ER BC 7		11	.	08/31/95	13:00
GW-694 Dupe	EXP	7	2:42	08/31/95	14:39
ER BC 7		7	.	08/31/95	14:49

-----Sampling Group= BC 8 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-069	BG	W	1:50	08/15/95	14:45
GW-079	BG	8	0:10	09/18/95	12:50
GW-654	BG	8	0:10	09/18/95	13:50
GW-287	BG	8	0:04	09/18/95	15:15
GW-652	BG	8	0:31	09/19/95	10:01
GW-652 Dupe	BG	8	0:31	09/19/95	10:01
GW-095	BG	8	3:00	09/20/95	12:18
GW-653	BG	8	0:19	09/20/95	14:33
GW-080	BG	W	0:03	09/21/95	10:50
GW-061	BG	W	0:15	09/21/95	15:41
GW-627	BG	8	6:10	09/25/95	13:53
ER BC 8		8	.	09/25/95	14:50
GW-053	BG	8	0:03	09/25/95	15:00

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-----Sampling Group= BC 9 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-056	EXP	W	0:20	08/04/95	15:00
GW-685	EXP	4	6:00	08/05/95	9:00
GW-685 Dupe	EXP	4	6:00	08/05/95	9:00
GW-057	EXP	W	0:21	08/05/95	9:51
GW-683	EXP	4	2:36	08/06/95	12:36
ER BC 9		4	.	08/06/95	15:45
GW-684	EXP	4	2:42	08/06/95	15:52

-----Sampling Group= BC 10 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
NT-02	EXP	.	.	07/25/95	.
SS-1	EXP	.	.	07/25/95	.
BCK-00.63	EXP	.	.	07/25/95	7:30
BCK-04.55	EXP	.	.	07/25/95	7:47
SS-6	EXP	.	.	07/25/95	8:08
BCK-09.40	EXP	.	.	07/25/95	8:20
SS-5	EXP	.	.	07/25/95	8:31
SS-4	EXP	.	.	07/25/95	9:16
BCK-11.97	EXP	.	.	07/25/95	9:31
NT-01	EXP	.	.	07/25/95	10:06

-----Sampling Group= BC 11 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-346	S3	8	0:35	08/31/95	15:50
GW-346 Dupe	S3	8	0:35	08/31/95	15:50
GW-100	S3	W	0:23	09/06/95	11:13
GW-124	S3	8	3:00	09/16/95	11:25

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Sampling Sequence, Third Quarter 1995

-----Sampling Group= BC 11 (continued) -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-236	S3	8	0:13	09/16/95	12:33
GW-229	OLF	8	0:27	09/17/95	9:05
GW-228	OLF	8	1:11	09/17/95	12:36
ER BC 11		8	.	09/17/95	14:00
GW-066	OLF	B	1:10	09/27/95	11:30
GW-087	OLF	W	0:10	09/27/95	14:30

-----Sampling Group= BC 12 -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-291	BG	W	0:35	08/03/95	13:50
GW-014	BG	W	0:32	08/04/95	13:30
GW-290	BG	7	0:14	08/07/95	15:00
GW-290 Dupe	BG	7	.	08/07/95	15:00
GW-248	BG	7	0:28	08/08/95	12:00
GW-257	BG	7	0:08	08/08/95	14:00
GW-289	BG	7	0:20	08/08/95	15:00
ER BC 12		7	.	08/09/95	10:40
GW-288	BG	7	0:54	08/09/95	10:49
GW-046	BG	W	0:12	08/09/95	14:30

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-----Sampling Group= BC 2 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-315		SPI	W	1:50	12/07/95	11:38
GW-315	Dupe	SPI	W	1:50	12/07/95	11:38
GW-828		OLF	6	2:10	12/08/95	9:25
ER BC 2			6	.	12/10/95	13:40
GW-829		OLF	6	1:10	12/10/95	13:45

-----Sampling Group= BC 3 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-044		OLF	W	0:28	10/18/95	13:15
GW-044	Dupe	OLF	W	0:28	10/18/95	13:15
GW-043		OLF	W	0:04	10/18/95	16:00
GW-084		OLF	W	0:17	10/19/95	10:30
GW-537		OLF	W	0:43	10/25/95	10:02
GW-085		OLF	W	0:29	10/25/95	11:13
GW-311		RS	W	0:02	10/25/95	13:44

-----Sampling Group= BC 5 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-162		BG	11	2:40	10/10/95	10:00
GW-642		BG	11	0:17	10/10/95	11:15
GW-042		BG	W	0:08	10/11/95	11:50
GW-040		BG	W	0:07	10/11/95	14:15
GW-372		BG	W	1:30	10/12/95	12:00
GW-372	Dupe	BG	W	1:30	10/12/95	12:00
ER BC 5			11	.	10/12/95	15:55
GW-373		BG	11	3:00	10/12/95	16:00

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-----Sampling Group= BC 6 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-363		OLF	11	1:08	10/19/95	11:50
GW-363	Dupe	OLF	11	1:08	10/19/95	11:50
GW-793		AGLLSF	W	1:13	10/19/95	13:58
ER BC 6			11	.	10/23/95	9:30
GW-794		AGLLSF	W	0:53	10/24/95	11:00
GW-795		AGLLSF	W	0:30	10/24/95	13:48

-----Sampling Group= BC 8 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
GW-069		BG	W	2:17	12/07/95	14:37
GW-653		BG	8	0:21	12/08/95	10:41
GW-653	Dupe	BG	8	0:21	12/08/95	10:41
GW-079		BG	5	2:06	12/09/95	10:50
GW-080		BG	W	0:09	12/09/95	13:15
GW-654		BG	5	0:14	12/09/95	14:30
GW-287		BG	5	0:04	12/10/95	13:00
GW-627		BG	8	1:00	12/10/95	14:00
ER BC 8			8	.	12/10/95	15:00
GW-053		BG	8	0:03	12/10/95	15:06
ER BC 8			5	.	12/11/95	13:00
GW-095		BG	5	2:00	12/11/95	13:10

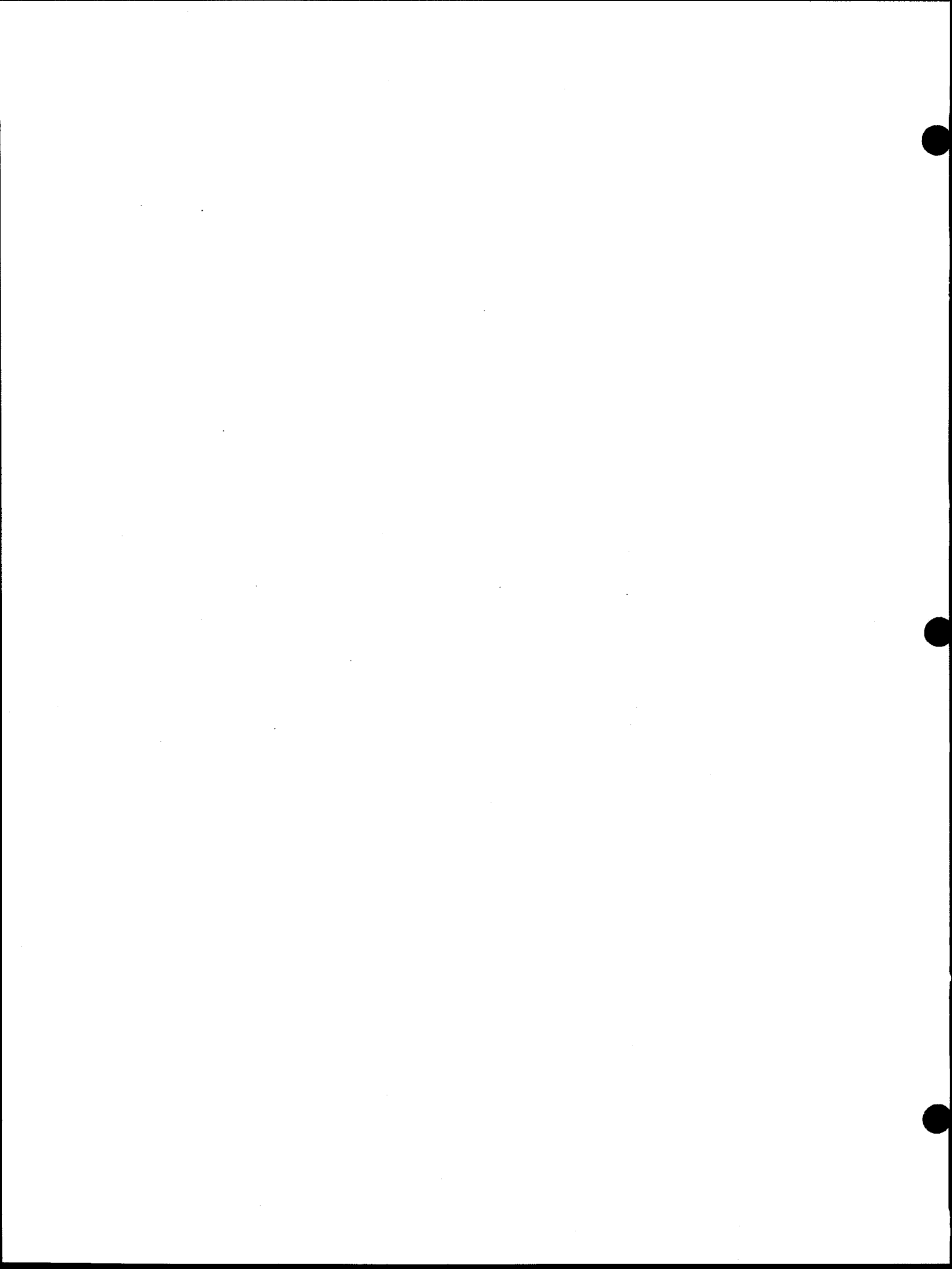
-----Sampling Group= BC 10 -----

Sample Identity		Location	Pump No.	Purge Time	Date Sampled	Time Sampled
SS-6.6	DRY	EXP	.	.	10/26/95	7:55
SS-6W		EXP	.	.	10/26/95	9:30
SS-5.95K		EXP	.	.	10/26/95	10:25

APPENDIX D
Sampling Sequence, Fourth Quarter 1995

-----Sampling Group= BC 10 (continued) -----

Sample Identity	Location	Pump No.	Purge Time	Date Sampled	Time Sampled
SS-7	EXP	.	.	10/26/95	10:50
GCS1	EXP	.	.	10/26/95	11:20



APPENDIX E

GROUNDWATER AND SURFACE WATER QUALITY DATA

EXPLANATION

SAMPLING POINT:

BCK	-	Bear Creek Kilometer
CWESTTOE	-	Burial Ground C-West Toe Seep
GCS-01	-	Grassy Creek Spring 01
GW	-	Monitoring Well
MS-1	-	Bear Creek Main Stem Headwaters (Station 1)
NT	-	Northern Tributary
SEEP 1	-	Burial Ground A-North Seep
SEEP 2	-	Burial Ground C-East Seep
SS	-	(Bear Creek) Spring Station
TS	-	Tankfarm Spring (Bear Creek Headwaters)

LOCATION:

AGLLSF	-	Above Grade Low-Level Storage Facility
B9714	-	Y-12 TSD Garage Facility (Building 9714)
BG	-	Bear Creek Burial Grounds WMA
EXP	-	Exit Pathway Monitoring Location
OLF	-	Oil Landfarm WMA
RS	-	Rust Spoil Area
S3	-	S-3 Site
SPI	-	Spoil Area I

ALL DATA:

. - Not analyzed or not reported.

ORGANIC COMPOUNDS:

All results in micrograms per liter (ug/L).

METALS, ANIONS, MISCELLANEOUS, AND RADIOCHEMICAL PARAMETERS:

General:

Bicarbonate and carbonate alkalinity reported as CaCO_3 .

<	-	Compound analyzed but not detected at the reported minimum attainable detection limit
DIS	-	Dissolved Concentration (Filtered Sample)
TOT	-	Total Concentration (Unfiltered Sample)
TDS	-	Total Dissolved Solids
TSS	-	Total Suspended Solids
Sp. Cond.	-	Specific Conductance

EXPLANATION (cont'd)

Method:

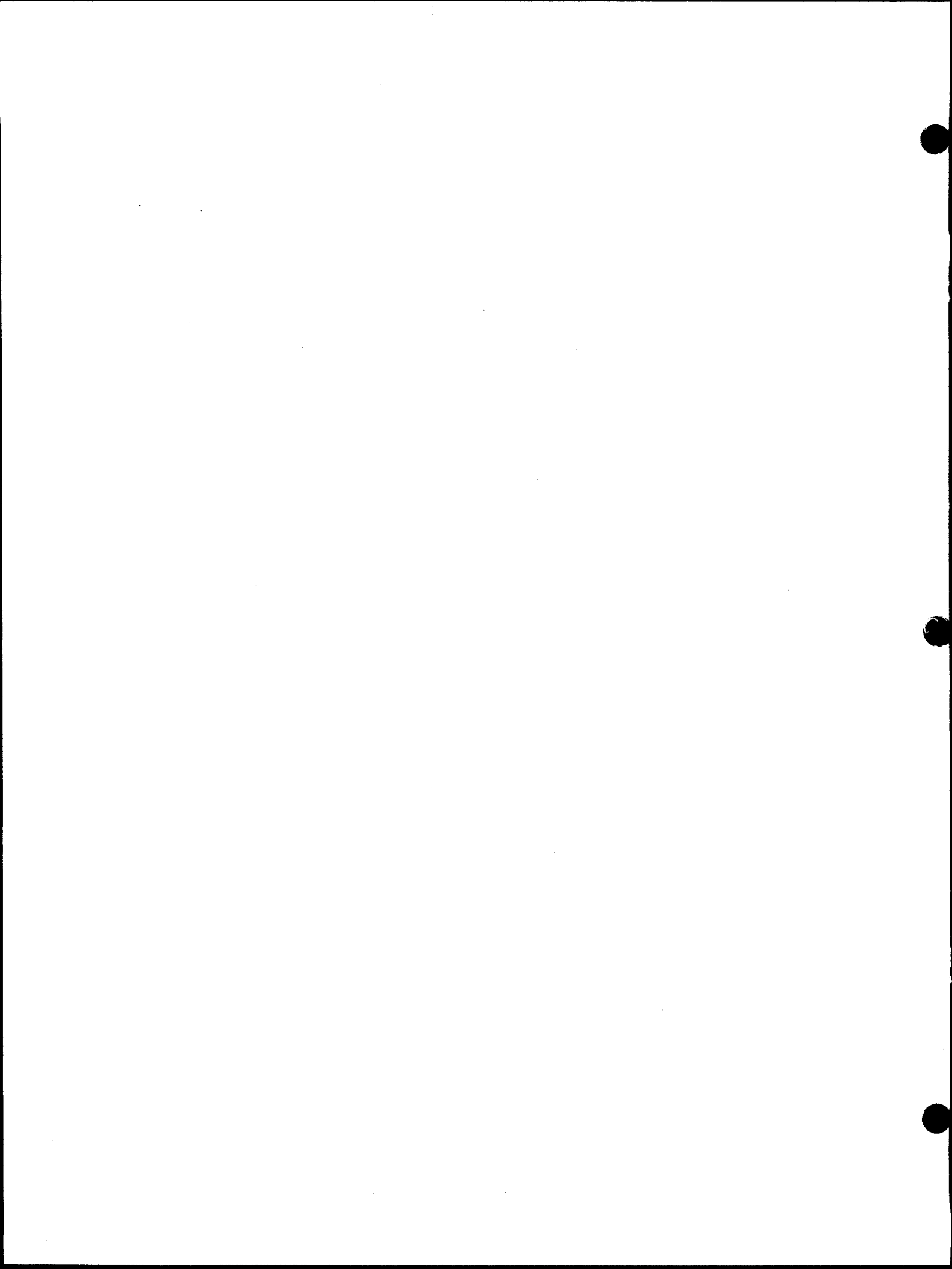
ICAP	-	Inductively Coupled Arc Plasma Spectroscopy
AAS	-	Atomic Absorption Spectroscopy
CVAA	-	Cold Vapor Atomic Absorption
PMS	-	Plasma Mass Spectroscopy

Units:

mg/L	-	milligrams per liter
ppm	-	parts per million
μmhos/cm	-	micromhos per centimeter
NTU	-	Nephelometric Turbidity Unit
mV	-	millivolts
pCi/L	-	picocuries per liter
Bq/L	-	Becquerels per liter
CE+/-	-	counting error (two standard deviations)
FT.-TOC	-	feet below top of casing
DEG. CENT.	-	degrees centigrade
FT. ABOVE MSL	-	feet above mean sea level

EXPLANATION (cont'd)

Analyte Class	Qualifier	Explanation
Radionuclides	J	Estimated value.
	A	Possible detector contamination.
	E	Result of analysis is less than MDA, confidence level is less than 95%.
	F	Result less than background.
	i	Tentatively identified isotope.
	*	Duplicate analysis outside control limits.
	C	Control analysis outside of control limits.
	D	Spike control limits do not apply, sample activity exceeds spike activity.
	N	Spike recovery not within limits.
	H	Daughter of uranium isotopes, reported for comparison purposes only.
	G	Gamma photopeak near MDA, poor curve fit.
Organics	J	Estimated value less than laboratory reporting limit.
	B	Compound also detected in the associated laboratory blank.
	U	Compound not detected.
	D	Compound identified at a secondary dilution factor.
	E	Concentration exceeds calibration range of instrument.
	s	Spike recovery not within limits.
ICP and ICP/MS Metals	d	Dilution required, reporting limits raised accordingly.
AAS Metals	s	Spike recovery not within limits.
	D	Sample contained matrix interferences, reporting limit adjusted.
Conductivity	L	Sample received with expired holding time.
	h	Analysis exceeded holding time.
Alkalinities	h	Analysis exceeded holding time.
Nitrate	h	Analysis exceeded holding time.
Sulfate	d	Dilution required, reporting limits raised accordingly.



APPENDIX E.1
TRACE METALS AND ANIONS



APPENDIX E.1

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APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-042 BG 02/01/95 DIS	GW-042 BG 02/01/95 TOT	GW-043 OLF 03/16/95 DIS	GW-043 OLF 03/16/95 TOT	GW-044 OLF 03/16/95 DIS	GW-044 OLF 03/16/95 TOT	GW-047 BG 01/25/95 DIS	GW-047 BG 01/25/95 TOT	GW-053 BG 03/28/95 DIS	GW-053 BG 03/28/95 TOT
METALS										
ALUMINUM	<0.02	<0.02	<0.02	0.91	<0.02	0.03	<0.02	0.61	0.035	0.17
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.13	0.13	0.017	0.021	<0.0003	0.25	0.027	0.037	0.23	0.23
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.015	0.017	0.022	0.036	0.03	0.024	0.0092	0.013	0.27	0.26
CADMIUM	0.013	0.038	<0.003	<0.003	<0.003	<0.003	0.0032	<0.003	<0.003	<0.003
CALCIUM	0.022	0.046	<0.002	<0.002	<0.002	<0.002	7.3	7.3	120	120
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	0.0091	0.017	<0.004	<0.004	<0.004	0.0048	0.0095	0.0048	<0.004	<0.004
IRON	1.1	0.94	0.013	0.76	<0.005	0.0084	<0.005	0.56	0.065	1
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
MAGNESIUM	4.1	3.8	3.4	3.4	3.1	3	0.96	1.1	14	14
MANGANESE	0.27	0.26	0.0013	0.015	<0.001	0.01	0.0026	0.016	0.08	0.094
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	0.025	0.038	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.021
POTASSIUM	2.1	1.9	0.77	1.2	0.98	1.4	1.3	1.2	2.3	2.3
SELENIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.058	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.006	<0.006	0.0061	<0.006	<0.006	<0.006	<0.006
SODIUM	3.4	3	7	7.1	5.5	5.3	3.3	3.2	7.8	7.8
STRONTIUM	0.016	0.015	0.036	0.035	0.078	0.076	0.02	0.21	0.41	0.43
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	0.00092	<0.0005 d	<0.0005 d	0.0018	0.0014
VANADIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	0.036	0.077	<0.002	0.0057	0.0053	0.0052	0.014	0.01	0.021	0.042
ANIONS										
ALKALINITY-HCO3	.	24	.	67	.	137	.	188	.	314
ALKALINITY-CO3	.	<1	.	<1	.	<1	.	<1	.	<1
CHLORIDE	.	2.2	.	2	.	2.2	.	1.8	.	33
FLUORIDE	.	0.2	.	<0.1	.	<0.1	.	<0.1	.	<0.1
NITRATE NITROGEN	.	0.32	.	<0.2	.	<0.2	.	0.57	.	0.76
SULFATE	.	6.6	.	9.2	.	7.2	.	1.3	.	25
TOTAL SUSPENDED SOLIDS	.	<1	.	<1	.	<1	.	7	.	9.5
TURBIDITY	.	2.2	.	16	.	0.3	.	9	.	6.1

APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-056 EXP 03/05/95	GW-056 DIS	GW-056 EXP 03/05/95	GW-056 DIS	GW-057 EXP 03/05/95	GW-057 DIS	GW-061 EXP 03/05/95	GW-061 DIS	GW-061 BG 03/28/95	GW-064 OLF 03/26/95	GW-064 DIS	GW-064 OLF 03/26/95	GW-064 TOT	GW-069 BG 03/25/95	GW-069 DIS	GW-069 TOT
METALS																
ALUMINUM	ICAP (MG/L)	<0.02	0.15	0.021	0.036	0.093	0.093	0.093	17	<0.02	100	34	0.032	0.065	7.8	0.032
ANTHONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.12	0.13	0.087	0.087	0.06	0.06	0.06	0.17	0.047	0.047	0.25	0.4	0.38	0.38	0.4
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0007	0.0003	0.0003	0.0028	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.021	0.017	0.017	0.017	0.013	0.013	0.013	0.072	0.023	0.023	0.072	0.11	0.13	0.13	0.11
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	<0.002	<0.002	94	94	93	85	85	86	100	100	110	7.1	7.8	7.8	7.1
CALCIUM	ICAP (MG/L)	96	98	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.041	<0.01	<0.01	<0.01	<0.01
CHROMIUM	ICAP (MG/L)	<0.01	0.023	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.025	<0.01	<0.01	<0.01	<0.01
CHROMIUM	AAS (MG/L)	<0.01	0.031	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.042	<0.01	<0.01	<0.01	<0.01
COBALT	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.005	0.025	<0.005	<0.005	<0.005	<0.005
COPPER	ICAP (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.01	<0.004	<0.004	0.042	<0.004	<0.004	<0.004	<0.004
IRON	ICAP (MG/L)	0.4	1.1	<0.005	<0.005	0.0057	0.065	0.065	13	<0.005	<0.005	40	0.031	0.063	0.063	0.031
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.051	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	<0.004	<0.004	18	18	18	11	11	13	16	16	20	5.8	5.8	5.8	6
MAGNESIUM	ICAP (MG/L)	19	18	0.014	0.014	0.017	0.019	0.019	2.2	<0.001	<0.001	1.5	<0.001	<0.001	<0.001	<0.001
MANGANESE	ICAP (MG/L)	0.38	0.4	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	CVA (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	ICAP (MG/L)	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	0.018	0.064	<0.01	<0.01	<0.01	<0.01	<0.01	0.022	<0.01	<0.01	0.052	<0.01	<0.01	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	1.2	1.9	1.2	1.2	1.1	1.8	1.8	6.1	2.5	2.5	8.1	4.9	4.4	4.4	4.9
SELENIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)	77	79	68	68	68	7.5	7.5	6.9	4.6	4.6	4.7	70	69	69	70
STRONTIUM	ICAP (MG/L)	0.15	0.16	0.16	0.16	0.16	0.14	0.14	0.2	0.11	0.11	0.14	1	0.96	0.96	1
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	0.0032	0.0036	0.0015	0.0016	0.0016	0.039	0.039	0.04	0.0006	0.0006	0.0011	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.019	<0.005	<0.005	0.053	<0.005	<0.005	<0.005	<0.005
ZINC	ICAP (MG/L)	0.0038	0.064	0.013	0.0097	0.0097	0.0053	0.0053	0.041	<0.002	<0.002	0.16	0.0044	0.005	0.005	0.0044
ANIONS																
ALKALINITY-HCO3	(MG/L)	273	262	262	262	262	262	262	187	301	301	301	117	117	117	117
ALKALINITY-CO3	(MG/L)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	18	18	18	18
CHLORIDE	(MG/L)	135	113	113	113	113	113	113	12	10	10	10	45	45	45	45
FLUORIDE	(MG/L)	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
NITRATE NITROGEN	(MG/L)	0.52	0.49	0.49	0.49	0.49	0.49	0.49	11	5	5	5	<0.2	<0.2	<0.2	<0.2
SULFATE	(MG/L)	29	29	29	29	29	29	29	21	20	20	20	1.6	1.6	1.6	1.6
TOTAL SUSPENDED SOLIDS	(MG/L)	2	<1	<1	<1	<1	<1	<1	228	770	770	770	<1	<1	<1	<1
TURBIDITY	(NTU)	4.3	1.2	1.2	1.2	1.2	1.2	1.2	240	1350	1350	1350	0.7	0.7	0.7	0.7

APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-079 BG 03/26/95 DIS	GW-079 BG 03/26/95 TOT	GW-080 BG 03/25/95 DIS	GW-080 BG 03/25/95 TOT	GW-084 OLF 03/23/95 DIS	GW-084 OLF 03/23/95 TOT	GW-085 OLF 03/26/95 DIS	GW-085 OLF 03/26/95 TOT	GW-095 BG 03/27/95 DIS	GW-095 BG 03/27/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	0.021	0.068	10	<0.02	0.76	<0.02	3.1	0.025	<0.02
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.15	0.015	0.15	0.16	0.17	0.7	0.72	0.025	0.026
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	0.00055	<0.0003	0.00078	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.021	0.047	0.047	0.052	0.026	0.023	0.023	1	1
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	ICAP (MG/L)	36	3.2	3.7	51	50	260	260	1.3	1.3
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	AAS (MG/L)	<0.01	<0.01	0.037	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CORALIT	ICAP (MG/L)	<0.005	<0.005	0.0083	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	ICAP (MG/L)	<0.004	0.0076	0.025	0.005	0.0041	<0.004	<0.004	<0.004	<0.004
IRON	ICAP (MG/L)	0.017	0.079	11	0.0058	0.77	0.0085	2.5	0.0058	0.0067
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	<0.004	<0.004	0.0094	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
MAGNESIUM	ICAP (MG/L)	3.5	3.4	5.4	3.8	3.9	17	17	0.46	0.46
MANGANESE	ICAP (MG/L)	0.042	0.049	0.088	0.063	0.082	0.0019	0.073	0.0026	<0.001
MERCURY	CVA (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	1.3	1.5	4.8	0.92	1.6	2.3	2.9	2	1.9
SELENIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)	<0.006	<0.006	0.007	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)	4.5	6.8	6.6	5.7	5.6	10	11	130	120
STRONTIUM	ICAP (MG/L)	0.13	0.013	0.029	0.079	0.079	0.62	0.62	0.098	0.098
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)	<0.005	<0.005	0.012	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	ICAP (MG/L)	0.003	0.0081	0.041	0.0071	0.004	<0.002	0.0083	0.0049	0.0072
ANIONS										
ALKALINITY-HCO3	(MG/L)	109	.	27	.	158	.	146	.	226
ALKALINITY-CO3	(MG/L)	<1	.	<1	.	<1	.	<1	.	32
CHLORIDE	(MG/L)	1.6	.	1.7	.	1.9	.	9.1	.	2.4
FLUORIDE	(MG/L)	<0.1	.	<0.1	.	0.11	.	<0.1	.	0.56
NITRATE NITROGEN	(MG/L)	<0.2	.	<0.2	.	<0.2	.	180	.	<0.2
SULFATE	(MG/L)	7	.	11	.	8.1	.	5.2	.	8.5
TOTAL SUSPENDED SOLIDS	(MG/L)	<1	.	268	.	18	.	<1	.	<1
TURBIDITY	(NTU)	0.3	.	400	.	4.9	.	42	.	0.2

APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-115 S3 01/14/95 DIS	GW-115 S3 01/14/95 TOT	GW-162 BG 01/26/95 DIS	GW-162 BG 01/26/95 TOT	GW-276 S3 01/24/95 DIS	GW-276 S3 01/24/95 TOT	GW-287 BG 03/26/95 DIS	GW-287 BG 03/26/95 TOT	GW-311 RS 03/25/95 DIS	GW-311 RS 03/25/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	0.76	<0.02	0.19	16	17	0.34	19	<0.02	<0.02
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.22	0.12	0.24	0.64	0.66	0.081	0.17	0.021	0.02
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	0.00045	0.011	0.011	<0.0003	0.001	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.019	0.091	0.052	0.17	0.068	0.084	0.1	0.044	0.0096
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	0.059	0.058	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	<0.002	<0.002	<0.002	0.049 s	0.053				
CALCIUM	ICAP (MG/L)	73	20	27	150	150	27	30	71	75
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	AAS (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01				
COBALT	ICAP (MG/L)	<0.005	<0.005	<0.005	0.22	0.23	<0.005	0.0083	<0.005	<0.005
COPPER	ICAP (MG/L)	0.0072	0.0061	<0.004	0.034	0.036	0.0068	0.02	0.0074	0.0044
IRON	ICAP (MG/L)	0.26	0.0078	7.4	0.034	0.36	0.29	9.4	<0.005	0.049
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004				
MAGNESIUM	ICAP (MG/L)	11	4.4	4.7	28	28	4.8	9.4	4.9	5.6
MANGANESE	ICAP (MG/L)	0.32	0.023	0.094	11	11	0.12	0.37	0.0074	0.0044
MERCURY	CVA (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	<0.01	<0.01	0.64	0.64	0.036	0.049	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	2.1	3.8	3.4	13	13	1.5	2.5	1.9	2
SELENIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)	9.7	15	15	92	93	5.7	5.4	2.3	2.4
STRONTIUM	ICAP (MG/L)	0.12	0.62	0.75	0.37	0.36	0.078	0.12	0.068	0.07
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	<0.0005 d	<0.0005 d	<0.0005 d	1.8	1.6	<0.0005 d	0.004	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0067	<0.005	<0.005
ZINC	ICAP (MG/L)	0.026	0.011	0.0032	0.2	0.21	0.026	0.098	0.0044	0.0092
ANIONS										
ALKALINITY-HCO3	(MG/L)	228	97	97		<1		81		223
ALKALINITY-CO3	(MG/L)	<1	<1	<1		<1		<1		<1
CHLORIDE	(MG/L)	5.1	3.6	3.6		248		3.7		2.8
FLUORIDE	(MG/L)	0.1	<0.1	<0.1		6.7		<0.1		<0.1
NITRATE	(MG/L)	0.62	<0.2	<0.2		151		0.42		0.78
SULFATE	(MG/L)	17	8.2	8.2		22		6.6		3.6
TOTAL SUSPENDED SOLIDS	(MG/L)	2	41	41		9		49		<1
TURBIDITY	(NTU)	0.3	60	60		5.5		320		0.9

APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-312 RS 03/25/95 DIS	GW-312 RS 03/25/95 TOT	GW-315 SP1 03/15/95 DIS	GW-315 SP1 03/15/95 TOT	GW-317 SP1 03/14/95 DIS	GW-317 SP1 03/14/95 TOT	GW-347 S3 03/15/95 DIS	GW-347 S3 03/15/95 TOT	GW-348 S3 03/15/95 DIS	GW-348 S3 03/15/95 TOT
METALS										
ALUMINUM	2.5	3.2	<0.02	<0.02	<0.02	<0.02	<0.02	1	<0.02	<0.02
ANTHONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.011	0.014	0.042	0.044	0.021	0.02	0.0091	0.01	0.095	0.097
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00031	<0.0003	<0.0003
BORON	0.0072	<0.004	0.025	0.0092	0.075	0.0076	0.011	0.012	0.043	0.043
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CALCIUM	72	93	93	95	51	51	29	23	85	88
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COBALT	0.004	<0.004	0.0058	<0.004	0.0084	<0.004	0.013	0.012	<0.004	<0.004
COPPER	<0.005	0.013	<0.005	0.0054	0.33	0.041	0.04	2.4	0.006	0.041
IRON	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	0.043	0.049	14	14	23	23	1.9	1.8	18	19
MAGNESIUM	<0.001	<0.001	<0.001	<0.001	0.01	0.0043	0.0029	0.039	<0.001	<0.001
MANGANESE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	0.036	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	7.2	7.9	1.9	1.9	0.81	0.7	2.8	3.1	1.3	1.4
POTASSIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SELENIUM	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SILVER	6.5	6.1	2.5	2.5	4.8	6.6	0.77	0.83	3.5	3.5
SODIUM	0.22	0.28	0.13	0.13	0.045	0.042	0.026	0.021	0.1	0.11
STRONTIUM	<0.0005 d	<0.0005 d	0.0011	<0.001	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
THORIUM	0.01	0.012	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
URANIUM	0.0032	<0.002	0.005	0.01	0.028	0.014	0.01	0.031	0.006	0.0067
VANADIUM										
ZINC										
ANIONS										
ALKALINITY-HCO3		<1		261		219		70		242
ALKALINITY-CO3		46		<1		<1		<1		<1
CHLORIDE		1.9		4.1		2.1		1.5		8.8
FLUORIDE		0.13		<0.1		<0.1		<0.1		0.12
NITRATE		0.74		3.4		0.67		0.51		8.2
NITROGEN		4.5		18		8.4		1.2		7
SULFATE										
TOTAL SUSPENDED SOLIDS		<1		<1		<1		4.5		<1
TURBIDITY		0.5		0.4		1		38		0.6

APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-363 OLF 01/23/95 DIS	GW-363 OLF 01/23/95 TOT	GW-370 BG 02/01/95 DIS	GW-370 BG 02/01/95 TOT	GW-372 BG 01/31/95 DIS	GW-372 BG 01/31/95 TOT	GW-373 BG 01/31/95 DIS	GW-373 BG 01/31/95 TOT	GW-537 OLF 03/26/95 DIS	GW-537 OLF 03/26/95 TOT
METALS										
ALUMINUM	ICAP (NG/L)	0.63	0.025	0.96	<0.02	0.21	<0.02	0.35	0.036	<0.02
ANTIMONY	ICAP (NG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (NG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BERYLLIUM	ICAP (NG/L)	0.028	0.068	0.076	0.067	0.068	0.03	0.045	2.4	2.4
BORON	ICAP (NG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
CADMIUM	ICAP (NG/L)	0.29	0.13	0.029	0.047	0.015	0.17	0.22	0.04	0.0064
CALCIUM	AAS (NG/L)	<0.003	<0.003	<0.003	<0.002	<0.002	<0.002	<0.002	<0.003	<0.003
CHROMIUM	ICAP (NG/L)	3.7	27	26	59	59	1.3	1.4	1000	1000
CHROMIUM	ICAP (NG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	ICAP (NG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	ICAP (NG/L)	0.0047	<0.004	<0.004	<0.004	<0.004	<0.004	0.0048	0.0059	<0.004
IRON	ICAP (NG/L)	0.082	<0.005	0.59	<0.005	0.85	0.059	2.1	<0.005	0.0076
LEAD	ICAP (NG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (NG/L)	1	2.6	2.7	10	10	<0.004	<0.004	68	68
MAGNESIUM	ICAP (NG/L)	0.0016	0.0082	0.012	0.022	0.027	0.011	0.18	0.0019	0.0018
MANGANESE	ICAP (NG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	CVA (NG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	ICAP (NG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (NG/L)	2	1.1	1.8	2.4	2.6	1.4	1.8	3	3.1
POTASSIUM	ICAP (NG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SELENIUM	ICAP (NG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SILVER	ICAP (NG/L)	97	11	11	9.5	9.6	110	110	33	33
SODIUM	ICAP (NG/L)	0.072	0.05	0.05	0.18	0.17	0.056	0.062	2.8	2.8
STRONTIUM	ICAP (NG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
THORIUM	ICAP (NG/L)	<0.0005 d	<0.0005 d	0.00079	0.00054	<0.0005 d	<0.0005 d	<0.0005 d	0.0014	0.0014
URANIUM	ICAP (NG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	ICAP (NG/L)	0.0053	0.005	0.0098	<0.002	0.005	<0.002	0.0084	0.0022	<0.002
ZINC	ICAP (NG/L)									
ANIONS										
ALKALINITY-HCO3	(NG/L)	204		81		179		200		276
ALKALINITY-CO3	(NG/L)	28		<1		<1		22		<1
CHLORIDE	(NG/L)	1.6		2		2.6		2.3		34
FLUORIDE	(NG/L)	0.2		0.1		0.2		1.6		<0.1
NITRATE	(NG/L)	0.39		0.34		<0.2		0.52		760
NITROGEN	(NG/L)	7.1		11		31		30		3.9
SULFATE	(NG/L)									
TOTAL SUSPENDED SOLIDS	(NG/L)	24		53		2		4		<1
TURBIDITY	(NTU)	16		21		4.5		12		1

APPENDIX E-1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-613 S3 01/11/95 DIS	GW-613 S3 01/11/95 TOT	GW-614 S3 01/11/95 DIS	GW-614 S3 01/11/95 TOT	GW-621 EXP 03/29/95 DIS	GW-621 EXP 03/29/95 TOT	GW-627 BG 03/28/95 DIS	GW-627 BG 03/28/95 TOT	GW-637 OLF 01/24/95 DIS	GW-637 OLF 01/24/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	0.065	<0.02	0.16	0.04	1.6	<0.02	0.064	<0.02	0.19
ANTHONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.059	0.15	0.15	0.019	0.028	0.038	0.043	0.14	0.15
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.016	0.022	0.022	0.023	0.019	0.49	0.56	0.038	0.034
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0032
CADMIUM	AAS (MG/L)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.003	<0.003	<0.003	0.0032
CALCIUM	ICAP (MG/L)	30	48	48	52	53	0.89	0.9	74	80
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	0.041	<0.01	<0.01	<0.01	<0.01
CHROMIUM	AAS (MG/L)	<0.01	<0.01	<0.01	<0.01	0.041	<0.01	<0.01	<0.01	<0.01
COBALT	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0055	<0.005
COPPER	ICAP (MG/L)	0.0053	<0.004	<0.004	<0.004	0.0053	<0.004	<0.004	<0.004	<0.004
IRON	ICAP (MG/L)	0.0056	0.048	0.067	<0.005	1.4	0.012	0.35	<0.005	0.82
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
MAGNESIUM	ICAP (MG/L)	2.8	9.5	9.5	9.2	9.4	0.21	0.2	6	6.2
MANGANESE	ICAP (MG/L)	<0.001	0.014	0.013	<0.001	0.093	0.0016	0.0073	0.022	0.03
MERCURY	CVAA (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	0.035	<0.01	<0.01	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	0.82	1.4	1.8	2.1	2.6	1.6	1.5	2.5	2
SELENIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)	3.5	9.7	9.7	2.5	2.5	310	310	2.8	2.7
STRONTIUM	ICAP (MG/L)	0.047	0.045	0.56	0.064	0.066	0.074	0.075	0.18	0.19
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	<0.0005 d	<0.0005 d	<0.0005 d	0.0023	0.0024	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	ICAP (MG/L)	0.0093	0.0069	0.002	0.0044	0.011	0.0037	0.016	0.003	0.013
ANIONS										
ALKALINITY-HCO3	(MG/L)	89	.	168	.	165	.	497	.	214
ALKALINITY-CO3	(MG/L)	<1	.	<1	.	<1	.	<1	.	<1
CHLORIDE	(MG/L)	2	.	1.7	.	3.8	.	30	.	2.9
FLUORIDE	(MG/L)	0.1	.	0.1	.	<0.1	.	5.4	.	<0.1
NITRATE	(MG/L)	0.84	.	<0.2	.	3.6	.	<0.2	.	<0.2
SULFATE	(MG/L)	5.5	.	11	.	3.6	.	32	.	7.1
TOTAL SUSPENDED SOLIDS	(MG/L)	4	.	12	.	11	.	<1	.	3
TURBIDITY	(NTU)	1.7	.	2.7	.	27	.	0.5	.	4.4

APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-642 BG 01/31/95 DIS	GW-642 BG 01/31/95 TOT	GW-652 BG 03/27/95 DIS	GW-652 BG 03/27/95 TOT	GW-653 BG 03/27/95 DIS	GW-653 BG 03/27/95 TOT	GW-654 BG 03/26/95 DIS	GW-654 BG 03/26/95 TOT	GW-683 EXP 03/09/95 DIS	GW-683 EXP 03/09/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	0.52	<0.02	1.6	<0.02	1.8	<0.02	1	<0.02	0.07
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.15	0.15	0.16	0.16	0.16	0.089	0.13	0.042	0.043
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.034	0.033	0.033	0.033	0.033	0.074	0.06	0.064	0.016
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	ICAP (MG/L)	10	80	82	82	2.4	15	16	24	23
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	AAS (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	ICAP (MG/L)	<0.004	<0.004	0.0053	0.0053	<0.004	<0.004	<0.004	<0.004	<0.004
IRON	ICAP (MG/L)	3.3	5.3	1.7	1.7	0.034	0.074	2.2	<0.005	0.025
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
MAGNESIUM	ICAP (MG/L)	7.8	6.2	6.2	6.2	1.1	3.9	4.1	11	10
MANGANESE	ICAP (MG/L)	1.8	<0.001	0.049	0.049	0.0026	0.11	0.48	<0.001	0.0018
MERCURY	CVAA (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	2.4	2.5	3	3	<0.6	1.3	2	1.5	2.3
SELENIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)	8	1	0.99	0.99	2.7	29	30	1.9	1.9
STRONTIUM	ICAP (MG/L)	0.028	0.16	0.15	0.15	0.018	0.2	0.2	0.028	0.029
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	ICAP (MG/L)	0.0076	0.024	0.0097	0.0097	0.0084	0.0032	0.013	0.021	0.0062
ANIONS										
ALKALINITY-HCO3	(MG/L)	68	206	206	206	13	117	117	108	108
ALKALINITY-CO3	(MG/L)	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHLORIDE	(MG/L)	2.3	4.1	4.1	4.1	1.8	1.8	1.8	3.4	3.4
FLUORIDE	(MG/L)	0.4	<0.1	<0.1	<0.1	<0.1	0.26	0.26	<0.1	<0.1
NITRATE NITROGEN	(MG/L)	<0.2	0.47	0.47	0.47	<0.2	0.42	0.42	1.3	1.3
SULFATE	(MG/L)	11	7.2	7.2	7.2	2.1	12	12	5	5
TOTAL SUSPENDED SOLIDS	(MG/L)	5	13	13	13	178	14	14	1	1
TURBIDITY	(NTU)	6.6	58	58	58	39	31	31	3	3

APPENDIX E-1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-684 EXP 03/10/95 DIS	GW-684 EXP 03/10/95 TOT	GW-685 EXP 03/08/95 DIS	GW-685 EXP 03/08/95 TOT	GW-694 EXP 03/30/95 DIS	GW-694 EXP 03/30/95 TOT	GW-695 EXP 03/29/95 DIS	GW-695 EXP 03/29/95 TOT	GW-703 EXP 03/29/95 DIS	GW-703 EXP 03/29/95 TOT
METALS										
ALUMINUM	0.026	0.026	<0.02	0.14	0.056	0.045	0.028	1.7	<0.02	0.024
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.067	0.067	0.1	0.11	0.12	0.12	0.025	0.032	0.069	0.089
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00032	<0.0003	<0.0003
BORON	0.046	0.046	0.068	0.035	0.17	0.19	0.053	0.049	0.099	0.11
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CALCIUM	33	33	85	85	90	88	35	41	68	70
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
CHROMIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COBALT	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.007	0.0044	0.0055	0.0042
COPPER	<0.005	<0.005	<0.005	2.1	0.24	0.55	0.014	0.89	<0.005	6.8
IRON	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	12	12	25	25	19	18	17	19	31	31
MAGNESIUM	0.0045	0.0045	0.12	0.17	0.073	0.074	0.0016	0.0061	0.065	0.16
MANGANESE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	9.2	9.2	2.1	1.5	2.6	2.8	4.5	4.1	3	3.1
POTASSIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SELENIUM	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SILVER	4.4	4.4	27	26	13	13	34	28	11	11
SODIUM	0.075	0.075	0.12	0.12	0.23	0.23	0.053	0.061	0.24	0.25
STRONTIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
THORIUM	0.012	0.011	0.0056	0.0059	0.13	0.13	0.0014	0.0024	0.0031	0.0069
URANIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	0.0047	0.0047	0.0034	0.01	0.01	0.0083	0.011	0.019	0.036	0.01
ZINC										
ANIONS										
ALKALINITY-HCO3		130		296		220		196		213
ALKALINITY-CO3		<1		<1		<1		<1		<1
CHLORIDE		10		47		22		8.4		21
FLUORIDE		0.1		<0.1		0.4		0.1		0.14
NITRATE		2.9		2.4		20		8.5		22
NITROGEN		7.1		21		24		9.5		22
SULFATE										
TOTAL SUSPENDED SOLIDS		<1		10		<1		82		<1
TURBIDITY		7		28		3.1		40		5.4

APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GH-704 EXP 03/30/95 DIS	GH-704 EXP 03/30/95 TOT	GH-706 EXP 03/31/95 DIS	GH-706 EXP 03/31/95 TOT	GH-710 EXP 01/15/95 DIS	GH-710 EXP 01/15/95 TOT	GH-711 EXP 01/13/95 DIS	GH-711 EXP 01/13/95 TOT	GH-712 EXP 01/13/95 DIS	GH-712 EXP 01/13/95 TOT
METALS										
ALUMINUM	0.058	0.036	0.03	0.047	0.024	<0.02	<0.2 d	<0.2 d	<0.02	<0.02
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5 d	<0.5 d	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5 d	<0.5 d	<0.05	<0.05
BARIUM	0.076	0.082	0.1	0.1	0.007	0.0067	0.01	0.012	0.049	0.05
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.003 d	<0.003 d	<0.0003	<0.0003
BORON	0.068	0.071	0.099	0.11	0.26	0.25	1.3	1.3	0.13	0.11
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.03 d	<0.03 d	<0.003	<0.003
CADMIUM	58	58	76	73	530	530	<0.002	<0.002	<0.002	<0.002
CALCIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1 d	<0.1 d	<0.01	<0.01
CHROMIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01
CHROMIUM	0.0041	0.02	<0.004	0.05	0.0048	0.006	<0.05 d	<0.05 d	<0.005	<0.005
COBALT	0.053	2.7	<0.005	0.073	12	12	<0.04 d	<0.04 d	0.0061	0.0054
COPPER	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5 d	<0.5 d	<0.05	<0.05
IRON	27	28	17	16	180	180	<0.004	<0.004	<0.004	<0.004
LEAD	0.016	0.025	0.0026	0.0032	0.32	0.29	220	230	35	35
MAGNESIUM	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.028	0.031	0.011	0.011
MANGANESE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1 d	<0.1 d	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1 d	<0.1 d	<0.01	<0.01
NICKEL	1.8	1.9	3.2	3.5	11	11	<0.1 d	<0.1 d	<0.01	<0.01
POTASSIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5 d	<0.5 d	<0.05	<0.05
SELENIUM	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.06 d	<0.06 d	<0.006	<0.006
SILVER	11	11	13	13	230	220	13	14	20	21
SODIUM	0.37	0.37	0.2	0.2	7.8	7.8	<2 d	<2 d	1.6	1.6
STRONTIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
THORIUM	0.001	0.0011	0.077	0.078	<0.005	<0.005	<0.05 d	<0.05 d	<0.005	<0.005
URANIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.02 d	<0.02 d	<0.002	<0.002
VANADIUM	0.0059	0.014	0.0041	0.19	<0.002	<0.002				
ZINC										
ANIONS										
ALKALINITY-HCO3		196		206		129		153		182
ALKALINITY-CO3		<1		<1		<1		<1		<1
CHLORIDE		23		25		370		1769		20
FLUORIDE		0.2		0.3		1.5		1.7		0.6
NITRATE		16		16		<0.2		<0.2		0.77
NITROGEN		20		17		1892		1799		168
SULFATE										
TOTAL SUSPENDED SOLIDS		3		<1		20		5		<1
TURBIDITY		13		0.5		50		25		7.4

APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-713 EXP 01/14/95 DIS	GW-713 EXP 01/14/95 TOT	GW-714 EXP 01/14/95 DIS	GW-714 EXP 01/14/95 TOT	GW-715 EXP 01/14/95 DIS	GW-715 EXP 01/14/95 TOT	GW-723 EXP 02/20/95 DIS	GW-723 EXP 02/20/95 TOT	GW-724 EXP 02/19/95 DIS	GW-724 EXP 02/19/95 TOT
METALS										
ALUMINUM	<0.02	<0.02	<0.02	0.077	<0.02	0.23	<0.02	<0.02	0.022	<0.02
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIIUM	0.047	0.048	0.064	0.068	0.069	0.07	0.069	0.067	0.16	0.17
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.086	0.089	0.075	0.091	0.033	0.03	0.069	0.042	0.066	0.12
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	60	61	56	57	84	84	68	67	89	89
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	0.0066	0.0069	0.0054	0.011	<0.004	0.0065	<0.004	<0.004	0.0071	<0.004
IRON	0.6	1	0.016	3.3	<0.005	0.46	0.0056	0.27	0.048	0.28
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
MAGNESIUM	28	28	21	22	16	16	27	26	38	38
MANGANESE	0.011	0.013	0.0079	0.02	<0.001	0.048	0.0014	0.0061	0.017	0.018
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	2.8	2.7	1.5	1.4	2.3	2.3	2.4	2.8	2.4	2.4
SELENIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	14	14	3.7	3.7	10	10	8.8	8.3	23	23
STRONTIUM	1.7	1.6	0.2	0.21	0.1	0.1	0.89	0.83	1.2	1.2
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	0.0025	0.0027	0.00096	0.001	0.003	0.003	<0.0005 d	<0.0005 d
VANADIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	<0.002	0.0088	0.0036	0.0081	0.0051	0.0072	<0.002	<0.002	<0.002	0.0033
ANIONS										
ALKALINITY-HCO3	.	183	.	196	.	268	.	216	.	205
ALKALINITY-CO3	.	<1	.	<1	.	<1	.	<1	.	<1
CHLORIDE	.	13	.	8.7	.	20	.	11	.	54
FLUORIDE	.	0.6	.	0.2	.	<0.1	.	0.3	.	0.2
NITRATE NITROGEN	.	0.62	.	4.3	.	1	.	16	.	41
SULFATE	.	102	.	23	.	4.1	.	33	.	25
TOTAL SUSPENDED SOLIDS	.	2	.	18	.	2	.	<1	.	<1
TURBIDITY	.	2	.	65	.	5	.	3	.	1.5

APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-725 EXP 02/28/95 DIS	GW-725 EXP 02/28/95 TOT	GW-736 EXP 02/28/95 DIS	GW-736 EXP 02/28/95 TOT	GW-737 EXP 03/01/95 DIS	GW-737 EXP 03/01/95 TOT	GW-738 EXP 02/18/95 DIS	GW-738 EXP 02/18/95 TOT	GW-739 EXP 02/17/95 DIS	GW-739 EXP 02/17/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	0.025	0.043	<0.02	<0.02	0.025	<0.02	0.68	0.02	<0.02
ANTHONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.27	0.2	0.21	0.21	0.21	0.049	0.05	0.044	0.046
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.051	0.036	0.061	0.061	0.13	0.048	0.033	0.047	0.019
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	160	150	150	150	140	110	110	56	57
CALCIUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CHROMIUM	AAS (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.0054	<0.004
COBALT	ICAP (MG/L)	0.76	0.015	<0.005	<0.005	0.062	<0.005	0.57	0.014	3.2
COPPER	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
IRON	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	27	21	21	21	21	24	24	27	27
MAGNESIUM	ICAP (MG/L)	0.44	0.97	0.98	1.1	1	<0.001	0.0096	0.01	0.018
MANGANESE	ICAP (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	CVAA (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	3.1	3.4	3	2.8	3	2.1	2.2	1.5	1.4
POTASSIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.064	<0.05
SELENIUM	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SILVER	ICAP (MG/L)	20	20	20	19	19	7.3	7.2	2.7	2.7
SODIUM	ICAP (MG/L)	0.54	0.31	0.3	0.3	0.3	0.11	0.11	0.098	0.1
STRONTIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
THORIUM	ICAP (MG/L)	0.0052	0.0086	0.0086	0.0089	0.009	0.0022	0.0023	0.0007	0.00073
URANIUM	ICP/MS (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	ICAP (MG/L)	<0.002	0.0028	0.0046	0.0021	0.0032	0.0024	0.0052	<0.002	0.0041
ZINC	ICAP (MG/L)									
ANIONS										
ALKALINITY-HCO3	(MG/L)	319	337	337	337	332		302		240
ALKALINITY-CO3	(MG/L)	<1	<1	<1	<1	<1		<1		<1
CHLORIDE	(MG/L)	50	49	49	49	48		15		6.6
FLUORIDE	(MG/L)	0.1	0.2	0.2	0.2	0.2		<0.1		0.2
NITRATE	(MG/L)	49	32	32	32	33		18		15
NITROGEN	(MG/L)	41	44	44	44	43		28		15
SULFATE	(MG/L)									
TOTAL SUSPENDED SOLIDS	(MG/L)	<1	<1	<1	<1	<1		2		6
TURBIDITY	(NTU)	1.3	0.1	0.1	0.1	1		12		6.2

APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-740 EXP 02/16/95 DIS	GW-740 EXP 02/16/95 TOT	GW-793 AGLLSF 01/23/95 DIS	GW-793 AGLLSF 01/23/95 TOT	GW-794 AGLLSF 01/24/95 DIS	GW-794 AGLLSF 01/24/95 TOT	GW-795 AGLLSF 01/25/95 DIS	GW-795 AGLLSF 01/25/95 TOT	GW-800 OLF 03/25/95 DIS	GW-800 OLF 03/25/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	0.022	<0.02	0.2	<0.02	2	<0.02	0.021	<0.02	0.23
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	0.051	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.086	0.14	0.14	0.12	0.15	0.057	0.056	0.074	0.076
BERYLLIUM	ICAP (MG/L)	0.0016	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.028	0.016	0.073	0.097	0.078	0.045	0.025	0.012	0.039
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	59	51	54	84	110	79	79	37	36
CALCIUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	ICAP (MG/L)	59	51	54	84	110	79	79	37	36
CHROMIUM	AAS (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	ICAP (MG/L)	<0.004	0.0043	0.032	<0.004	<0.004	0.0072	<0.004	0.0051	0.0046
COPPER	ICAP (MG/L)	0.037	0.02	0.25	<0.005	3.4	<0.005	0.025	<0.005	0.27
IRON	ICAP (MG/L)	<0.05	<0.05	0.051	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	ICAP (MG/L)	29	4.5	4.7	12	10	3.5	3.3	15	15
LEAD	AAS (MG/L)	0.0068	0.034	0.046	0.046	0.13	0.011	0.012	0.0021	0.015
MANGANESE	ICAP (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	CVAA (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	1.6	1.3	1.3	3.8	3.7	1.4	1	2.1	1.8
POTASSIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SELENIUM	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SILVER	ICAP (MG/L)	2.1	3.6	3.7	2.8	3.3	2.1	1.9	0.72	0.83
SODIUM	ICAP (MG/L)	0.049	0.09	0.093	0.19	0.21	0.13	0.13	0.096	0.095
STRONTIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
THORIUM	ICP/MS (MG/L)	<0.0005 d	<0.0005 d	<0.0005 d	0.00097	0.00082	0.0007	0.00066	<0.0005 d	<0.0005 d
URANIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	ICAP (MG/L)	<0.002	0.0032	0.027	0.0023	0.014	0.0089	<0.002	0.0091	0.015
ZINC	ICAP (MG/L)									
ANIONS										
ALKALINITY-HCO3	(MG/L)	255	.	156	.	235	.	25	.	160
ALKALINITY-CO3	(MG/L)	<1	.	<1	.	<1	.	<1	.	<1
CHLORIDE	(MG/L)	7.1	.	1.6	.	9.6	.	3.9	.	2.1
FLUORIDE	(MG/L)	0.2	.	0.1	.	0.2	.	<0.1	.	<0.1
NITRATE NITROGEN	(MG/L)	4.1	.	0.42	.	0.32	.	0.67	.	0.42
SULFATE	(MG/L)	14	.	4.7	.	25	.	18	.	8.1
TOTAL SUSPENDED SOLIDS	(MG/L)	1	.	1	.	458	.	<1	.	4
TURBIDITY	(NTU)	2.5	.	2.4	.	360	.	1.1	.	5

APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-828-100 OLF 02/14/95 TOT	GW-828-200 OLF 02/18/95 TOT	GW-829-029 OLF 03/01/95 TOT	GW-829-116 OLF 03/07/95 TOT	NT-01 EXP 03/09/95 DIS	NT-01 EXP 03/09/95 TOT	NT-02 EXP 03/09/95 DIS	NT-02 EXP 03/09/95 TOT
METALS								
ALUMINUM	ICAP (MG/L)				1.1	0.92	0.9	1.3
ANTIMONY	ICAP (MG/L)				<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)				<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)				0.16	0.16	0.071	0.072
BERYLLIUM	ICAP (MG/L)				<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)				0.035	0.034	0.034	0.021
CADMIUM	ICAP (MG/L)				0.0042	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)				0.0038	0.0038	<0.002	<0.002
CALCIUM	ICAP (MG/L)				62	61	20	20
CHROMIUM	ICAP (MG/L)				<0.01	<0.01	<0.01	<0.01
CHROMIUM	AAS (MG/L)				<0.01	<0.01	<0.01	<0.01
COBALT	ICAP (MG/L)				<0.005	<0.005	<0.005	<0.005
COPPER	ICAP (MG/L)				<0.004	<0.004	<0.004	<0.004
IRON	ICAP (MG/L)				0.82	0.76	0.61	0.88
LEAD	ICAP (MG/L)				<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)				<0.004	<0.004	<0.004	<0.004
MAGNESIUM	ICAP (MG/L)				9.3	9.1	2.9	2.8
MANGANESE	ICAP (MG/L)				0.87	0.86	0.065	0.063
MERCURY	CVAA (MG/L)				<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	ICAP (MG/L)				<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)				0.02	0.019	<0.01	<0.01
POTASSIUM	ICAP (MG/L)				2.2	2	1.5	1.9
SELENIUM	ICAP (MG/L)				<0.05	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)				<0.006	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)				8	8.1	2.4	2.4
STRONTIUM	ICAP (MG/L)				0.2	0.2	0.064	0.063
THORIUM	ICAP (MG/L)				<0.2	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)				0.0056	0.008	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)				<0.005	<0.005	<0.005	<0.005
ZINC	ICAP (MG/L)				0.02	0.016	0.012	0.012
ANIONS								
ALKALINITY-HCO3	(MG/L)					60		20
ALKALINITY-CO3	(MG/L)					<1		<1
CHLORIDE	(MG/L)					7		2.4
FLUORIDE	(MG/L)					0.2		<0.1
NITRATE NITROGEN	(MG/L)					34		8.1
SULFATE	(MG/L)					17		10
TOTAL SUSPENDED SOLIDS	(MG/L)					5		10
TURBIDITY	(NTU)					16		20

APPENDIX E.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	SS-1 EXP 03/09/95	SS-1 DIS 03/09/95	SS-1 TOT 03/09/95	SS-4 EXP 03/09/95	SS-4 DIS 03/09/95	SS-4 TOT 03/09/95	SS-5 EXP 03/09/95	SS-5 DIS 03/09/95	SS-5 TOT 03/09/95	SS-6 EXP 03/09/95	SS-6 DIS 03/09/95	SS-6 TOT 03/09/95
METALS												
ALUMINUM	ICAP (MG/L)	0.12	0.16	0.72	0.76	0.19	0.14	0.17	0.03	0.17	0.03	0.03
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.078	0.075	0.085	0.083	0.034	0.034	0.024	0.024	0.024	0.024	0.024
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.072	0.061	0.066	0.04	0.012	0.018	0.0095	0.016	0.0095	0.016	0.016
CADMIUM	ICAP (MG/L)	0.0032	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
CALCIUM	AAS (MG/L)	<0.002	<0.002	56	55	24	24	19	18	19	18	18
CHROMIUM	ICAP (MG/L)	160	170	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	AAS (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	ICAP (MG/L)	0.0066	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	ICAP (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
IRON	ICAP (MG/L)	0.059	0.046	1.1	1.2	0.16	0.13	0.14	0.039	0.14	0.039	0.039
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	<0.004	<0.004	15	15	11	11	6.8	6.8	6.8	6.8	6.8
MAGNESIUM	ICAP (MG/L)	0.16	0.15	0.43	0.46	0.098	0.099	0.023	0.013	0.023	0.013	0.013
MANGANESE	ICAP (MG/L)	0.015	0.015	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	CVA (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	3.4	3.3	1.9	1.7	0.69	0.69	<0.6	<0.6	<0.6	<0.6	<0.6
SELENIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)	0.0073	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)	14	14	7.4	7.3	1.6	1.6	0.46	0.47	0.46	0.47	0.47
STRONTIUM	ICAP (MG/L)	0.42	0.41	0.1	0.1	0.025	0.025	0.019	0.018	0.019	0.018	0.018
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	0.025	0.025	0.048	0.049	0.0055	0.0054	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	ICAP (MG/L)	0.0091	0.0059	0.01	0.008	0.007	0.005	0.013	0.01	0.013	0.01	0.01
ANIONS												
ALKALINITY-HCO3	(MG/L)	323	323	.	167	.	98	.	64	.	64	64
ALKALINITY-CO3	(MG/L)	<1	<1	.	<1	.	<1	.	<1	.	<1	<1
CHLORIDE	(MG/L)	42	42	.	12	.	3.5	.	1.8	.	1.8	1.8
FLUORIDE	(MG/L)	<0.1	<0.1	.	0.2	.	<0.1	.	<0.1	.	<0.1	<0.1
NITRATE	(MG/L)	23	23	.	3.7	.	1.2	.	0.68	.	0.68	0.68
NITROGEN	(MG/L)	53	53	.	13	.	5	.	4.8	.	4.8	4.8
SULFATE	(MG/L)	.	.	.	.	.	.	.	.	.	.	.
TOTAL SUSPENDED SOLIDS	(MG/L)	2	2	.	22	.	<1	.	<1	.	<1	<1
TURBIDITY	(NTU)	1	1	.	15	.	4.7	.	3.6	.	3.6	3.6

APPENDIX E.1
TRACE METALS AND ANIONS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GCS1 EXP 05/23/95 DIS	GCS1 EXP 05/23/95 TOT	GW-040 BG 06/06/95 DIS	GW-040 BG 06/06/95 TOT	GW-042 BG 06/06/95 DIS	GW-042 BG 06/06/95 TOT	GW-043 OLF 06/01/95 DIS	GW-043 OLF 06/01/95 TOT	GW-044 OLF 06/01/95 DIS	GW-044 OLF 06/01/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	0.065	0.037	10	<0.02	<0.02	<0.02	1.1	<0.02	0.026
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.044	0.029	0.15	0.12	0.14	0.016	0.021	0.26	0.26
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	0.00038	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.0084	0.14	0.04	0.017	0.025	0.036	0.027	0.004	0.023
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	0.0074	0.007	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	<0.003	<0.002	<0.002	0.0082	0.0075	<0.002	<0.002	<0.002	<0.002
CALCIUM	ICAP (MG/L)	35	7	6.9	3.9	3.7	21	21	48	49
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	0.016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	AAS (MG/L)	<0.01	<0.01	0.043	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	ICAP (MG/L)	<0.005	<0.005	0.0067	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	ICAP (MG/L)	<0.004	0.0091	0.0092	0.0071	<0.004	<0.004	<0.004	<0.004	0.0058
IRON	ICAP (MG/L)	0.021	0.007	10	0.8	1.1	0.0092	0.81	<0.005	0.035
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	20	6.8	0.011	<0.004	<0.004	<0.004	<0.004	<0.004	0.0087
MAGNESIUM	ICAP (MG/L)	0.008	1	8.6	4.6	4.7	3.5	3.6	3.4	3.3
MANGANESE	ICAP (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.013	<0.0002	0.056
MERCURY	CVA (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	0.015	0.016	0.015	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	1.7	5.8	1.5	1.3	1.3	1.3	1.1	0.71
POTASSIUM	ICAP (MG/L)	0.66	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SELENIUM	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	0.0065	<0.006	<0.006	<0.006
SILVER	ICAP (MG/L)	0.58	0.62	12	3.6	3.5	6.8	7.1	5.4	5.3
SODIUM	ICAP (MG/L)	0.016	0.017	0.018	0.017	0.017	0.034	0.035	0.078	0.077
STRONTIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
THORIUM	ICP/MS (MG/L)	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
URANIUM	ICAP (MG/L)	<0.005	<0.005	0.011	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	ICAP (MG/L)	0.0046	0.011	0.023	0.037	0.013	0.0072	0.008	0.0034	0.0072
ZINC	ICAP (MG/L)									
ANIONS										
ALKALINITY-HCO3	(MG/L)	162	38	26	65	65	65	65	65	140
ALKALINITY-CO3	(MG/L)	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHLORIDE	(MG/L)	<1	2.7	2.3	1.9	1.9	1.9	1.9	1.9	2.1
FLUORIDE	(MG/L)	<0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	<0.1
NITRATE	(MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
NITROGEN	(MG/L)	1.8	29	6	7.7	7.7	7.7	7.7	7.7	6.6
SULFATE	(MG/L)									
TOTAL SUSPENDED SOLIDS	(MG/L)	4	37	<1	6	6	6	6	6	2.5
TURBIDITY	(NTU)	0.9	72	3.7	12	12	12	12	12	1.5

APPENDIX E.1
TRACE METALS AND ANIONS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-047 BG 06/18/95 DIS	GW-047 BG 06/18/95 TOT	GW-053 BG 06/28/95 DIS	GW-053 BG 06/28/95 TOT	GW-061 BG 06/28/95 DIS	GW-061 BG 06/28/95 TOT	GW-064 OLF 06/07/95 DIS	GW-064 OLF 06/07/95 TOT	GW-069 BG 06/27/95 DIS	GW-069 BG 06/27/95 TOT
METALS										
ALUMINUM	0.15	3.2	0.045	0.085	0.11	20	0.046	17	<0.02	<0.02
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.037	0.06	0.34	0.32	0.053	0.24	0.049	0.15	0.38	0.38
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0018	<0.0003	0.0015	<0.0003	<0.0003
BORON	0.051	0.039	0.36	0.36	0.08	0.08	0.029	0.026	0.14	0.11
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CALCIUM	8.6	10	120	120	89	95	100	110	11	11
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	0.036	<0.01	0.021	<0.01	<0.01
CHROMIUM										
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	0.022	<0.005	0.01	<0.005	<0.005
COPPER	<0.004	0.0068	0.01	<0.004	<0.004	0.027	<0.004	0.032	<0.004	<0.004
IRON	0.12	2.2	0.063	0.56	0.08	33	0.027	21	0.015	0.063
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD										
MAGNESIUM	1.1	1.7	15	15	13	16	17	19	5.3	5.2
MANGANESE	0.0066	0.044	0.14	0.13	0.0089	1.6	0.0017	0.83	0.0067	0.0048
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	<0.01	0.024	0.029	<0.01	0.044	<0.01	0.03	<0.01	<0.01
POTASSIUM	0.79	2.4	2.3	2.6	2.2	5.7	2.4	5	5.7	5
SELENIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	3.4	3.7	9.6	9.4	8.4	8.5	4.5	4.4	64	65
STRONTIUM	0.026	0.033	0.46	0.45	0.16	0.18	0.11	0.11	0.78	0.79
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	0.0021	0.0021	0.037	0.039	0.00063	0.0012	<0.0005 d	<0.0005 d
VANADIUM	<0.005	<0.005	<0.005	<0.005	<0.005	0.037	<0.005	0.032	<0.005	<0.005
ZINC	0.0036	0.01	0.0078	0.0074	0.0026	0.073	<0.002	0.12	0.005	0.0059
ANIONS										
ALKALINITY-HCO3		29		324		203		300		132
ALKALINITY-CO3		<1		<1		<1		<1		4
CHLORIDE		1.8		32		15		11		42
FLUORIDE		<0.1		<0.1		0.12		0.1		0.12
NITRATE NITROGEN		0.55		<0.2		15		4.9		0.4
SULFATE		1.1		23		27		19		2.2
TOTAL SUSPENDED SOLIDS		12		8.5		2150		441		<1
TURBIDITY		35		4.5		1440		440		1.1

APPENDIX E.1
TRACE METALS AND ANIONS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-079 BG 06/19/95 DIS	GW-079 BG 06/19/95 TOT	GW-080 BG 06/19/95 DIS	GW-080 BG 06/19/95 TOT	GW-084 OLF 06/07/95 DIS	GW-084 OLF 06/07/95 TOT	GW-085 OLF 06/08/95 DIS	GW-085 OLF 06/08/95 TOT	GW-095 BG 06/20/95 DIS	GW-095 BG 06/20/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	0.034	<0.02	1.6	<0.02	0.67	0.038	9.1	0.033	0.032
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.15	0.019	0.038	0.17	0.17	0.65	0.76	0.027	0.028
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00044	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.017	0.018	0.024	0.014	0.0061	0.015	0.025	1	0.96
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	ICAP (MG/L)	36	4.2	4.1	54	55	250	250	1.3	1.3
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01
CHROMIUM	AAS (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0085	<0.005	<0.005
COPPER	ICAP (MG/L)	<0.004	0.0088	0.013	<0.004	<0.004	<0.004	0.01	0.0043	0.0054
IRON	ICAP (MG/L)	<0.005	0.19	1.6	0.0082	0.82	<0.005	9.3	<0.005	0.051
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
MAGNESIUM	ICAP (MG/L)	3.8	4.5	4.9	4	4.3	17	18	0.48	0.48
MANGANESE	ICAP (MG/L)	0.048	0.068	0.075	0.0065	0.073	0.0028	0.32	<0.001	0.002
MERCURY	CVAA (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	0.011	0.011	<0.01	<0.01	<0.01	0.012	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	1.8	1.7	2.2	<0.6	1.6	1.9	5.7	2.4	3.1
SELENIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)	0.0072	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)	4.5	8.6	8.5	5.6	5.6	9.9	10	0.006	0.006
STRONTIUM	ICAP (MG/L)	0.12	0.016	0.018	0.075	0.077	0.55	0.55	0.1	0.099
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	<0.0005 d	0.001	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	0.00062	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	0.012	<0.005	<0.005
ZINC	ICAP (MG/L)	<0.002	0.0063	0.0086	<0.002	0.0049	0.0035	0.043	<0.002	<0.002
ANIONS										
ALKALINITY-HCO3	(MG/L)	109	34	34	160	160	223	150	223	223
ALKALINITY-CO3	(MG/L)	<1	<1	<1	<1	<1	36	<1	36	36
CHLORIDE	(MG/L)	1.8	1.8	1.8	1.8	1.8	2.3	9.1	2.3	2.3
FLUORIDE	(MG/L)	0.1	0.1	0.1	0.2	0.2	0.6	<0.1	0.6	0.6
NITRATE	(MG/L)	0.48	<0.2	<0.2	<0.2	<0.2	<0.2	17	<0.2	<0.2
NITROGEN	(MG/L)	7.2	14	14	7.4	7.4	8.5	5	8.5	8.5
SULFATE	(MG/L)	<1	16	16	14	14	<1	280	<1	<1
TOTAL SUSPENDED SOLIDS	(MG/L)	<1	33	33	6.6	6.6	175	175	175	175
TURBIDITY	(NTU)									

APPENDIX E.1
TRACE METALS AND ANIONS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-162 BG 05/31/95 DIS	GW-162 BG 05/31/95 TOT	GW-287 BG 06/20/95 DIS	GW-287 BG 06/20/95 TOT	GW-311 RS 06/06/95 DIS	GW-311 RS 06/06/95 TOT	GW-312 RS 06/06/95 DIS	GW-312 RS 06/06/95 TOT	GW-315 SPL 06/26/95 DIS	GW-315 SPL 06/26/95 TOT
METALS										
ALUMINUM	<0.02	0.15	1.4	5.9	<0.02	2	2.4	5	0.034	0.054
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.25	0.27	0.11	0.14	0.02	0.025	0.025	0.037	0.047	0.047
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.068	0.066	0.024	0.056	<0.004	0.0079	0.015	<0.004	0.043	0.11
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	28	31	27	35	84	87	110	150	100	100
CHROMIUM	<0.01	0.19	<0.01	<0.01	<0.01	0.02	0.014	0.024	<0.01	<0.01
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	<0.004	0.011	<0.004	0.015	0.0082	0.023	0.021	0.017	<0.004	<0.004
IRON	0.03	3.6	0.69	3	0.0058	3.2	<0.005	5.5	<0.005	<0.005
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.004	0.013	<0.004	8.1	<0.004	6.3	0.04	1.1	<0.004	<0.004
MAGNESIUM	4.5	4.8	6.9	8.1	<0.004	6.3	0.04	1.1	<0.004	<0.004
MANGANESE	0.071	0.13	0.048	0.097	0.0044	0.11	<0.001	0.042	0.0018	0.0018
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	0.11	<0.01	0.022	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	2.8	3.1	2.1	2.2	1.5	2.4	7.6	7.9	3.1	3.4
SELENIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	<0.006	<0.006	0.0066	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	14	14	5.4	5.1	2.2	2.2	8.8	8.6	5.5	5.6
STRONTIUM	0.77	0.8	0.08	0.093	0.073	0.076	0.3	0.37	0.15	0.15
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	<0.0005 d	0.0016	0.0006	0.0007	<0.0005 d	<0.0005 d	0.0018	0.0017
VANADIUM	<0.005	<0.005	<0.005	<0.005	<0.005	0.011	0.012	0.017	<0.005	<0.005
ZINC	0.0062	0.014	0.03	0.046	0.0074	0.036	0.004	0.038	<0.002	<0.002
ANIONS										
ALKALINITY-HCO3		120		115		230		<1		236
ALKALINITY-CO3		<1		<1		<1		54		<1
CHLORIDE		3.5		3.3		3.1		2		9
FLUORIDE		<0.1		0.2		0.1		0.3		<0.1
NITRATE		<0.2		<0.2		0.74		0.51		12
NITROGEN		8.1		5.8		3.8		4.3		25
SULFATE										
TOTAL SUSPENDED SOLIDS		5.5		4		89		2		<1
TURBIDITY		9.5		80		1.1		13		0.5

APPENDIX E.1
TRACE METALS AND ANIONS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-317 SPI 06/21/95	GW-317 SPI 06/21/95	GW-347 S3 06/21/95	GW-347 S3 06/21/95	GW-348 S3 06/26/95	GW-348 S3 06/26/95	GW-363 OLF 06/17/95	GW-370 BG 06/05/95
	DIS	TOT	DIS	TOT	DIS	TOT	DIS	TOT
METALS								
ALUMINUM	0.03	0.14	0.035	0.61	0.021	0.044	0.032	0.64
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.019	0.023	0.011	0.01	0.086	0.084	0.057	0.043
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.03	0.028	0.008	0.014	0.032	0.0068	0.32	0.29
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	0.03	0.14	0.035	0.61	0.021	0.044	0.032	0.64
CALCIUM	0.03	0.14	0.035	0.61	0.021	0.044	0.032	0.64
CHROMIUM	0.03	0.14	0.035	0.61	0.021	0.044	0.032	0.64
CHROMIUM	0.03	0.14	0.035	0.61	0.021	0.044	0.032	0.64
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	<0.004	0.014	0.0046	<0.004	<0.004	<0.004	<0.004	<0.004
IRON	<0.005	0.64	0.021	<0.005	<0.005	0.024	0.13	0.91
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MAGNESIUM	0.0025	0.016	0.0033	0.0098	<0.002	0.0016	<0.002	0.0083
MANGANESE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	1.3	1.2	4.2	3.2	1.8	1.6	1.6	1.6
SELENIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	0.0069	<0.006	0.007	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	3.7	3	0.95	0.93	3.3	3.2	110	7.2
STRONTIUM	0.044	0.065	0.024	0.022	0.091	0.089	0.093	0.014
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	0.00068	0.00071	<0.0005 d	<0.0005 d	0.00087	0.0042	<0.0005 d	<0.0005 d
VANADIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	<0.002	0.013	0.003	0.0048	0.027	<0.002	<0.002	0.016
ANIONS								
ALKALINITY-HCO3		203		70		246		18
ALKALINITY-CO3		<1		<1		<1		<1
CHLORIDE		1.8		1.4		9.4		2.1
FLUORIDE		<0.1		<0.1		0.1		0.1
NITRATE		0.54		0.44		7.6		<0.2
SULFATE		5		1.2		7		19
TOTAL SUSPENDED SOLIDS		<1		13		<1		5.5
TURBIDITY		0.2		24		1		26

APPENDIX E.1
TRACE METALS AND ANIONS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-372 BG 06/02/95 DIS	GW-372 BG 06/02/95 TOT	GW-373 BG 06/05/95 DIS	GW-373 BG 06/05/95 TOT	GW-537 OLF 06/08/95 DIS	GW-537 OLF 06/08/95 TOT	GW-627 BG 06/22/95 DIS	GW-627 BG 06/22/95 TOT	GW-637 OLF 06/17/95 DIS	GW-637 OLF 06/17/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	0.27	0.039	0.12	<0.04 d	<0.04 d	0.035	<0.02	0.06	1.2
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.068	0.039	0.044	2.3	2.5	0.041	0.04	0.14	0.15
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	<0.0003	<0.0006 d	<0.0006 d	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.043	0.19	0.19	<0.008 d	<0.008 d	0.53	0.48	0.084	0.075
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.006 d	<0.006 d	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	<0.002	<0.002	<0.002	1000	1100	1	0.88	82	84
CALCIUM	ICAP (MG/L)	56	1.4	1.3	0.046	0.045	<0.01	<0.01	<0.01	<0.01
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01 d	<0.01 d	0.0064	<0.005	<0.005	<0.005
CHROMIUM	AAS (MG/L)	<0.01	<0.01	<0.01	<0.008 d	<0.008 d	<0.004	<0.004	<0.004	<0.004
COBALT	ICAP (MG/L)	<0.005	<0.005	<0.005	0.16	0.26	0.032	0.12	0.011	1.2
COPPER	ICAP (MG/L)	<0.004	<0.004	<0.004	<0.1 d	<0.1 d	<0.05	<0.05	<0.05	<0.05
IRON	ICAP (MG/L)	0.066	0.11	0.92	<0.008 d	<0.008 d	<0.003	<0.003	<0.003	<0.003
IRON	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.008 d	<0.008 d	<0.003	<0.003	<0.003	<0.003
LEAD	ICAP (MG/L)	<0.004	<0.004	<0.004	<0.008 d	<0.008 d	<0.003	<0.003	<0.003	<0.003
LEAD	AAS (MG/L)	<0.004	<0.004	<0.004	70	75	0.21	0.2	5.1	5.7
MAGNESIUM	ICAP (MG/L)	10	0.14	0.14	0.0081	0.011	0.0093	0.0054	0.032	0.041
MANGANESE	ICAP (MG/L)	0.031	0.0037	0.0069	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	CVAA (MG/L)	<0.0002	<0.0002	<0.0002	<0.02 d	<0.02 d	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	1.6	1.1	0.89	3.1	3.2	2.4	1.3	1.7	2
SELENIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.01 d	<0.01 d	<0.05	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.012 d	<0.012 d	0.0086	0.0067	<0.006	<0.006
SODIUM	ICAP (MG/L)	8.6	120	120	32	35	300	290	3.4	2.8
STRONTIUM	ICAP (MG/L)	0.17	0.062	0.064	2.6	2.8	0.073	0.071	0.19	0.2
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.4 d	<0.4 d	<0.005 d	<0.005 d	<0.005 d	<0.005 d
URANIUM	ICP/MS (MG/L)	<0.0005 d	<0.0005 d	<0.0005 d	0.0014	0.0014	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.01 d	<0.01 d	<0.005	<0.005	<0.005	<0.005
ZINC	ICAP (MG/L)	0.0024	0.0022	0.0039	<0.004 d	<0.004 d	0.0082	0.0071	<0.002	0.0036
ANIONS										
ALKALINITY-HCO3	(MG/L)	180	.	170	.	280	.	492	.	229
ALKALINITY-CO3	(MG/L)	<1	.	54	.	<1	.	72	.	<1
CHLORIDE	(MG/L)	3.1	.	1.8	.	37	.	30	.	3.2
FLUORIDE	(MG/L)	0.2	.	1.5	.	<0.1	.	5.2	.	<0.1
NITRATE NITROGEN	(MG/L)	0.24	.	<0.2	.	980	.	<0.2	.	<0.2
SULFATE	(MG/L)	27	.	27	.	3.5	.	31	.	7.2
TOTAL SUSPENDED SOLIDS	(MG/L)	5.5	.	4.5	.	<1	.	<1	.	1.5
TURBIDITY	(NTU)	3.6	.	7.9	.	2.6	.	1.2	.	5.1

APPENDIX E.1
TRACE METALS AND ANIONS, 2ND QUARTER 1995

SAMPLING POINT LOCATION	DATE SAMPLED	TYPE	GW-642 BG	GW-642 DIS	GW-642 TOT	GW-652 BG	GW-652 DIS	GW-652 TOT	GW-653 BG	GW-653 DIS	GW-653 TOT	GW-654 BG	GW-654 DIS	GW-654 TOT	GW-793 AGLLSF	GW-793 DIS	GW-793 TOT
METALS																	
ALUMINUM		ICAP (MG/L)	0.029	<0.002	74	<0.002	<0.002	74	<0.002	<0.002	74	<0.002	<0.002	74	<0.002	<0.002	74
ANTIMONY		ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC		ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM		ICAP (MG/L)	0.16	0.18	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
BERYLLIUM		ICAP (MG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON		ICAP (MG/L)	0.022	0.026	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
CADMIUM		ICAP (MG/L)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM		ICAP (MG/L)	10	11	74	74	74	74	74	74	74	74	74	74	74	74	74
CHROMIUM		ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM		AAS (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT		ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER		ICAP (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
IRON		ICAP (MG/L)	3.3	3.5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
LEAD		ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD		AAS (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
MAGNESIUM		ICAP (MG/L)	9.3	9.5	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
MANGANESE		ICAP (MG/L)	2.4	2.5	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MERCURY		CVAA (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM		ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL		ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM		ICAP (MG/L)	1.8	1.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
SELENIUM		ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER		ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM		ICAP (MG/L)	7.1	7.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
STRONTIUM		ICAP (MG/L)	0.033	0.036	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
THORIUM		ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM		ICP/MS (MG/L)	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM		ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC		ICAP (MG/L)	0.014	0.019	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
ANIONS																	
ALKALINITY-HCO3		(MG/L)	68	68	203	203	203	203	203	203	203	203	203	203	203	203	203
ALKALINITY-CO3		(MG/L)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHLORIDE		(MG/L)	2.2	2.2	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
FLUORIDE		(MG/L)	0.3	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
NITRATE		(MG/L)	<0.2	<0.2	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
SULFATE		(MG/L)	10	10	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
TOTAL SUSPENDED SOLIDS		(MG/L)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
TURBIDITY		(NTU)	4.2	4.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2

APPENDIX E.1
TRACE METALS AND ANIONS, 2ND QUARTER 1995

SAMPLING POINT LOCATION	DATE SAMPLED	TYPE	GH-794 AGLISF 06/18/95	GH-794 AGLISF 06/18/95	GH-795 AGLISF 06/18/95	GH-795 BG 06/18/95	GH-800 OLIF 05/31/95	GH-828 OLIF 06/27/95	GH-829 OLIF 06/27/95	GH-829 OLIF 06/27/95	GH-829 OLIF 06/27/95
			DIS	TOT	DIS	TOT	DIS	TOT	DIS	TOT	TOT
ALUMINUM	ICAP (MG/L)		<0.02	0.66	0.49	0.061	0.029	0.077	0.19	37	
ANTIMONY	ICAP (MG/L)		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
ARSENIC	ICAP (MG/L)		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
BARIUM	ICAP (MG/L)		0.11	0.14	0.064	0.061	0.095	0.024	1.5	3	
BERYLLIUM	ICAP (MG/L)		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0061	
BORON	ICAP (MG/L)		0.046	0.05	0.12	0.052	0.053	0.21	0.26	0.35	
CADMIUM	ICAP (MG/L)		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	
CADMIUM	AAS (MG/L)		65	77	83	80	43	2	93	170	
CALCIUM	ICAP (MG/L)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1.3	
CHROMIUM	ICAP (MG/L)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.11	
CHROMIUM	AAS (MG/L)		<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.026	
COBALT	ICAP (MG/L)		0.0077	1.1	0.018	0.027	0.017	0.034	0.071	25	
COPPER	ICAP (MG/L)		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.1	
IRON	ICAP (MG/L)		12	13	3.6	3.5	18	0.004	<0.004	0.059	
LEAD	AAS (MG/L)		0.003	0.03	0.037	0.04	0.0017	0.0015	0.046	36	
MAGNESIUM	ICAP (MG/L)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.44	
MANGANESE	ICAP (MG/L)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0002	
MERCURY	CVAA (MG/L)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.027	
MOLYBDENUM	ICAP (MG/L)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.71	
NICKEL	ICAP (MG/L)		2.8	3	1.3	1.1	2.1	2.4	10	15	
POTASSIUM	ICAP (MG/L)		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
SELENIUM	ICAP (MG/L)		<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
SILVER	ICAP (MG/L)		2	2.2	2	1.9	0.94	180	170	170	
SODIUM	ICAP (MG/L)		0.15	0.17	0.15	0.15	0.1	0.058	2.7	4.2	
STRONTIUM	ICAP (MG/L)		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
THORIUM	ICAP (MG/L)		<0.0005 d	<0.0005 d	0.00078	0.00076	<0.0005 d	0.0024	0.0036	0.015	
URANIUM	ICP/MS (MG/L)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.018	
VANADIUM	ICAP (MG/L)		0.0024	0.0028	<0.002	<0.002	0.0058	<0.002	<0.002	0.13	
ZINC	ICAP (MG/L)										
ANIONS											
ALKALINITY-HCO3	(MG/L)		220	220		200		283		177	
ALKALINITY-CO3	(MG/L)		<1	<1		<1		48		<1	
CHLORIDE	(MG/L)		10	3.9		2.1		11		6.3	
FLUORIDE	(MG/L)		0.11	<0.1		<0.1		1.7		0.32	
NITRATE NITROGEN	(MG/L)		0.87	<0.2		<0.2		2.8		200	
SULFATE	(MG/L)		22	17		6.1		25		13	
TOTAL SUSPENDED SOLIDS	(MG/L)		<1	<1		266		980		227	
TURBIDITY	(NTU)		7.1	0.6		230		280		85	

APPENDIX E.1
TRACE METALS AND ANIONS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	MS-1 S3 05/03/95 TOT	NT-1N S3 05/03/95 TOT	NT-1S S3 05/03/95 TOT	SS-5.95K EXP 05/23/95 DIS	SS-5.95K EXP 05/23/95 TOT	SS-6.6K EXP 05/23/95 DIS	SS-6.6K EXP 05/23/95 TOT	SS-6H EXP 05/23/95 DIS	SS-6H EXP 05/23/95 TOT
METALS									
ALUMINUM	ICAP (MG/L)	.	.	<0.02	<0.02	0.25	0.12	0.074	0.031
ANTIMONY	ICAP (MG/L)	.	.	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	.	.	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	.	.	0.083	0.083	0.049	0.048	0.05	0.051
BERYLLIUM	ICAP (MG/L)	.	.	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	.	.	0.0076	0.011	0.027	0.042	0.0092	0.013
CADMIUM	ICAP (MG/L)	.	.	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	.	.	39	39	54	55	27	27
CALCIUM	ICAP (MG/L)	.	.	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	ICAP (MG/L)	.	.	.	.	.	.	.	.
CHROMIUM	AAS (MG/L)	.	.	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COBALT	ICAP (MG/L)	.	.	<0.004	<0.004	<0.004	<0.004	0.0049	<0.004
COPPER	ICAP (MG/L)	.	.	<0.005	<0.005	0.4	0.24	0.018	<0.005
IRON	ICAP (MG/L)	.	.	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	.	.	22	22	13	13	13	13
MAGNESIUM	ICAP (MG/L)	.	.	<0.001	<0.001	0.036	0.032	0.016	0.0041
MANGANESE	ICAP (MG/L)	.	.	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	CVAA (MG/L)	.	.	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	ICAP (MG/L)	.	.	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	.	.	<0.01	<0.01	1.1	0.85	0.73	0.69
POTASSIUM	ICAP (MG/L)	.	.	<0.6	<0.6	<0.05	<0.05	<0.05	<0.05
SELENIUM	ICAP (MG/L)	.	.	<0.05	<0.05	<0.006	<0.006	<0.006	<0.006
SILVER	ICAP (MG/L)	.	.	0.84	0.84	3.7	3.7	2	2.1
SODIUM	ICAP (MG/L)	.	.	0.019	0.019	0.063	0.063	0.026	0.027
STRONTIUM	ICAP (MG/L)	.	.	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
THORIUM	ICP/MS (MG/L)	.	.	<0.0005 d	<0.0005 d	0.0029	0.003	<0.0005 d	<0.0005 d
URANIUM	ICAP (MG/L)	.	.	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	ICAP (MG/L)	.	.	0.006	0.0087	0.0046	0.0065	<0.002	0.004
ZINC	ICAP (MG/L)	.	.	.	.	.	.	.	.
ANIONS									
ALKALINITY-HCO3	(MG/L)	.	.	.	187	.	181	.	116
ALKALINITY-CO3	(MG/L)	.	.	.	<1	.	<1	.	<1
CHLORIDE	(MG/L)	.	.	.	1.4	.	6.7	.	3
FLUORIDE	(MG/L)	.	.	.	<0.1	.	<0.1	.	<0.1
NITRATE NITROGEN	(MG/L)	5.8	23	110	<0.2	.	0.25	.	<0.2
SULFATE	(MG/L)	.	.	.	2.8	.	8.1	.	4.3
TOTAL SUSPENDED SOLIDS	(MG/L)	.	.	.	<1	.	36	.	<1
TURBIDITY	(NTU)	.	.	.	0.5	.	4.6	.	1.8

APPENDIX E.1
TRACE METALS AND ANIONS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	SS-7 EXP 05/23/95 DIS	SS-7 EXP 05/23/95 TOT	TS SS 05/03/95 TOT
METALS			
ALUMINUM	ICAP (MG/L)	0.14	0.13
ANTIMONY	ICAP (MG/L)	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.036	0.036
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.0088	0.0096
CADMIUM	ICAP (MG/L)	<0.003	<0.003
CADMIUM	AAS (MG/L)	.	.
CALCIUM	ICAP (MG/L)	34	33
CHROMIUM	ICAP (MG/L)	<0.01	<0.01
CHROMIUM	AAS (MG/L)	.	.
COBALT	ICAP (MG/L)	<0.005	<0.005
COPPER	ICAP (MG/L)	0.012	0.0086
IRON	ICAP (MG/L)	0.042	0.066
LEAD	ICAP (MG/L)	<0.05	<0.05
LEAD	AAS (MG/L)	.	.
MAGNESIUM	ICAP (MG/L)	9.6	9.4
MANGANESE	ICAP (MG/L)	0.0047	0.0044
MERCURY	CVAA (MG/L)	<0.0002	<0.0002
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	<0.6	0.97
SELENIUM	ICAP (MG/L)	<0.05	<0.05
SILVER	ICAP (MG/L)	<0.006	<0.006
SODIUM	ICAP (MG/L)	2	2.2
STRONTIUM	ICAP (MG/L)	0.031	0.031
THORIUM	ICAP (MG/L)	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)	<0.005	<0.005
ZINC	ICAP (MG/L)	0.0083	0.0086
ANIONS			
ALKALINITY-HCO ₃	(MG/L)	.	115
ALKALINITY-CO ₃	(MG/L)	.	<1
CHLORIDE	(MG/L)	.	3
FLUORIDE	(MG/L)	.	<0.1
NITRATE NITROGEN	(MG/L)	.	0.24
SULFATE	(MG/L)	.	1.9
TOTAL SUSPENDED SOLIDS			
TURBIDITY	(MG/L)	.	<1
	(NTU)	.	3

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	BCK-00.63 EXP 07/25/95 DIS	BCK-00.63 EXP 07/25/95 TOT	BCK-04.55 EXP 07/25/95 DIS	BCK-04.55 EXP 07/25/95 TOT	BCK-09.40 EXP 07/25/95 DIS	BCK-09.40 EXP 07/25/95 TOT	BCK-11.97 EXP 07/25/95 DIS	BCK-11.97 EXP 07/25/95 TOT	GW-014 BG 08/04/95 DIS	GW-014 BG 08/04/95 TOT
METALS										
ALUMINUM	ICAP (NG/L)	0.16	0.14	0.27	0.17	0.18	0.037	<0.02	<0.02	<0.02
ANTIMONY	ICAP (NG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (NG/L)	<0.05	<0.05	<0.05	0.064	0.088	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (NG/L)	0.064	0.063	0.064	0.099	0.099	0.49	0.5	0.86	0.87
BERYLLIUM	ICAP (NG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00036
BORON	ICAP (NG/L)	0.049	0.041	0.031	0.33	0.31	0.092	0.061	4.8	4.8
CADMIUM	ICAP (NG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (NG/L)	45	45	43	44	68	270	280	120	120
CALCIUM	ICAP (NG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	ICAP (NG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CHROMIUM	AAS (NG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
COBALT	ICAP (NG/L)	0.11	0.11	0.23	0.23	0.23	0.049	<0.05	<0.05	<0.05
COPPER	ICAP (NG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
IRON	ICAP (NG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (NG/L)	<0.004	<0.004	0.0041	0.004	0.048	<0.004	<0.004	<0.004	<0.004
LITHIUM	ICAP (NG/L)	17	16	17	17	18	36	37	19	19
MAGNESIUM	ICAP (NG/L)	0.026	0.028	0.098	0.094	0.039	0.03	0.031	2.5	2.3
MANGANESE	ICAP (NG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	CVAA (NG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	ICAP (NG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (NG/L)	1.1	2.3	<0.6	0.84	2.5	7.9	7.1	2.9	2.9
POTASSIUM	ICAP (NG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SELENIUM	ICAP (NG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SILVER	ICAP (NG/L)	3.2	3.2	2.7	2.7	7.8	43	44	12	11
SODIUM	ICAP (NG/L)	0.072	0.071	0.061	0.062	0.14	0.78	0.8	0.45	0.45
STRONTIUM	ICAP (NG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
THORIUM	ICAP (NG/L)	0.022	0.022	0.017	0.016	0.089	0.14	0.14	0.032	0.031
URANIUM	ICP/MS (NG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	ICAP (NG/L)	0.0027	0.002	0.0042	<0.002	0.031	<0.002	<0.002	0.0036	0.0022
ZINC	ICAP (NG/L)									
ANIONS										
ALKALINITY-HCO3	(NG/L)	169	167		167	205		142		348
ALKALINITY-CO3	(NG/L)	<1	<1		<1	<1		<1		<1
CHLORIDE	(NG/L)	5	4.5		4.5	14		40		54
FLUORIDE	(NG/L)	0.13	0.11		0.11	0.21		1.2		<0.1
NITRATE	(NG/L)	1.3	1.2		1.2	6		190		<0.2
SULFATE	(NG/L)	7.2	5.9		5.9	14		50		3.3
TOTAL SUSPENDED SOLIDS	(NG/L)	1.5	3		3	2.5		<1		<1
TURBIDITY	(NTU)	2.3	3.7		3.7	3.4		0.5		0.7

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION	DATE SAMPLED	TYPE	GW-040 BG	GW-040 DIS	GW-040 TOT	GW-042 BG	GW-042 DIS	GW-042 TOT	GW-043 OLF	GW-043 DIS	GW-043 TOT	GW-044 OLF	GW-044 DIS	GW-044 TOT	GW-046 BG	GW-046 DIS	GW-046 TOT
METALS																	
ALUMINUM		ICAP (MG/L)	0.12		16						3.2			0.1			0.03
ANTIMONY		ICAP (MG/L)	<0.05		<0.05			<0.02			<0.05			<0.05			<0.05
ARSENIC		ICAP (MG/L)	<0.05		<0.05			<0.05			<0.05			<0.05			<0.05
BARIUM		ICAP (MG/L)	0.042		0.28			0.12			0.024			0.24			0.16
BERYLLIUM		ICAP (MG/L)	<0.0003		0.00086			<0.0003			<0.0003			<0.0003			<0.0003
BORON		ICAP (MG/L)	0.019		0.026			0.016			0.015			0.011			0.041
CADMIUM		ICAP (MG/L)	0.0033		<0.003			0.011			<0.003			<0.003			<0.003
CADMIUM		AAS (MG/L)	<0.002		<0.002			0.011			<0.002			<0.002			<0.002
CALCIUM		ICAP (MG/L)	7.3		8.2			4.1			17			52			20
CHROMIUM		ICAP (MG/L)	<0.01		0.028			<0.01			<0.01			<0.01			<0.01
CHROMIUM		AAS (MG/L)	<0.01		0.11			<0.01			<0.01			<0.01			<0.01
COBALT		ICAP (MG/L)	<0.005		0.014			<0.005			<0.005			<0.005			<0.005
COPPER		ICAP (MG/L)	<0.004		0.032			0.018			<0.004			0.0084			<0.004
IRON		ICAP (MG/L)	0.36		27			1.1			2			0.87			0.06
IRON		ICAP (MG/L)	<0.05		<0.05			<0.05			<0.05			<0.05			<0.05
LEAD		AAS (MG/L)	<0.004		0.024			<0.004			<0.004			0.0052			<0.004
LITHIUM		ICAP (MG/L)	0.032		0.052			0.018			0.0042			0.0079			0.3
MAGNESIUM		ICAP (MG/L)	7.7		12			4.6			3.4			3.4			4.8
MANGANESE		ICAP (MG/L)	1.3		1.6			0.28			0.025			0.044			0.21
MERCURY		CVA (MG/L)	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002			0.00051
MOLYBDENUM		ICAP (MG/L)	<0.01		<0.01			<0.01			<0.01			<0.01			<0.01
NICKEL		ICAP (MG/L)	<0.01		0.037			0.017			<0.01			<0.01			<0.01
POTASSIUM		ICAP (MG/L)	1.7		7.6			1.1			2.2			0.82			2.3
SELENIUM		ICAP (MG/L)	<0.05		<0.05			<0.05			<0.05			<0.05			0.072
SILVER		ICAP (MG/L)	<0.006		<0.006			<0.006			<0.006			<0.006			0.007
SODIUM		ICAP (MG/L)	13		13			3.2			6.7			4.8			7.4
STRONTIUM		ICAP (MG/L)	0.018		0.034			0.02			0.03			0.08			0.072
THORIUM		ICAP (MG/L)	<0.2		<0.2			<0.2			<0.2			<0.2			<0.2
URANIUM		ICP/MS (MG/L)	<0.0005 d		<0.0005 d			<0.0005 d			<0.0005 d			<0.0005 d			<0.0005 d
VANADIUM		ICAP (MG/L)	0.023		0.023			<0.005			0.0064			<0.005			<0.005
ZINC		ICAP (MG/L)	0.077		0.077			0.048			0.0087			0.0089			0.0084
ANIONS																	
ALKALINITY-HCO ₃		(MG/L)			39			30			54			142			50
ALKALINITY-CO ₃		(MG/L)			<1			<1			<1			<1			<1
CHLORIDE		(MG/L)			2.8			2.4			1.9			2			29
FLUORIDE		(MG/L)			0.32			0.2			<0.1			<0.1			<0.1
NITRATE NITROGEN		(MG/L)			<0.2			<0.2			<0.2			<0.2			1.6
SULFATE		(MG/L)			31			6.2			7			7.2			2.7
TOTAL SUSPENDED SOLIDS		(MG/L)			637			<1			21			<1			<1
TURBIDITY		(NTU)			850			2.7			70			1.5			0.2

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-047 BG 07/24/95 DIS	GW-047 BG 07/24/95 TOT	GW-053 BG 09/25/95 DIS	GW-053 BG 09/25/95 TOT	GW-056 EXP 08/04/95 DIS	GW-056 EXP 08/04/95 TOT	GW-057 EXP 08/05/95 DIS	GW-057 EXP 08/05/95 TOT	GW-061 BG 09/21/95 DIS	GW-061 BG 09/21/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	0.69	<0.02	0.044	0.025	0.13	<0.02	0.067	0.071	7.8
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BERYLLIUM	ICAP (MG/L)	0.035	0.044	0.12	0.12	0.12	0.097	0.097	0.077	0.11
BARIUM	ICAP (MG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.037	0.033	0.34	0.033	0.025	0.016	0.031	0.085	0.096
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	0.0046	<0.003	<0.003	<0.003	<0.003
CALCIUM	AAS (MG/L)	10	120	120	99	100	100	100	92	92
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	0.16	<0.01	0.042	<0.01	<0.01
CHROMIUM	AAS (MG/L)	10	120	120	99	100	100	100	92	92
COBALT	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	0.23	<0.005	<0.005	<0.005	<0.005
COPPER	ICAP (MG/L)	0.0048	0.0048	<0.004	<0.004	0.0066	0.0042	<0.004	0.021	<0.004
IRON	ICAP (MG/L)	<0.005	0.64	0.32	0.32	1.4	0.14	0.26	0.075	5.6
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LITHIUM	AAS (MG/L)	0.0045	0.042	0.54	0.004	0.0041	<0.004	<0.004	0.0058	0.013
MAGNESIUM	ICAP (MG/L)	1.2	1.3	16	0.0065	0.0054	24	24	16	16
MANGANESE	ICAP (MG/L)	0.0013	0.017	0.11	0.35	0.5	0.46	0.46	0.0071	0.25
MERCURY	CVAA (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	<0.01	0.032	0.14	0.067	<0.01	<0.01	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	0.87	0.82	2	1.5	1.6	1.5	1.6	3.6	5
SELENIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)	3.6	3.6	9.8	57	51	79	79	11	11
STRONTIUM	ICAP (MG/L)	0.026	0.028	0.46	0.17	0.17	0.16	0.17	0.19	0.19
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	<0.0005 d	<0.0005 d	0.0021	0.0033	0.0034	0.0012	0.0012	0.051	0.057
VANADIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	ICAP (MG/L)	0.011	0.014	0.11	0.011	0.011	0.0077	0.02	0.1	0.016
ANIONS										
ALKALINITY-HCO3	(MG/L)	33	33	319	319	286	294	294	205	205
ALKALINITY-CO3	(MG/L)	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHLORIDE	(MG/L)	2.1	2.1	33	33	54	140	140	20	20
FLUORIDE	(MG/L)	0.12	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	0.14	0.14
NITRATE NITROGEN	(MG/L)	0.59	0.59	<0.2	<0.2	0.22	<0.2	<0.2	18	18
SULFATE	(MG/L)	1.3	1.3	22	22	32	36	36	30	30
TOTAL SUSPENDED SOLIDS	(MG/L)	6.5	6.5	1	1	3	<1	<1	34	34
TURBIDITY	(NTU)	14	14	1.5	1.5	6.1	2	2	100	100

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-064 OLF DIS	GW-064 OLF TOT	GW-066 OLF DIS	GW-066 OLF TOT	GW-069 BG DIS	GW-069 BG TOT	GW-079 BG DIS	GW-079 BG TOT	GW-080 BG DIS	GW-080 BG TOT
METALS										
ALUMINUM	<0.02	26	<0.02	0.22	<0.02	0.042	<0.02	0.049	0.07	3.8
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARUM	0.047	0.19	0.13	0.14	0.4	0.43	0.17	0.16	0.019	0.058
BERYLLIUM	<0.0003	0.0022	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.035	0.044	0.064	0.077	0.13	0.1	0.02	0.015	0.011	0.019
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	100	110	140	130	14	14	35	33	3.4	4.1
CHROMIUM	<0.01	0.033	<0.01	0.035	<0.01	0.018	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.005	0.02	<0.005	0.043	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COBALT	0.012	0.038	<0.004	<0.004	<0.004	0.0069	<0.004	0.0065	<0.004	0.018
COPPER	1.9	30	<0.005	0.39	0.011	0.12	0.0061	0.072	0.17	4.3
IRON	<0.05	0.076	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
LEAD	<0.004	0.037	0.013	0.029	0.037	0.04	<0.004	<0.004	<0.004	0.0035
LITHIUM	17	20	26	27	6	6.2	0.0062	0.0062	0.009	0.015
MAGNESIUM	0.017	1.2	0.018	0.04	0.0057	0.01	0.049	0.048	0.054	0.093
MANGANESE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	<0.01	0.046	<0.01	0.034	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	1.3	6.8	3.1	3.4	4.8	4.9	1.3	1.4	1.6	4.2
POTASSIUM	<0.05	<0.05	<0.05	<0.05	<0.05	0.075	0.071	<0.05	<0.05	<0.05
SELENIUM	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SILVER	4.2	4.5	8.6	8.2	66	65	4.8	4.5	11	11
SODIUM	0.1	0.12	0.27	0.28	0.91	0.94	0.12	0.12	0.014	0.019
STRONTIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
THORIUM	0.00061	0.00093	0.011	0.0097	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
URANIUM	<0.005	0.046	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	0.0093	0.15	0.0078	0.018	0.0071	0.0079	0.0039	0.0043	0.014	0.023
ZINC										
ANIONS										
ALKALINITY-HCO3		301		297		142		106		34
ALKALINITY-CO3		<1		<1		<1		<1		<1
CHLORIDE		11		8.3		46		1.6		1.7
FLUORIDE		<0.1		<0.1		0.13		0.11		<0.1
NITRATE		5.4		7.4		<0.2		0.34		<0.2
NITROGEN		22		120		2.6		7.3		15
SULFATE										
TOTAL SUSPENDED SOLIDS		654		5		<1		1		51
TURBIDITY		480		1.6		0.45		1.1		50

APPENDIX E-1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-084 OLF DIS	GW-084 OLF TOT	GW-085 OLF DIS	GW-085 OLF TOT	GW-087 OLF DIS	GW-087 OLF TOT	GW-095 BG DIS	GW-095 BG TOT	GW-100 S3 DIS	GW-100 S3 TOT
METALS										
ALUMINUM	<0.02	0.59	<0.02	2.6	<0.02	0.96	<0.02	0.035	<0.02	0.33
ANTIMONY	<0.05	<0.05	0.064	0.062	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.15	0.16	0.6	0.63	0.12	0.15	0.026	0.027	0.95	0.97
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.023	0.01	0.023	0.01	0.14	0.088	0.93	0.97	0.029	0.023
CADMIUM	<0.003	<0.003	<0.003	<0.003	0.014	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	<0.002	<0.002	<0.002	<0.002	0.014	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	50	55	240	250	64	100	1.3	1.4	390	390
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	<0.005	<0.005	<0.005	<0.005	0.0061	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	<0.004	<0.004	<0.004	0.0049	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
IRON	0.0062	0.64	<0.005	2.6	0.022	1.7	0.0055	0.016	<0.005	0.32
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.004	<0.004	<0.004	<0.004	<0.004	0.0051	<0.004	<0.004	<0.004	<0.004
LITHIUM	0.0057	0.0063	0.015	0.017	0.014	0.01	0.07	0.073	0.02	0.021
MAGNESIUM	3.7	4.1	16	16	7.5	9.7	0.49	0.51	29	29
MANGANESE	0.01	0.074	0.002	0.09	0.61	0.95	0.011	<0.001	0.012	0.033
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	<0.01	<0.01	<0.01	0.048	0.017	<0.01	<0.01	<0.01	<0.01
POTASSIUM	0.67	1.1	1.8	3	4.3	4	2.1	2.5	3.5	4
SELENIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.15
SILVER	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	5.1	5.4	9.4	9.2	17	12	120	120	7	7.1
STRONTIUM	0.072	0.078	0.54	0.54	0.1	0.16	0.099	0.1	0.71	0.71
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	0.5	0.87	<0.0005 d	<0.0005 d	0.0017	0.0015
VANADIUM	<0.005	<0.005	<0.005	0.0074	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	0.0055	0.004	0.01	0.014	0.15	0.04	<0.002	0.0036	0.0098	0.0092
ANIONS										
ALKALINITY-HCO3		154		144		260		225		217
ALKALINITY-CO3		<1		<1		<1		32		<1
CHLORIDE		1.8		8.8		20		2.4		300
FLUORIDE		0.1		<0.1		<0.1		0.55		<0.1
NITRATE		<0.2		220		0.52		<0.2		190
NITROGEN		7.9		5.2		18		8.9		15
SULFATE										
TOTAL SUSPENDED SOLIDS		12		78		66		<1		1
TURBIDITY		5.6		50		90		0.4		6.2

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-115 S3 07/30/95 DIS	GW-115 S3 07/30/95 TOT	GW-124 S3 09/16/95 DIS	GW-124 S3 09/16/95 TOT	GW-162 BG 08/03/95 DIS	GW-162 BG 08/03/95 TOT	GW-228 OLF 09/17/95 DIS	GW-228 OLF 09/17/95 TOT	GW-229 OLF 09/17/95 DIS	GW-229 OLF 09/17/95 TOT
METALS										
ALUMINUM	<0.02	0.047	0.023	0.029	<0.02	<0.02	0.037	1.2	0.027	0.031
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	0.065	<0.05	<0.05	<0.05	<0.05	<0.05	0.052	0.063
BARIUM	0.22	0.22	0.19	0.19	0.28	0.31	0.22	0.31	1.1	1.1
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.02	0.1	0.037	0.037	0.042	0.052	0.098	0.041	2.1	2.1
CADMIUM	<0.003	<0.003	<0.003	<0.003	0.0036	<0.003	<0.003	<0.003	<0.003	<0.003
CALCIUM	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	78	77	150	150	32	34	110	120	160	160
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.014	0.014
COPPER	0.0045	0.0051	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
IRON	0.49	0.53	0.23	0.36	0.0098	1.1	0.0065	26	10	11
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.0063	<0.004	<0.004
LITHIUM	0.016	0.02	<0.004	<0.004	0.04	0.043	0.016	0.017	0.037	0.038
MAGNESIUM	13	13	18	19	5.2	5.7	40	43	29	29
MANGANESE	0.44	0.45	0.013	0.017	0.12	0.14	0.15	0.36	6.1	6
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.039	0.04
POTASSIUM	0.78	1.6	6.5	6.6	2.9	2.9	3.5	3.3	6.7	6.8
SELENIUM	<0.05	0.066	0.062	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.006	0.0066	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	11	11	19	19	13	14	19	18	48	48
STRONTIUM	0.13	0.13	0.32	0.32	0.79	0.87	0.6	0.63	0.41	0.41
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	0.0039	0.0038	<0.0005 d	<0.0005 d	0.0065	0.0077	0.013	0.014
VANADIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	0.0061	0.0022	0.0095	0.0075	<0.002	0.0051	<0.002	0.014	0.0077	0.003
ANIONS										
ALKALINITY-HCO3		240		249		127		230		453
ALKALINITY-CO3		<1		<1		<1		<1		<1
CHLORIDE		6.7		27		3.7		43		120
FLUORIDE		<0.1		0.17		<0.1		0.15		<0.1
NITRATE NITROGEN		0.42		51		<0.2		40		0.54
SULFATE		17		43		9.1		37		23
TOTAL SUSPENDED SOLIDS		<1		<1		<1		502		6
TURBIDITY		4.5		2.3		5.9		1100		25

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-236 S3 DIS 09/16/95	GW-236 S3 TOT 09/16/95	GW-248 BG DIS 08/08/95	GW-248 BG TOT 08/08/95	GW-257 BG DIS 08/08/95	GW-257 BG TOT 08/08/95	GW-276 S3 DIS 07/29/95	GW-276 S3 TOT 07/29/95	GW-287 BG DIS 09/18/95	GW-287 BG TOT 09/18/95
METALS										
ALUMINUM	1.7	2.9	<0.02	0.066	<0.02	9.5	16	18	0.041	6.6
ANTIMONY	<0.05	<0.054 d	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.054 d	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.053
BARIUM	0.38	0.39	0.081	0.077	0.067	0.19	0.6	0.83	0.14	0.16
BERYLLIUM	0.0035	0.0036	<0.0003	<0.0003	<0.0003	0.00051	0.012	0.012	<0.0003	<0.0003
BORON	0.03	0.06	0.019	0.025	0.011	0.012	0.062	0.051	0.032	0.025
CADMIUM	0.0036	0.0045	<0.003	<0.003	<0.003	<0.003	0.053	0.056	<0.003	<0.003
CADMIUM	0.0049	0.005	<0.002	<0.002	<0.002	<0.002	0.061	0.058	<0.003	<0.003
CALCIUM	86	86	75	78	31	31	150	140	43	40
CHROMIUM	<0.01	<0.011 d	<0.01	<0.01	<0.01	0.018	<0.01	0.013	<0.01	0.012
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	0.023	<0.01	0.022	<0.01	<0.01
COBALT	0.032	0.029	<0.005	<0.005	<0.005	0.01	0.21	0.21	<0.005	<0.005
COPPER	0.0069	0.0069	<0.004	<0.004	<0.004	0.012	0.037	0.043	<0.004	0.0094
IRON	0.041	0.82	<0.005	0.17	0.0065	11	<0.005	1.4	0.081	3.5
LEAD	<0.05	<0.054 d	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.004	<0.004	<0.004	<0.004	<0.004	0.023	<0.004	0.011	<0.005	<0.005
LITHIUM	<0.004	<0.0043 d	0.014	0.015	0.0045	0.01	0.038	0.043	0.0075	0.011
MANGANESE	13	13	10	11	2.8	4.4	29	28	5.2	6.6
MANGANESE	3.4	3.4	0.27	0.21	0.0054	1.4	10	10	0.062	0.12
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00042	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.011 d	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	0.063	0.071	<0.01	<0.01	<0.01	0.014	0.61	0.61	0.11	0.081
POTASSIUM	4.8	5	2.1	1.9	1.9	3.9	14	14	1.8	2.6
SELENIUM	<0.05	<0.054 d	<0.05	<0.05	<0.05	<0.05	0.077	<0.05	<0.05	<0.05
SILVER	<0.006	<0.0065 d	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	33	33	11	12	6.1	6.4	86	83	5.1	5.3
STRONTIUM	0.23	0.23	0.23	0.25	0.047	0.052	0.37	0.35	0.082	0.083
THORIUM	<0.2	<0.22 d	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	0.0081	0.0096	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	2	2	<0.0005 d	0.0013
VANADIUM	<0.005	<0.0054 d	<0.005	<0.005	<0.005	0.013	<0.005	<0.005	<0.005	<0.005
ZINC	0.041	0.049	<0.002	0.0025	0.0039	0.03	0.2	0.19	0.012	0.05
ANIONS										
ALKALINITY-HCO3		8		222		91				127
ALKALINITY-CO3		<1		<1		<1				<1
CHLORIDE		48		2.1		2.2		150		3.4
FLUORIDE		0.47		0.12		0.17		5.3		0.14
NITRATE NITROGEN		65		<0.2		0.36		220		<0.2
SULFATE		45		42		7.6		18		6.3
TOTAL SUSPENDED SOLIDS		16		1		197		234		15
TURBIDITY		22		1.2		125		1400		84

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-288 BG 08/09/95 DIS	GW-288 BG 08/09/95 TOT	GW-289 BG 08/08/95 DIS	GW-289 BG 08/08/95 TOT	GW-290 BG 08/07/95 DIS	GW-290 BG 08/07/95 TOT	GW-291 BG 08/03/95 DIS	GW-291 BG 08/03/95 TOT	GW-312 RS 08/06/95 DIS	GW-312 RS 08/06/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	1.4	2.4	0.077	0.02	0.077	0.02	0.1	2.1	4
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.056	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.21	0.11	0.23	0.23	0.23	0.15	0.15	0.028	0.033
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00047	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.013	0.018	0.68	0.7	0.7	2.3	2.2	0.03	0.011
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0034	<0.003	<0.003
CADMIUM	AAS (MG/L)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	130	160
CALCIUM	ICAP (MG/L)	36	28	62	57	57	45	43	0.074	0.084
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.005	<0.005
CHROMIUM	AAS (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0086	0.01
COBALT	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.066	<0.005	1.6
COPPER	ICAP (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.0048	<0.005	<0.005
IRON	ICAP (MG/L)	0.018	3.2	0.33	0.41	0.41	<0.005	0.16	<0.005	<0.005
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.013	0.014
LEAD	AAS (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.0087	0.032	1.2
LITHIUM	ICAP (MG/L)	0.0077	0.01	0.062	0.11	0.11	0.011	0.0087	<0.0002	<0.0002
MAGNESIUM	ICAP (MG/L)	4	4.3	3.7	9.3	9.3	8.6	8.4	<0.001	<0.001
MANGANESE	ICAP (MG/L)	0.0084	0.081	0.0032	0.11	0.097	0.0094	0.018	<0.0002	<0.0002
MERCURY	CVA (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.001
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	1.1	2.1	1.2	2.6	2.6	3	3.1	<0.006	<0.006
SELENIUM	ICAP (MG/L)	<0.05	0.087	0.072	<0.05	<0.05	<0.05	<0.05	<0.006	<0.006
SILVER	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.0078	<0.006	<0.006
SODIUM	ICAP (MG/L)	4.4	4.3	5	9.1	9.1	9.7	9.5	12	12
STRONTIUM	ICAP (MG/L)	0.071	0.071	0.053	0.27	0.26	0.098	0.095	0.32	0.34
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	<0.0005 d	<0.0005 d	0.0012	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	0.011
ZINC	ICAP (MG/L)	0.0077	0.014	0.01	0.0095	0.0044	0.0094	0.015	0.08	0.026
ANIONS										
ALKALINITY-HCO3	(MG/L)	112	87	150	156	150	156	156	<1	<1
ALKALINITY-CO3	(MG/L)	<1	<1	<1	<1	<1	<1	<1	62	62
CHLORIDE	(MG/L)	3.1	3.2	3.4	4.5	3.4	4.5	4.5	0.26	0.26
FLUORIDE	(MG/L)	<0.1	0.11	0.13	<0.1	0.13	<0.1	<0.1	0.54	0.54
NITRATE NITROGEN	(MG/L)	0.25	0.49	<0.2	0.31	<0.2	0.31	0.31	6.3	6.3
SULFATE	(MG/L)	5.2	5.7	14	18	14	18	18	40	40
TOTAL SUSPENDED SOLIDS	(MG/L)	28	54	22	2.5	22	2.5	2.5	36	36
TURBIDITY	(NTU)	19	34	7	2	7	2	2		

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-315 SPI 08/21/95	GW-315 SPI 08/21/95	GW-317 SPI 08/15/95	GW-346 S3 08/31/95	GW-346 S3 08/31/95	GW-347 S3 08/15/95	GW-347 S3 08/15/95	GW-348 S3 08/21/95	GW-348 S3 08/21/95
	DIS	TOT	DIS	DIS	TOT	DIS	TOT	DIS	TOT
METALS									
ALUMINUM	0.053	0.051	<0.02	0.044	0.058	0.031	0.071	0.051	0.035
ANTIMONY	<0.05	0.084	<0.05	<0.1 d	<0.1 d	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	0.18	0.18	<0.05	<0.05	<0.05	<0.05
BARIUM	0.048	0.047	0.021	1.5	1.1	0.017	0.016	0.083	0.086
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0006 d	<0.0006 d	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.061	0.024	0.01	0.12	0.13	0.015	0.018	0.031	0.022
CADMIUM	<0.003	<0.003	<0.003	<0.006 d	<0.006 d	<0.003	<0.003	<0.003	<0.003
CALCIUM	98	97	48	740	780	21	21	82	84
CHROMIUM	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05
COBALT	0.024	0.063	0.0048	<0.01 d	<0.01 d	<0.004	<0.004	0.0043	0.0047
COPPER	0.15	0.016	1.7	0.044	0.27	0.0074	0.11	0.015	0.053
IRON	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.05	<0.05	<0.05	<0.05
LEAD	<0.004	<0.004	<0.004	0.14	0.15	<0.004	<0.004	<0.004	<0.004
LITHIUM	11	11	22	190	190	1.7	1.7	17	18
MAGNESIUM	0.0018	0.0015	0.0084	0.27	0.27	0.0026	0.0061	0.0017	0.0018
MANGANESE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01	<0.01	<0.01
POTASSIUM	3.5	4.1	1.6	17	17	3.2	3.3	1.8	1.7
SELENIUM	<0.05	<0.05	0.08	<0.1 d	0.12	<0.05	0.053	<0.05	0.053
SILVER	<0.006	<0.006	<0.006	<0.012 d	<0.012 d	<0.006	<0.006	<0.006	<0.006
SODIUM	6.5	6.3	2.4	100	94	0.68	0.71	3.3	3.4
STRONTIUM	0.15	0.15	0.036	17	16	0.018	0.018	0.092	0.095
THORIUM	<0.2	<0.2	<0.2	<0.4 d	<0.4 d	<0.2	<0.2	<0.2	<0.2
URANIUM	0.0016	0.0016	<0.0005 d	0.0032	0.0033	<0.0005 d	<0.0005 d	0.00074	0.00075
VANADIUM	<0.005	<0.005	<0.005	<0.01 d	<0.01 d	<0.005	<0.005	<0.005	<0.005
ZINC	0.031	0.005	0.014	0.018	<0.004 d	0.0092	0.0091	0.011	0.0051
ANIONS									
ALKALINITY-HCO3	.	239	220	.	131	.	67	.	252
ALKALINITY-CO3	.	<1	<1	.	<1	.	<1	.	<1
CHLORIDE	.	11	1.7	.	38	.	1.4	.	9.9
FLUORIDE	.	<0.1	0.11	.	<0.1	.	<0.1	.	<0.1
NITRATE NITROGEN	.	15	0.3	.	830	.	0.25	.	7.6
SULFATE	.	22	4.4	.	29	.	<1	.	7.6
TOTAL SUSPENDED SOLIDS	.	<1	<1	.	<1	.	1	.	<1
TURBIDITY	.	0.16	1.7	.	1.4	.	5.4	.	0.41

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION	GW-363 OLF	GW-363 DIS	GW-370 OLF	GW-370 DIS	GW-370 BG	GW-372 DIS	GW-372 BG	GW-372 TOT	GW-373 DIS	GW-373 BG	GW-373 TOT	GW-537 OLF	GW-537 DIS	GW-537 BG	GW-537 TOT
DATE SAMPLED	07/19/95	07/19/95	07/19/95	08/08/95	08/08/95	08/07/95	08/07/95	08/07/95	08/08/95	08/08/95	08/08/95	08/03/95	08/03/95	08/08/95	08/03/95
TYPE	OLF	DIS	TOT	DIS	TOT	DIS	TOT	TOT	DIS	TOT	TOT	OLF	DIS	TOT	TOT
METALS															
ALUMINUM	<0.02	1.5	0.053	0.21	<0.02	0.27	0.023	0.32	<0.04 d	0.14	<0.1 d	<0.04 d	0.32	0.14	<0.1 d
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d
BARIUM	0.034	0.06	0.062	0.068	0.066	0.069	0.034	0.049	0.034	0.049	0.049	2.4	2.4	0.049	2.6
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0006 d	<0.0006 d	<0.0006 d	<0.0006 d
BORON	0.31	0.3	0.0096	0.017	0.011	0.013	0.17	0.16	0.17	0.16	0.16	<0.008 d	<0.008 d	<0.008 d	0.036
CADMIUM	<0.003	<0.003	0.0036	0.0034	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.006 d	<0.006 d	<0.006 d	<0.006 d
CALCIUM	1.6	2.7	37	35	56	56	1.3	1.5	1.3	1.5	1.5	1100	1100	1200	1200
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.024	0.024	0.021	0.021
CHROMIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01 d	<0.01 d	<0.01 d	<0.01 d
COBALT	<0.004	0.0074	<0.004	0.0079	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.008 d	<0.008 d	<0.008 d	<0.008 d
COPPER	0.021	2.7	0.027	0.44	0.063	0.48	0.086	2.6	0.086	2.6	2.6	0.063	0.063	0.063	0.3
IRON	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.1 d	<0.1 d
LEAD	0.038	0.042	0.008	0.007	0.013	0.014	0.035	0.033	0.035	0.033	0.033	0.031	0.031	0.032	0.032
LITHIUM	0.58	1.2	3.6	3.5	11	11	0.12	0.24	0.12	0.24	0.24	74	74	78	78
MAGNESIUM	<0.001	0.02	0.0044	0.013	0.012	0.024	0.0023	0.015	0.0023	0.015	0.015	0.0075	0.0075	0.013	0.013
MANGANESE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.02 d	<0.02 d
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.02 d	<0.02 d
NICKEL	1.4	2.2	<0.6	<0.6	1.7	1.9	1.3	0.9	1.3	0.9	0.9	2.2	2.2	2.5	2.5
POTASSIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.1 d	<0.1 d
SELENIUM	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.012 d	<0.012 d	<0.012 d	<0.012 d
SILVER	110	120	11	10	9.2	8.5	110	110	110	110	110	33	33	35	35
SODIUM	0.066	0.08	0.063	0.06	0.16	0.17	0.06	0.061	0.06	0.061	0.061	2.8	2.8	3	3
STRONTIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4 d	<0.4 d	<0.4 d	<0.4 d
THORIUM	<0.0005 d	<0.0005 d	<0.0005 d	0.0007	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	0.0016	0.0016	0.0015	0.0015
URANIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.013	0.013	<0.01 d	<0.01 d
VANADIUM	0.0036	0.0085	0.0075	0.015	0.0048	0.002	0.004	0.0034	0.004	0.0034	0.0034	<0.004 d	<0.004 d	<0.004 d	<0.004 d
ZINC															
ANIONS															
ALKALINITY-HCO3		211		89		182		187						279	279
ALKALINITY-CO3		34		<1		<1		26						<1	<1
CHLORIDE		1.9		2.3		2.6		2.1						38	38
FLUORIDE		0.21		0.13		0.17		1.4						<0.1	<0.1
NITRATE		<0.2		0.31		<0.2		<0.2						900	900
NITROGEN		6.8		12		29		29						3.6	3.6
SULFATE															
TOTAL SUSPENDED SOLIDS		55		45		<1		<1						3	3
TURBIDITY		36		20		22		2.4						2.1	2.1

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-613 S3 DIS	GW-613 S3 TOT	GW-614 S3 DIS	GW-614 S3 TOT	GW-621 EXP DIS	GW-621 EXP TOT	GW-627 BG DIS	GW-627 BG TOT	GW-637 OLF DIS	GW-637 OLF TOT
METALS										
ALUMINUM	<0.02	0.043	0.038	0.37	<0.02	4.9	<0.02	<0.02	<0.02	0.46
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARYLLIUM	0.054	0.063	0.17	0.17	0.017	0.05	0.043	0.042	0.13	0.14
BORON	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
CADMIUM	0.0086	0.015	0.07	0.022	0.0083	0.056	0.46	0.45	0.021	0.02
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CALCIUM	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CHROMIUM	26	30	48	47	47	67	83	80	80	78
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	0.094	<0.01	<0.01	<0.01	<0.01
COBALT	<0.01	<0.01	<0.01	<0.01	<0.01	0.081	<0.01	<0.01	<0.01	<0.01
COPPER	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
IRON	0.0073	0.0053	0.013	0.01	<0.004	0.018	<0.004	0.0082	<0.004	0.012
IRON	<0.005	0.14	0.036	0.92	<0.005	4.4	0.027	0.38	<0.005	0.65
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.004	<0.004	<0.004	<0.004	<0.004	0.0056	<0.004	<0.004	<0.004	<0.004
LITHIUM	0.0057	0.007	0.013	0.014	<0.004	0.008	0.084	0.083	<0.004	<0.004
MAGNESIUM	2.7	3.1	11	11	9.6	13	0.2	0.2	5.7	6
MANGANESE	0.0016	0.002	0.016	0.018	<0.001	0.31	0.0044	0.0072	0.018	0.019
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	<0.01	<0.01	<0.01	<0.01	0.11	<0.01	<0.01	<0.01	<0.01
POTASSIUM	<0.6	0.71	1.9	1.3	1.8	4.5	0.98	0.8	1.9	0.95
SELENIUM	<0.05	0.092	<0.05	0.098	<0.05	0.082	<0.05	<0.05	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	3.8	3.8	11	11	3.1	4	270	260	2.7	2.7
STRONTIUM	0.043	0.05	0.64	0.62	0.055	0.078	0.071	0.07	0.18	0.19
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	<0.0005 d	0.00073	0.0031	0.0036	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	<0.005	<0.005	<0.005	<0.005	<0.005	0.011	<0.005	<0.005	<0.005	<0.005
ZINC	0.012	0.0067	0.0087	0.019	0.0038	0.022	0.0065	0.039	0.0076	0.0041
ANIONS										
ALKALINITY-HCO3		98		170 h		159		488		224
ALKALINITY-CO3		<1		<1 h		<1		68		<1
CHLORIDE		1.8		1.6		4.9		31		3.2
FLUORIDE		0.11		<0.1		<0.1		5.1		<0.1
NITRATE NITROGEN		<0.2		<0.2		5.6		<0.2		<0.2
SULFATE		5.6		11		4.8		31		7.5
TOTAL SUSPENDED SOLIDS		<1		16		43		<1		<1
TURBIDITY		0.5		5.5		55		0.9		3

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-642 BG 08/07/95	GW-642 BG 08/07/95	GW-642 BG 08/07/95	GW-652 BG 09/19/95	GW-652 BG 09/19/95	GW-652 BG 09/19/95	GW-653 BG 09/20/95	GW-653 BG 09/20/95	GW-654 BG 09/18/95	GW-683 EXP 08/06/95	GW-683 EXP 08/06/95
	DIS	TOT	TOT	DIS	TOT	TOT	DIS	TOT	DIS	TOT	TOT
METALS											
ALUMINUM	<0.02	0.071	4.2	<0.02	<0.05	1.6	<0.02	<0.05	0.3	<0.02	<0.02
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.13	0.14	0.18	0.17	0.18	0.062	0.12	0.13	0.11	0.11	0.11
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.015	0.014	0.027	0.037	0.026	0.023	0.065	0.094	0.1	0.081	0.081
CADMIUM	<0.003	0.0038	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	8.4	9.7	63	74	63	2.2	19	20	64	64	64
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
IRON	2.9	3.2	5	0.02	5	1.4	0.066	0.38	<0.005	0.017	0.017
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
LITHIUM	0.039	0.04	0.014	0.012	0.014	<0.004	0.031	0.034	0.01	0.011	0.011
MAGNESIUM	8.3	8.8	11	9.8	11	1.4	4.7	5	20	20	20
MANGANESE	1.6	1.9	0.061	0.0055	0.061	0.065	0.25	0.26	0.0023	0.0029	0.0029
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	0.015	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	1.8	1.7	4.3	3.4	4.3	2.1	1.8	2.1	1.8	1.8	1.8
SELENIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	7.9	8.1	1.3	1.7	1.3	2.9	31	36	7.7	7.5	7.5
STRONTIUM	0.025	0.028	0.27	0.25	0.27	0.22	0.21	0.24	0.13	0.13	0.13
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	<0.005	<0.005	0.0058	<0.005	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	0.014	0.016	0.02	<0.002	0.02	0.018	0.0088	0.014	0.0033	0.002	0.002
ANIONS											
ALKALINITY-HCO3		62	209		209	13		126		205	205
ALKALINITY-CO3		<1	<1		<1	<1		<1		<1	<1
CHLORIDE		2.1	3.7		3.7	1.9		1.6		13	13
FLUORIDE		0.46	<0.1		<0.1	<0.1		0.51		0.19	0.19
NITRATE NITROGEN		<0.2	0.53		0.53	<0.2		<0.2		9.3	9.3
SULFATE		9.9	7.9		7.9	1.9		16		15	15
TOTAL SUSPENDED SOLIDS		8.5	25		25	72		3		<1	<1
TURBIDITY		2.9	93		93	36		7.7		0.4	0.4

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-684 EXP 08/06/95	GW-684 EXP 08/06/95	GW-684 EXP 08/06/95	GW-685 EXP 08/06/95	GW-685 EXP 08/06/95	GW-694 EXP 08/31/95	GW-694 EXP 08/31/95	GW-695 EXP 08/30/95	GW-703 EXP 08/30/95	GW-703 EXP 08/30/95
	DIS	TOT	DIS	TOT	DIS	TOT	DIS	TOT	DIS	TOT
METALS										
ALUMINUM	ICAP (MG/L)	0.5	ICAP (MG/L)	0.042	ICAP (MG/L)	0.02	ICAP (MG/L)	0.02	ICAP (MG/L)	0.5
ANTIMONY	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05
ARSENIC	ICAP (MG/L)	<0.05	ICAP (MG/L)	0.056	ICAP (MG/L)	0.061	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05
BARIUM	ICAP (MG/L)	0.11	ICAP (MG/L)	0.076	ICAP (MG/L)	0.2	ICAP (MG/L)	0.19	ICAP (MG/L)	0.048
BERYLLIUM	ICAP (MG/L)	<0.0003	ICAP (MG/L)	<0.0003	ICAP (MG/L)	<0.0003	ICAP (MG/L)	<0.0003	ICAP (MG/L)	<0.0003
BORON	ICAP (MG/L)	0.078	ICAP (MG/L)	0.042	ICAP (MG/L)	0.27	ICAP (MG/L)	0.0083	ICAP (MG/L)	0.051
CADMIUM	ICAP (MG/L)	<0.003	ICAP (MG/L)	<0.003	ICAP (MG/L)	<0.003	ICAP (MG/L)	<0.003	ICAP (MG/L)	<0.003
CADMIUM	AAS (MG/L)	53	AAS (MG/L)	82	AAS (MG/L)	130	AAS (MG/L)	31	AAS (MG/L)	70
CALCIUM	ICAP (MG/L)	<0.01	ICAP (MG/L)	<0.01	ICAP (MG/L)	<0.01	ICAP (MG/L)	0.025	ICAP (MG/L)	<0.01
CHROMIUM	ICAP (MG/L)	<0.005	ICAP (MG/L)	<0.005	ICAP (MG/L)	<0.005	ICAP (MG/L)	<0.005	ICAP (MG/L)	<0.005
CHROMIUM	AAS (MG/L)	<0.004	ICAP (MG/L)	<0.004	ICAP (MG/L)	<0.004	ICAP (MG/L)	<0.004	ICAP (MG/L)	<0.004
COBALT	ICAP (MG/L)	0.0098	ICAP (MG/L)	0.43	ICAP (MG/L)	0.79	ICAP (MG/L)	0.006	ICAP (MG/L)	0.0072
COPPER	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05
IRON	ICAP (MG/L)	0.031	ICAP (MG/L)	0.0074	ICAP (MG/L)	0.047	ICAP (MG/L)	0.0097	ICAP (MG/L)	0.017
LEAD	ICAP (MG/L)	16	ICAP (MG/L)	24	ICAP (MG/L)	29	ICAP (MG/L)	18	ICAP (MG/L)	32
LITHIUM	ICAP (MG/L)	0.012	ICAP (MG/L)	0.072	ICAP (MG/L)	0.18	ICAP (MG/L)	0.0021	ICAP (MG/L)	0.22
MAGNESIUM	ICAP (MG/L)	<0.0002	ICAP (MG/L)	<0.0002	ICAP (MG/L)	<0.0002	ICAP (MG/L)	<0.0002	ICAP (MG/L)	<0.0002
MANGANESE	ICAP (MG/L)	<0.01	ICAP (MG/L)	<0.01	ICAP (MG/L)	<0.01	ICAP (MG/L)	<0.01	ICAP (MG/L)	<0.01
MERCURY	ICAP (MG/L)	<0.01	ICAP (MG/L)	<0.01	ICAP (MG/L)	0.012	ICAP (MG/L)	<0.01	ICAP (MG/L)	<0.01
MOLYBDENUM	ICAP (MG/L)	16	ICAP (MG/L)	2.5	ICAP (MG/L)	6.3	ICAP (MG/L)	7.2	ICAP (MG/L)	3.2
NICKEL	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05	ICAP (MG/L)	<0.05
POTASSIUM	ICAP (MG/L)	<0.006	ICAP (MG/L)	<0.006	ICAP (MG/L)	<0.006	ICAP (MG/L)	<0.006	ICAP (MG/L)	<0.006
SELENIUM	ICAP (MG/L)	9.4	ICAP (MG/L)	21	ICAP (MG/L)	23	ICAP (MG/L)	29	ICAP (MG/L)	11
SILVER	ICAP (MG/L)	0.14	ICAP (MG/L)	0.12	ICAP (MG/L)	0.35	ICAP (MG/L)	0.05	ICAP (MG/L)	0.19
SODIUM	ICAP (MG/L)	<0.2	ICAP (MG/L)	<0.2	ICAP (MG/L)	<0.2	ICAP (MG/L)	<0.2	ICAP (MG/L)	<0.2
STRONTIUM	ICAP (MG/L)	0.042	ICAP (MG/L)	0.0063	ICAP (MG/L)	0.12	ICAP (MG/L)	0.0015	ICAP (MG/L)	0.003
THORIUM	ICAP (MG/L)	<0.005	ICAP (MG/L)	<0.005	ICAP (MG/L)	<0.005	ICAP (MG/L)	<0.005	ICAP (MG/L)	<0.005
URANIUM	ICAP (MG/L)	0.0097	ICAP (MG/L)	<0.002	ICAP (MG/L)	0.0038	ICAP (MG/L)	0.0068	ICAP (MG/L)	0.017
VANADIUM	ICAP (MG/L)		ICAP (MG/L)		ICAP (MG/L)		ICAP (MG/L)		ICAP (MG/L)	
ZINC	ICAP (MG/L)		ICAP (MG/L)		ICAP (MG/L)		ICAP (MG/L)		ICAP (MG/L)	
ANIONS										
ALKALINITY-HCO3	(MG/L)	158	(MG/L)	261	(MG/L)	302	(MG/L)	183	(MG/L)	202
ALKALINITY-CO3	(MG/L)	<1	(MG/L)	<1	(MG/L)	<1	(MG/L)	<1	(MG/L)	<1
CHLORIDE	(MG/L)	20	(MG/L)	45	(MG/L)	40	(MG/L)	7	(MG/L)	18
FLUORIDE	(MG/L)	0.2	(MG/L)	0.13	(MG/L)	0.28	(MG/L)	0.12	(MG/L)	0.18
NITRATE	(MG/L)	8.8	(MG/L)	3	(MG/L)	16	(MG/L)	6.8	(MG/L)	19
SULFATE	(MG/L)	14	(MG/L)	19	(MG/L)	25	(MG/L)	9.1	(MG/L)	22
TOTAL SUSPENDED SOLIDS	(MG/L)	16	(MG/L)	3.5	(MG/L)	<1	(MG/L)	66	(MG/L)	3.5
TURBIDITY	(NTU)	14	(NTU)	13	(NTU)	2.8	(NTU)	32	(NTU)	14

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GM-704 EXP DIS	GM-704 EXP TOT	GM-706 EXP DIS	GM-706 EXP TOT	GM-710 EXP DIS	GM-710 EXP TOT	GM-711 EXP DIS	GM-711 EXP TOT	GM-712 EXP DIS	GM-712 EXP TOT
ALUMINUM	<0.02	<0.02	<0.02	<0.02	0.065	0.077	0.099	<0.04 d	<0.02	<0.02
ANTIMONY	<0.05	<0.05	<0.05	<0.05	0.065	<0.05	<0.1 d	<0.1 d	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.05	<0.05
BARIUM	0.08	0.083	0.18	0.17	0.0085	0.0083	0.012	0.0095	0.048	0.048
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003 d	<0.0006 d	<0.0003	<0.0003
BORON	0.052	0.056	0.22	0.21	0.46	0.27	1.3	1.3	0.12	0.095
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0063	<0.006 d	<0.003	<0.003
CALCIUM	62	62	120	110	540	540	530	530	78	78
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01
CHROMIUM	AAS (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01 d	<0.01 d	<0.005	<0.005
COPPER	<0.004	0.005	<0.004	<0.004	0.006	0.0078	0.011	0.01	0.0041	0.0057
IRON	0.12	2.1	2.7	2.6	7.6	7.7	8	8	0.37	0.52
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.05	<0.05
LITHIUM	0.014	0.015	0.038	0.035	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
MAGNESIUM	31	31	26	24	190	190	230	230	36	36
MANGANESE	0.037	0.042	0.096	0.088	0.21	0.2	0.067	0.063	0.015	0.016
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01
NICKEL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01
POTASSIUM	1.9	2.3	5.4	5.2	9.4	9	24	23	1.6	1.3
SELENIUM	0.059	<0.05	<0.05	<0.05	<0.05	0.099	<0.1 d	<0.1 d	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.012 d	<0.012 d	<0.006	<0.006
SODIUM	12	12	20	18	230	230	1200	1200	19	20
STRONTIUM	0.39	0.38	0.32	0.29	8.7	8.5	13	13	1.6	1.6
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4 d	<0.4 d	<0.2	<0.2
URANIUM	0.0077	0.0076	0.12	0.11	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01 d	0.012	<0.005	<0.005
ZINC	<0.002	0.0077	<0.002	0.0055	<0.002	<0.002	<0.004 d	<0.004 d	<0.002	0.0031
ANIONS										
ALKALINITY-HCO3		200		308		154		154		190
ALKALINITY-CO3		<1		<1		<1		<1		<1
CHLORIDE		23		38		390		1700		18
FLUORIDE		0.21		0.28		1.6		1.4		0.6
NITRATE NITROGEN		15		18		<0.2		<0.2		0.63
SULFATE		21		25		2000		1900		160
TOTAL SUSPENDED SOLIDS		2.5		<1		4		2		<1
TURBIDITY		22		11		23		95		5.6

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-713 EXP 07/27/95	GW-713 EXP 07/27/95	GW-714 EXP 07/29/95	GW-714 EXP 07/29/95	GW-715 EXP 07/29/95	GW-723 EXP 09/13/95	GW-724 EXP 09/24/95	GW-724 EXP 09/24/95
	DIS	TOT	DIS	TOT	DIS	TOT	DIS	TOT
METALS								
ALUMINUM	<0.02	<0.02	0.036	0.13	<0.02	<0.02	<0.02	<0.02
ANTIMONY	<0.05	0.054	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.049	0.049	0.068	0.064	0.069	0.063	0.17	0.17
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.099	0.11	0.075	0.09	0.061	0.061	0.069	0.075
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	64	63	57	56	74	53	91	93
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	<0.004	0.0071	0.01	0.004	<0.004	0.021	0.0045	<0.004
IRON	0.78	0.94	<0.005	0.58	0.3	5.5	0.021	0.16
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
LITHIUM	0.02	0.019	0.011	0.0097	<0.004	0.015	0.019	0.016
MAGNESIUM	31	30	23	22	18	29	40	41
MANGANESE	0.017	0.017	0.0026	0.0085	0.025	0.13	0.0065	0.0069
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	<0.01	<0.01
POTASSIUM	2.4	2	1.4	<0.6	1.8	3.4	2.4	2.2
SELENIUM	<0.05	0.11	0.057	<0.05	0.1	<0.05	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	15	15	3.9	3.6	11	9.1	23	23
STRONTIUM	1.8	1.8	0.2	0.21	0.098	1.3	1.2	1.2
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	0.0029	0.003	0.0012	0.0019	<0.0005 d	0.00068
VANADIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	0.0023	0.013	<0.002	0.011	0.0052	0.015	0.018	0.0028
ANIONS								
ALKALINITY-HCO3	.	188	.	197	235	204	.	214
ALKALINITY-CO3	.	<1	.	<1	<1	<1	.	<1
CHLORIDE	.	13	.	8.5	25	9.5	.	62
FLUORIDE	.	0.58	.	0.14	<0.1	0.44	.	0.2
NITRATE	.	0.53	.	3.9	1.2	6.7	.	38
SULFATE	.	110	.	23	6.6	41	.	25
TOTAL SUSPENDED SOLIDS	.	<1	.	126	<1	5	.	<1
TURBIDITY	.	16	.	4.9	3.4	20	.	1.4

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION	DATE SAMPLED	TYPE	GW-725 EXP 09/25/95	GW-725 DIS 09/25/95	GW-736 EXP 09/26/95	GW-736 DIS 09/26/95	GW-737 EXP 09/26/95	GW-737 DIS 09/26/95	GW-738 EXP 09/17/95	GW-738 DIS 09/17/95	GW-739 EXP 09/16/95	GW-739 DIS 09/16/95	GW-739 EXP 09/16/95	GW-739 DIS 09/16/95	GW-739 EXP 09/16/95	GW-739 DIS 09/16/95
METALS																
ALUMINUM	ICAP (MG/L)		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ANTIMONY	ICAP (MG/L)		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)		0.25	0.25	0.21	0.21	0.22	0.22	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
BERYLLIUM	ICAP (MG/L)		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)		0.043	0.043	0.041	0.041	0.039	0.039	0.031	0.031	0.028	0.028	0.012	0.012	0.012	0.012
CADMIUM	ICAP (MG/L)		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)		160	160	160	160	150	150	110	110	60	60	62	62	62	62
CALCIUM	ICAP (MG/L)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	ICAP (MG/L)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CHROMIUM	AAS (MG/L)		<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
COBALT	ICAP (MG/L)		0.05	0.05	0.4	0.4	0.22	0.22	0.073	0.073	0.17	0.17	0.7	0.7	0.7	0.7
COPPER	ICAP (MG/L)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
IRON	ICAP (MG/L)		<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
LEAD	ICAP (MG/L)		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)		0.0047	0.0047	0.0042	0.0042	0.004	0.004	0.0066	0.0066	0.014	0.014	0.015	0.015	0.015	0.015
LITHIUM	ICAP (MG/L)		29	29	24	24	25	25	24	24	28	28	29	29	29	29
MAGNESIUM	ICAP (MG/L)		0.48	0.48	1	1	0.88	0.88	0.0002	0.0002	0.025	0.025	0.028	0.028	0.028	0.028
MANGANESE	ICAP (MG/L)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	CVA (MG/L)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	ICAP (MG/L)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)		3.2	3.2	3.4	3.4	3.1	3.1	2.4	2.4	2.2	2.2	1.9	1.9	1.9	1.9
POTASSIUM	ICAP (MG/L)		0.057	0.057	0.11	0.11	0.057	0.057	0.069	0.069	0.065	0.065	<0.05	<0.05	<0.05	<0.05
SELENIUM	ICAP (MG/L)		<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SILVER	ICAP (MG/L)		20	20	21	21	21	21	7.6	7.6	2.5	2.5	2.5	2.5	2.5	2.5
SODIUM	ICAP (MG/L)		0.47	0.47	0.31	0.31	0.34	0.34	0.12	0.12	0.1	0.1	0.11	0.11	0.11	0.11
STRONTIUM	ICAP (MG/L)		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
THORIUM	ICAP (MG/L)		0.006	0.006	0.0091	0.0091	0.0088	0.0088	0.0026	0.0026	0.0007	0.0007	0.00067	0.00067	0.00067	0.00067
URANIUM	ICP/MS (MG/L)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	ICAP (MG/L)		0.015	0.015	0.0049	0.0049	0.0042	0.0042	0.0041	0.0041	0.0056	0.0056	<0.005	<0.005	<0.005	<0.005
ZINC	ICAP (MG/L)		0.012	0.012	0.01	0.01	0.0042	0.0042	0.0041	0.0041	0.0056	0.0056	<0.005	<0.005	<0.005	<0.005
ANIONS																
ALKALINITY-HCO3	(MG/L)		309	309	322	322	312	312	302	302	241	241	241	241	241	241
ALKALINITY-CO3	(MG/L)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHLORIDE	(MG/L)		39	39	49	49	46	46	15	15	6	6	6	6	6	6
FLUORIDE	(MG/L)		0.16	0.16	0.28	0.28	0.2	0.2	<0.1	<0.1	0.16	0.16	0.16	0.16	0.16	0.16
NITRATE	(MG/L)		35	35	31	31	33	33	19	19	5.9	5.9	5.9	5.9	5.9	5.9
NITROGEN	(MG/L)		40	40	43	43	42	42	28	28	14	14	14	14	14	14
SULFATE	(MG/L)		<1	<1	<1	<1	<1	<1	39	39	<1	<1	<1	<1	<1	<1
TOTAL SUSPENDED SOLIDS	(MG/L)		2.1	2.1	0.25	0.25	1	1	81	81	6.8	6.8	6.8	6.8	6.8	6.8
TURBIDITY	(NTU)															

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-740 EXP 09/17/95 DIS	GW-740 EXP 09/17/95 TOT	GW-793 AGLLSF 07/19/95 DIS	GW-793 AGLLSF 07/19/95 TOT	GW-794 AGLLSF 07/24/95 DIS	GW-794 AGLLSF 07/24/95 TOT	GW-795 AGLLSF 07/24/95 DIS	GW-795 AGLLSF 07/24/95 TOT	GW-800 OLF 08/05/95 DIS	GW-800 OLF 08/05/95 TOT
METALS										
ALUMINUM	<0.02	<0.02	<0.02	0.33	<0.02	0.24	<0.02	<0.02	<0.02	1.3
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.086	0.087	0.14	0.14	0.12	0.12	0.06	0.061	0.13	0.13
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.018	0.023	0.043	0.023	0.058	0.061	0.046	0.059	0.033	0.035
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (NG/L)	AAS (NG/L)	AAS (NG/L)	AAS (NG/L)	AAS (NG/L)	AAS (NG/L)	AAS (NG/L)	AAS (NG/L)	AAS (NG/L)	AAS (NG/L)
CALCIUM	60	60	52	50	79	94	83	84	62	60
CHLORINE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM										
CHROMIUM	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
IRON	0.2	0.52	<0.005	<0.005	<0.005	0.38	<0.005	0.021	<0.005	1.3
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)	ICAP (NG/L)
LITHIUM	0.013	0.013	0.0059	0.0061	<0.004	<0.004	<0.004	<0.004	<0.004	0.0095
MAGNESIUM	31	31	4.6	4.5	12	8.9	3.5	3.6	29	28
MANGANESE	0.019	0.018	0.061	0.076	0.0088	0.016	0.041	0.048	<0.001	0.074
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	1.9	1.9	0.81	0.75	2.6	2.3	1.5	1.2	1.9	2.6
SELENIUM	0.069	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	2.2	2.2	3.7	3.6	2.7	3.6	2.1	2	1.2	1.2
STRONTIUM	0.051	0.051	0.092	0.089	0.17	0.17	0.14	0.14	0.2	0.2
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	0.00055	<0.0005 d	0.00082	0.00082	0.0006	0.00069
VANADIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00067
ZINC	<0.002	0.0046	0.0073	0.0083	<0.002	0.0059	0.0082	0.032	0.0084	0.014
ANIONS										
ALKALINITY-HCO3		258		152		237		206		260
ALKALINITY-CO3		<1		<1		<1		<1		<1
CHLORIDE		6.4		2		10		3.5		2
FLUORIDE		0.1		<0.1		<0.1		<0.1		<0.1
NITRATE		3.2		<0.2		0.99		<0.2		<0.2
SULFATE		13		5.1		20		16		11
TOTAL SUSPENDED SOLIDS		2		7.5		24		<1		233
TURBIDITY		7.1		6.4		35		0.3		240

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-828 OLF 08/24/95 DIS	GW-828 OLF 08/24/95 TOT	GW-829 OLF 08/30/95 DIS	GW-829 OLF 08/30/95 TOT	GW-830 B9714 09/14/95 DIS	GW-830 B9714 09/14/95 TOT	NT-01 EXP 07/25/95 DIS	NT-01 EXP 07/25/95 TOT	NT-02 EXP 09/22/95 DIS	NT-02 EXP 09/22/95 TOT
METALS										
ALUMINUM	0.35	48	0.045	6.5	0.035	0.38	0.41	0.37	<0.02	0.46
ANTIMONY	<0.05	<0.05	<0.05	<0.05	0.052	<0.05	<0.05	<0.05	0.072	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	0.052	<0.05	<0.05	0.057	<0.05	<0.05
BARIIUM	0.051	1.2	0.58	0.89	0.039	0.04	0.81	0.76	0.12	0.14
BERYLLIUM	<0.0003	0.0063	<0.0003	0.0011	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.49	0.49	0.27	0.27	0.011	0.0062	0.088	0.082	0.047	0.037
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.031	0.026	<0.003	<0.003
CADMIUM	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.031	0.031	<0.002	<0.002
CALCIUM	2.7	44	27	43	29	31	320	310	59	68
CHROMIUM	<0.01	0.056	<0.01	0.021	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.01	0.13	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	<0.005	0.023	<0.005	<0.005	<0.005	<0.005	0.0094	0.0062	<0.005	<0.005
COPPER	0.022	0.053	0.014	0.019	<0.004	<0.004	<0.004	<0.004	<0.004	0.0058
IRON	0.12	40	0.017	3.8	0.31	3.2	0.2	0.17	0.023	0.55
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.065	<0.05	<0.05	<0.05
LEAD	<0.004	0.057	<0.004	0.0069	0.0069	<0.004	<0.004	<0.004	<0.004	<0.004
LITHIUM	0.044	0.11	0.042	0.05	0.052	0.007	0.007	0.0052	0.015	0.12
MAGNESIUM	0.45	18	8.3	12	14	16	43	41	8.5	9.5
MANGANESE	0.0063	0.68	0.0056	0.069	0.079	0.054	5.9	5.4	0.016	0.045
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	0.017	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01
NICKEL	<0.01	0.057	<0.01	0.023	<0.01	<0.01	0.12	0.12	<0.01	<0.01
POTASSIUM	3.2	13	6.5	7.7	2.4	2.5	9.9	8.9	3.5	4.1
SELENIUM	0.066	0.12	<0.05	0.065	0.075	<0.05	0.12	0.11	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	180	210	120	120	1.4	0.85	40	39	3.3	3.5
STRONTIUM	0.097	1.3	1.3	1.7	0.016	0.014	1	0.99	0.23	0.24
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	0.0018	0.014	0.0021	0.0045	0.00081	<0.0005	0.048	0.047	0.0016	0.0017
VANADIUM	0.0079	0.037	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	0.0053	0.17	0.0048	0.042	0.58	0.24	0.016	0.015	0.011	0.043
ANIONS										
ALKALINITY-HCO3		271		173		139		194		95
ALKALINITY-CO3		78		<1		<1		<1		<1
CHLORIDE		11		3.8		1.7		25		3.1
FLUORIDE		1.8		0.38		0.23		1.6		0.18
NITRATE NITROGEN		11		59		0.62		170		25
SULFATE		27		17		3.1		70		43
TOTAL SUSPENDED SOLIDS		5550		570		26		1		7.5
TURBIDITY		1330		340		19		2.5		17

APPENDIX E.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	SS-1 EXP 09/22/95 DIS	SS-1 EXP 09/22/95 TOT	SS-4 EXP 07/25/95 DIS	SS-4 EXP 07/25/95 TOT	SS-5 EXP 07/25/95 DIS	SS-5 EXP 07/25/95 TOT	SS-6 EXP 07/25/95 DIS	SS-6 EXP 07/25/95 TOT
METALS								
ALUMINUM	ICAP (MG/L)	0.063	0.11	0.15	0.058	0.043	0.035	0.046
ANTIMONY	ICAP (MG/L)	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.11	0.16	0.17	0.099	0.1	0.027	0.027
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.052	0.18	0.19	0.12	0.12	0.015	0.021
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	<0.002	100	100	68	70	33	32
CALCIUM	ICAP (MG/L)	180	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	AAS (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	ICAP (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
IRON	ICAP (MG/L)	0.034	0.17	0.2	0.089	0.18	0.027	0.025
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	<0.004	0.031	0.036	0.013	0.011	<0.004	<0.004
LITHIUM	ICAP (MG/L)	0.0044	23	23	20	20	18	18
MAGNESIUM	ICAP (MG/L)	19	0.029	0.06	0.058	0.0052	0.0045	0.0045
MANGANESE	ICAP (MG/L)	0.023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	CVAA (MG/L)	<0.0002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	6	3.9	3.7	1.6	1.1	<0.6	<0.6
SELENIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)	30	17	17	8.1	8.3	0.63	0.62
STRONTIUM	ICAP (MG/L)	0.52	0.27	0.28	0.14	0.14	0.02	0.02
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	0.036	0.14	0.14	0.074	0.075	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	ICAP (MG/L)	0.008	<0.002	0.0032	<0.002	<0.002	0.031	0.03
ANIONS								
ALKALINITY-HCO3	(MG/L)	328	.	246	.	214	.	153
ALKALINITY-CO3	(MG/L)	<1	.	<1	.	<1	.	<1
CHLORIDE	(MG/L)	96	.	28	.	14	.	1.6
FLUORIDE	(MG/L)	0.22	.	0.37	.	0.27	.	<0.1
NITRATE NITROGEN	(MG/L)	28	.	23	.	7.5	.	0.45
SULFATE	(MG/L)	62	.	26	.	14	.	2.5
TOTAL SUSPENDED SOLIDS	(MG/L)	3.5	.	<1	.	24	.	<1
TURBIDITY	(NTU)	4.1	.	1.5	.	0.8	.	2.3

APPENDIX E.1
TRACE METALS AND ANIONS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GCS1 EXP 10/26/95 DIS	GCS1 EXP 10/26/95 TOT	GW-040 BG 10/11/95 DIS	GW-040 BG 10/11/95 TOT	GW-042 BG 10/11/95 DIS	GW-042 BG 10/11/95 TOT	GW-043 OLF 10/18/95 DIS	GW-043 OLF 10/18/95 TOT	GW-044 OLF 10/18/95 DIS	GW-044 OLF 10/18/95 TOT
METALS										
ALUMINUM	0.022	0.38	0.12	15	<0.02	<0.02	0.83	2.5	0.028	0.049
ANTHONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.059	0.059	0.042	0.21	0.15	0.15	0.023	0.033	0.23	0.23
BERYLLIUM	<0.0003	<0.0003	<0.0003	0.00083	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.021	0.019	0.023	0.052	0.026	0.021	0.032	0.02	0.015	0.046
BORON	<0.003	<0.003	<0.003	<0.003	0.033	0.0063	<0.003	<0.003	<0.003	<0.003
CADMIUM	<0.002	<0.002	<0.002	<0.002	0.034	0.0053	<0.002	0.0027	<0.002	<0.002
CALCIUM	35	35	6.1	7.1	3.8	3.6	25	26	49	47
CHROMIUM	<0.01	<0.01	<0.01	0.033	<0.01	<0.01	<0.01	0.013	<0.01	<0.01
CHROMIUM	<0.005	<0.005	0.0052	0.078	<0.01	<0.01	<0.01	0.022	<0.01	<0.01
COBALT	<0.004	<0.004	<0.004	0.013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	<0.005	<0.005	<0.005	<0.004	<0.004	<0.004	<0.004	0.0048	<0.004	0.0068
IRON	<0.05	<0.05	<0.05	22	0.88	1.4	0.33	2.3	<0.05	0.039
LEAD	<0.004	<0.004	<0.004	0.016	0.0064	<0.004	<0.004	0.006	<0.004	0.0094
LEAD	<0.004	<0.004	0.029	0.042	0.02	0.02	0.0065	0.0064	0.0055	0.0072
LITHIUM	22	22	7.2	10	4.6	4.5	4.7	5.1	3.4	3.2
MAGNESIUM	0.0051	0.042	1.2	1.4	0.31	0.3	0.0043	0.051	<0.001	0.046
MANGANESE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	<0.01	<0.01	<0.01	0.031	0.028	0.021	<0.01	<0.01	<0.01	<0.01
NICKEL	0.64	0.75	1.8	7.6	1.4	1.1	1.2	2.5	0.98	1.3
POTASSIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SELENIUM	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SILVER	0.55	0.48	11	12	3.2	3.2	7.3	7.4	5	4.8
SODIUM	0.037	0.036	0.016	0.03	0.018	0.016	0.044	0.047	0.079	0.076
STRONTIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
THORIUM	0.00051	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
URANIUM	<0.005	<0.005	<0.005	0.019	<0.005	<0.005	<0.005	0.0067	<0.005	<0.005
VANADIUM	0.0094	0.032	0.015	0.089	0.063	0.023	0.027	0.016	0.019	0.041
ZINC										
ANIONS										
ALKALINITY-HCO3	.	184	.	39	.	31	.	81	.	139
ALKALINITY-CO3	.	<1	.	<1	.	<1	.	<1	.	<1
CHLORIDE	.	1.62	.	2.33	.	2.08	.	2.32	.	1.83
FLUORIDE	.	<0.1	.	0.29	.	0.18	.	0.12	.	<0.1
NITRATE NITROGEN	.	0.274	.	<0.2	.	0.46	.	<0.2	.	0.341
SULFATE	.	2.68	.	28.3	.	5.76	.	11.5	.	6.82
TOTAL SUSPENDED SOLIDS	.	4	.	489	.	<1	.	46	.	2
TURBIDITY	.	0.55	.	590	.	5	.	97	.	0.7

APPENDIX E.1
TRACE METALS AND ANIONS, 4TH QUARTER 1995

SAMPLING POINT LOCATION	GW-053 BG	GW-069 BG	GW-079 BG	GW-080 BG	GW-084 OLF	GW-084 OLF
DATE SAMPLED	12/10/95	12/07/95	12/09/95	12/09/95	10/19/95	10/19/95
TYPE	DIS	DIS	DIS	TOT	DIS	TOT
METALS						
ALUMINUM	0.029	<0.02	<0.02	<0.02	0.08	0.93
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.33	0.41	0.15	0.16	0.17	0.17
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.39	0.15	0.022	0.015	0.013	0.012
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	120	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	120	13	35	36	57	54
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	0.0056	<0.01	<0.01	0.068	<0.01	<0.01
COBALT	<0.004	<0.005	<0.005	0.0091	<0.005	<0.005
COPPER	0.14	<0.004	<0.004	0.11	<0.004	<0.004
IRON	<0.05	0.017	0.011	0.057	<0.005	0.92
LEAD	0.51	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	0.52	<0.004	<0.004	<0.004	<0.004	<0.004
LITHIUM	16	0.044	<0.004	0.004	0.0086	0.0058
MAGNESIUM	0.12	6.1	3.6	3.7	4.1	4.2
MANGANESE	<0.0002	0.0052	0.05	0.056	0.012	0.054
MERCURY	<0.01	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	0.03	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	2.8	0.026	<0.01	0.015	<0.01	<0.01
POTASSIUM	<0.05	3.1	1.4	1.2	0.63	1.4
SELENIUM	<0.006	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	9.9	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	0.49	71	4.5	4.7	5.7	5.6
STRONTIUM	<0.2	0.9	0.12	0.12	0.082	0.077
THORIUM	0.0018	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
URANIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	0.0026	<0.002	<0.002	0.0062	0.019	0.0072
ZINC						
ANIONS						
ALKALINITY-HCO3		323		102		156
ALKALINITY-CO3		<1		<1		<1
CHLORIDE		36.6		1.55		1.17
FLUORIDE		<0.1		<1		0.12
NITRATE		<0.2		<0.93		<0.2
SULFATE		24.1		7.6		7.46
TOTAL SUSPENDED SOLIDS		7		<1		18
TURBIDITY		7.4		1.3		16

APPENDIX E.1
TRACE METALS AND ANIONS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-085 OLF 10/25/95 DIS	GW-085 OLF 10/25/95 TOT	GW-095 BG 12/11/95 DIS	GW-095 BG 12/11/95 TOT	GW-162 BG 10/11/95 DIS	GW-162 BG 10/11/95 TOT	GW-287 BG 12/10/95 DIS	GW-287 BG 12/10/95 TOT	GW-311 RS 10/25/95 DIS	GW-311 RS 10/25/95 TOT
METALS										
ALUMINUM	0.022	1.3	0.023	<0.02	<0.02	<0.02	0.024	0.29	<0.02	0.056
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIIUM	0.74	0.75	0.027	0.027	0.29	0.31	0.14	0.14	0.018	0.018
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.023	0.039	1.1	1	0.072	0.052	0.14	0.044	0.015	0.018
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CALCIUM	300	300	1.4	1.4	0.002	0.002	42	42	85	79
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	0.025	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COBALT	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
COPPER	<0.005	0.99	<0.005	0.011	<0.005	1.1	<0.005	0.19	<0.005	0.021
IRON	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	0.018	0.019	0.077	0.075	0.04	<0.004	0.0089	0.0098	<0.004	<0.004
LITHIUM	19	19	0.49	0.5	5	5.2	6.3	6.4	5.5	5.4
MAGNESIUM	0.003	0.044	<0.001	<0.001	0.1	0.11	0.0042	0.02	0.0059	<0.001
MANGANESE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.012	<0.01	<0.01
NICKEL	1.9	2.6	2.1	1.7	3	2.9	1.2	1.4	1.4	1.7
POTASSIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SELENIUM	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SILVER	11	11	120	120	15	15	4.4	4.3	2.5	2.6
SODIUM	0.67	0.67	0.1	0.1	0.82	0.84	0.083	0.084	0.076	0.069
STRONTIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
THORIUM	<0.0005 d	0.00071	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
URANIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	0.023	0.028	<0.002	0.003	0.016	0.0057	0.0041	0.0096	0.0075	0.023
ZINC										
ANIONS										
ALKALINITY-HCO ₃		147		223		123		130		228
ALKALINITY-CO ₃		<1		30		<1		<1		<1
CHLORIDE		9.62		2.29		3.18		3.35		2.65
FLUORIDE		<0.1		0.54		0.11		0.16		<0.1
NITRATE NITROGEN		191		<0.2		0.33		<0.2		0.497
SULFATE		5.24		8.88		8.62		6.78		3.6
TOTAL SUSPENDED SOLIDS		22		<1		59		2		<1
TURBIDITY		18		0.3		120		263		0.45

APPENDIX E.1
TRACE METALS AND ANIONS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-315 SP1 DIS	GW-315 SP1 TOT	GW-363 OLF DIS	GW-363 OLF TOT	GW-372 BG DIS	GW-372 BG TOT	GW-373 BG DIS	GW-373 BG TOT	GW-537 OLF DIS	GW-537 OLF TOT
METALS										
ALUMINUM										
ANTIMONY	<0.02	0.025	0.055	0.17	<0.02	<0.02	<0.02	0.28	<0.04 d	0.061
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d	<0.1 d
BARIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d	<0.1 d
BERYLLIUM	0.038	0.061	0.042	0.052	0.074	0.073	0.037	0.051	2.3	2.4
BORON	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0006 d	<0.0006 d
CADMIUM	0.013	0.038	0.3	0.28	0.021	0.024	0.23	0.18	0.031	0.041
CADMIUM	<0.003	0.0032	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.006 d	<0.006 d
CALCIUM	.	120	1.4	1.7	64	63	1.4	1.8	990	1000
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02 d	<0.02 d
CHROMIUM	.	.	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	.	.
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01 d	<0.01 d
COPPER	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.008 d	<0.008 d
IRON	<0.005	<0.005	0.015	0.18	0.033	0.075	0.15	2.3	<0.01 d	<0.01 d
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d	<0.1 d
LEAD	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.1 d	<0.1 d
LITHIUM	.	.	0.036	0.035	0.015	0.015	0.035	0.035	0.033	0.034
MAGNESIUM	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)	ICAP (MG/L)
MAGNESIUM	0.0013	0.0013	<0.001	0.0024	0.023	0.025	0.032	0.015	0.0027	0.0084
MANGANESE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02 d	<0.02 d
MOLYBDENUM	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.012	0.012	<0.02 d	<0.02 d
NICKEL	2.2	4.3	1.2	1.4	2	2	1.1	1	3	3.4
POTASSIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d	<0.1 d
SELENIUM	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.012 d	<0.012 d
SILVER	5.9	9.7	120	110	9.6	9.4	120	110	33	35
SODIUM	0.13	0.21	0.065	0.078	0.18	0.18	0.065	0.067	2.7	2.9
STRONTIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4 d	<0.4 d
THORIUM	0.0022	0.0024	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	0.0014	0.0014
URANIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01 d	<0.01 d
VANADIUM	0.017	0.017	0.0027	0.0065	0.0096	0.01	0.019	0.014	0.018	0.022
ZINC										
ANIONS										
ALKALINITY-HCO3		240	.	186	.	185	.	179	.	273
ALKALINITY-CO3		<1	.	30	.	<1	.	32	.	<1
CHLORIDE		15.4	.	1.38	.	2.33	.	1.7	.	34.5
FLUORIDE		<0.1	.	0.18	.	0.13	.	1.3	.	<0.1
NITRATE NITROGEN		16.8	.	<0.2	.	<0.2	.	<0.2	.	771
SULFATE		66.4	.	7.05	.	28	.	27	.	4.03
TOTAL SUSPENDED SOLIDS		<1	.	5	.	<1	.	2.5	.	3
TURBIDITY		0.05	.	2.8	.	0.85	.	7.8	.	1.9

APPENDIX E.1
TRACE METALS AND ANIONS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-627 BG 12/10/95 DIS	GW-627 BG 12/10/95 TOT	GW-642 BG 10/10/95 DIS	GW-642 BG 10/10/95 TOT	GW-653 BG 12/08/95 DIS	GW-653 BG 12/08/95 TOT	GW-654 BG 12/09/95 DIS	GW-654 BG 12/09/95 TOT	GW-793 AGLLSF 10/19/95 DIS	GW-793 AGLLSF 10/19/95 TOT
METALS										
ALUMINUM	<0.02	0.042	<0.02	<0.02	<0.02	0.32	<0.02	2.3	0.039	0.056
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.041	0.038	0.14	0.13	0.03	0.04	0.11	0.15	0.16	0.15
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.56	0.5	0.044	0.028	0.018	0.05	0.074	0.063	0.017	0.023
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	0.97	0.88	9.4	7.8	1.9	2.2	19	19	60	59
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COBALT	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
COPPER	0.05	0.18	1.1	3.2	0.013	0.26	0.14	2.4	<0.005	<0.005
IRON	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LITHIUM	0.095	0.085	0.035	0.038	<0.004	<0.004	0.033	0.036	<0.004	<0.004
MAGNESIUM	0.21	0.19	8.6	8.1	1	1.2	4.4	4.6	0.0087	0.0078
MANGANESE	0.0051	0.0057	1.9	1.6	0.0021	0.01	0.24	0.48	0.085	0.08
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	<0.01	0.017	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	1.5	1.1	1.8	1.9	0.72	<0.6	1.3	1.7	0.83	0.94
SELENIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	310	280	7.6	7.8	2.5	2.8	42	37	3.9	3.8
STRONTIUM	0.079	0.071	0.029	0.025	0.016	0.019	0.22	0.22	0.11	0.1
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	<0.002	0.0027	0.029	0.025	0.0081	0.0035	0.009	0.014	0.0058	0.0054
ANIONS										
ALKALINITY-HCO3	(MG/L)	498	.	61	.	12	.	124	.	152
ALKALINITY-CO3	(MG/L)	66	.	<1	.	<1	.	<1	.	<1
CHLORIDE	(MG/L)	30.7	.	1.7	.	1.61	.	1.59	.	1.42
FLUORIDE	(MG/L)	5.5	.	0.32	.	0.1	.	0.32	.	0.14
NITRATE NITROGEN	(MG/L)	<0.2	.	<0.2	.	<0.2	.	<0.2	.	<0.2
SULFATE	(MG/L)	32.1	.	9.88	.	1.48	.	12.7	.	4.22
TOTAL SUSPENDED SOLIDS	(MG/L)	<1	.	<1	.	1	.	23	.	<1
TURBIDITY	(NTU)	1	.	1.4	.	2.4	.	36	.	0.6

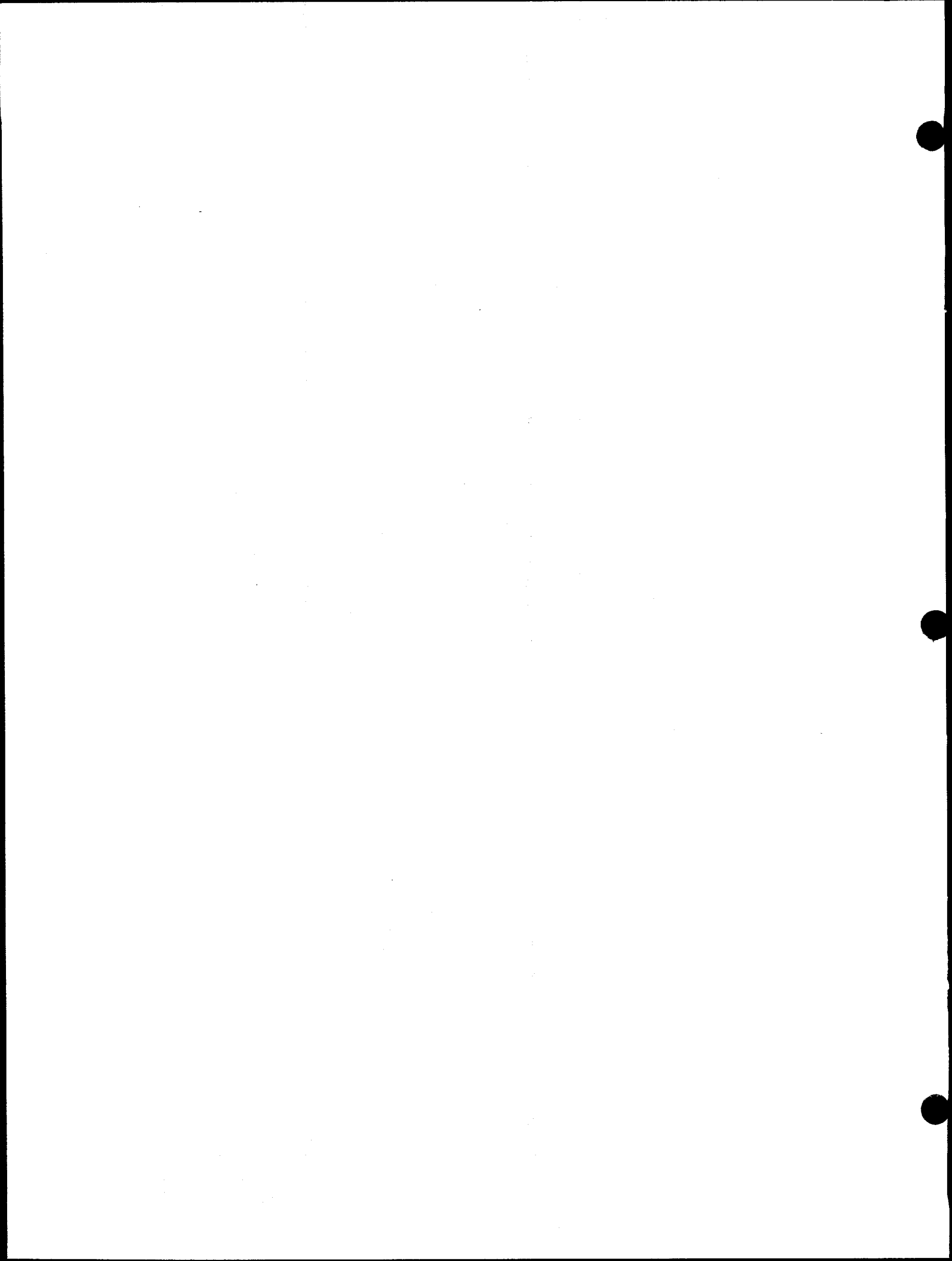
APPENDIX E.1
TRACE METALS AND ANIONS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-794 AGLLSF 10/24/95 DIS	GW-794 AGLLSF 10/24/95 TOT	GW-795 AGLLSF 10/24/95 DIS	GW-795 AGLLSF 10/24/95 TOT	GW-828 OLF 12/08/95 DIS	GW-828 OLF 12/08/95 TOT	GW-829 OLF 12/10/95 DIS	GW-829 OLF 12/10/95 TOT	SS-5.95K EXP 10/26/95 DIS	SS-5.95K EXP 10/26/95 TOT
METALS										
ALUMINUM	0.031	0.4	<0.02	0.029	0.058	0.56	0.063	0.48	0.03	0.052
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.1	0.1	0.075	0.076	0.047	0.073	0.74	0.81	0.12	0.12
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.067	0.079	0.036	0.039	0.43	0.48	0.25	0.25	0.024	0.02
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CALCIUM	110	110	110	110	1.9	2.4	<0.002	<0.002	40	40
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011
CHROMIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COBALT	<0.004	0.0071	<0.004	<0.004	0.0087	0.011	0.0089	0.012	<0.004	<0.004
COPPER	<0.005	0.085	<0.005	<0.005	0.027	0.45	<0.005	0.51	<0.005	<0.005
IRON	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	0.0083	0.0087	<0.004	<0.004	0.051	<0.004	<0.004	<0.004	<0.004	<0.004
LITHIUM	9	9	4.8	4.9	0.4	0.57	0.61	0.63	<0.004	<0.004
MAGNESIUM	0.0034	0.0082	0.01	0.01	<0.001	0.01	0.0052	0.18	<0.001	0.0013
MANGANESE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
POTASSIUM	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SELENIUM	0.19	0.19	0.19	0.19	0.089	0.11	1.6	1.7	0.036	0.035
SODIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
STRONTIUM	<0.0005 d	<0.0005 d	0.0041	0.004	<0.0005 d	<0.0005 d	0.0014	0.0015	<0.0005 d	<0.0005 d
THORIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
URANIUM	0.0049	0.011	0.0046	0.0051	0.026	0.035	0.018	0.028	0.0076	0.0082
ZINC										
ANIONS										
ALKALINITY-HCO3		234		221		282		156		202
ALKALINITY-CO3		<1		<1		52		10		<1
CHLORIDE		8.76		4.49		10.4		3.57		2.52
FLUORIDE		<0.1		<0.1		1.6		0.36		<0.1
NITRATE		0.69		2.54		0.876		54.3		0.274
SULFATE		20.5		24.3		23.4		20		3.46
TOTAL SUSPENDED SOLIDS		<1		<1		20		16.5		1.5
TURBIDITY		4		0.25		8.4		13		0.75

APPENDIX E.1
TRACE METALS AND ANIONS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	SS-6W EXP 10/26/95 DIS	SS-6W EXP 10/26/95 TOT	SS-7 EXP 10/26/95 DIS	SS-7 EXP 10/26/95 TOT
METALS				
ALUMINUM	ICAP (MG/L)	0.1	0.033	0.055
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.087	0.07	0.069
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.037	0.072	0.064
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	.	.	.
CALCIUM	ICAP (MG/L)	51	53	52
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	<0.01
CHROMIUM	AAS (MG/L)	.	.	.
COBALT	ICAP (MG/L)	<0.005	<0.005	<0.005
COPPER	ICAP (MG/L)	<0.004	<0.004	<0.004
IRON	ICAP (MG/L)	<0.005	<0.005	<0.005
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	.	.	.
LITHIUM	ICAP (MG/L)	0.005	0.0098	0.0095
MAGNESIUM	ICAP (MG/L)	21	19	19
MANGANESE	ICAP (MG/L)	0.0074	0.0011	0.0019
MERCURY	CVAA (MG/L)	<0.0002	<0.0002	<0.0002
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	0.88	1.5	1.5
SELENIUM	ICAP (MG/L)	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)	3.2	5.8	5.5
STRONTIUM	ICAP (MG/L)	0.1	0.087	0.084
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	0.01	0.036	0.036
VANADIUM	ICAP (MG/L)	<0.005	<0.005	<0.005
ZINC	ICAP (MG/L)	0.0073	0.0075	0.0036
ANIONS				
ALKALINITY-HCO3	(MG/L)	189	.	189
ALKALINITY-CO3	(MG/L)	<1	.	<1
CHLORIDE	(MG/L)	5.88	.	10.1
FLUORIDE	(MG/L)	<0.1	.	<0.1
NITRATE NITROGEN	(MG/L)	1.8	.	4.74
SULFATE	(MG/L)	21.1	.	15.9
TOTAL SUSPENDED SOLIDS	(MG/L)	6	.	3
TURBIDITY	(NTU)	2.4	.	1.2

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS



APPENDIX E.2
SUMMARY OF VOCs DETECTED IN GROUNDWATER AND SURFACE WATER SAMPLES

Total Samples 80
Samples without VOCs 45
Samples with VOCs 35

COMPOUND	FIRST QUARTER
ACETONE (UG/L)	5
BENZENE (UG/L)	0
BROMODICHLOROMETHANE (UG/L)	0
BROMOFORM (UG/L)	0
BROMOMETHANE (UG/L)	0
2-BUTANONE (UG/L)	6
CARBON DISULFIDE (UG/L)	0
CARBON TETRACHLORIDE (UG/L)	6
CHLOROBENZENE (UG/L)	0
CHLORODIBROMOMETHANE (UG/L)	0
CHLOROETHANE (UG/L)	0
CHLOROFORM (UG/L)	15
CHLOROMETHANE (UG/L)	0
1,1-DICHLOROETHANE (UG/L)	3
1,2-DICHLOROETHANE (UG/L)	0
1,1-DICHLOROETHENE (UG/L)	3
1,2-DICHLOROETHENE (UG/L)	13
TRANS-1,2-DICHLOROETHENE (UG/L)	0
1,2-DICHLOROPROPANE (UG/L)	0
CIS-1,3-DICHLOROPROPENE (UG/L)	0
TRANS-1,3-DICHLOROPROPENE (UG/L)	0
ETHYLBENZENE (UG/L)	1
2-HEXANONE (UG/L)	0
4-METHYL-2-PENTANONE (UG/L)	0
METHYLENE CHLORIDE (UG/L)	8
STYRENE (UG/L)	0
1,1,2,2-TETRACHLOROETHANE (UG/L)	0
TETRACHLOROETHENE (UG/L)	13
TOLUENE (UG/L)	4
1,1,1-TRICHLOROETHANE (UG/L)	3
1,1,2-TRICHLOROETHANE (UG/L)	0
TRICHLOROETHENE (UG/L)	22
VINYL ACETATE (UG/L)	0
VINYL CHLORIDE (UG/L)	1
XYLENES (UG/L)	2

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	BCK-00.63 EXP 03/09/95	BCK-04.55 EXP 03/09/95	BCK-09.40 EXP 03/09/95	BCK-11.97 EXP 03/09/95	GW-04.0 BG 02/01/95	GW-042 BG 02/01/95	GW-043 OLF 03/16/95	GW-044 OLF 03/16/95	GW-047 BG 01/25/95	GW-053 BG 03/28/95
ACETONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	19
TRANS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10
XYLENES	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-056 EXP 03/05/95	GW-057 EXP 03/05/95	GW-061 BG 03/28/95	GW-064 OLF 03/26/95	GW-069 BG 03/25/95	GW-079 BG 03/26/95	GW-080 BG 03/25/95	GW-084 OLF 03/23/95	GW-085 OLF 03/26/95	GW-095 BG 03/27/95
ACETONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE (UG/L)	10U	10U	10U	1 J	10U	10U	10U	10U	10U	10U
CHLOROBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE (UG/L)	10U	10U	10U	2 J	10U	10U	10U	10U	10U	10U
CHLOROFORM (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	7 J	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE (UG/L)	10U	10U	10U	1 J	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE (UG/L)	10U	10U	10U	1 J	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE (UG/L)	10U	10U	10U	64	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-115 S3 01/14/95	GW-162 BG 01/26/95	GW-276 S3 01/24/95	GW-287 BG 03/26/95	GW-311 RS 03/25/95	GW-312 RS 03/25/95	GW-315 S3 03/15/95	GW-317 S3 03/14/95	GW-347 S3 03/15/95	GW-348 S3 03/15/95
ACETONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	10U	10U	10 JB	10U	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	10U	10U	1 J	10U	10U	2 J	1 J	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	1 J	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	1 J	9 J	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	3 JB	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	10U	10U	37	2 J	10U	10U	15	10U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	10U	10U	10U	10U	13	65	8 J	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-363 OLF 01/23/95	GW-370 BG 02/01/95	GW-372 BG 01/31/95	GW-373 BG 01/31/95	GW-537 OLF 03/26/95	GW-613 S3 01/11/95	GW-614 S3 01/11/95	GW-621 EXP 03/29/95	GW-627 BG 03/28/95	GW-637 OLF 01/24/95
ACETONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-642 BG 01/31/95	GW-652 BG 03/27/95	GW-653 BG 03/27/95	GW-654 BG 03/26/95	GW-683 EXP 03/09/95	GW-684 EXP 03/10/95	GW-685 EXP 03/08/95	GW-694 EXP 03/30/95	GW-695 EXP 03/29/95	GW-703 EXP 03/29/95
ACETONE	10U	10U	10U	10U	10U	11	10U	10U	10U	10U
BENZENE	(UG/L)	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	(UG/L)	10U	10U	10U	10U	15	10U	10U	10U	10U
CARBON DISULFIDE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	(UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-704 EXP 03/30/95	GW-706 EXP 03/31/95	GW-710 EXP 01/15/95	GW-711 EXP 01/13/95	GW-712 EXP 01/13/95	GW-713 EXP 01/14/95	GW-714 EXP 01/14/95	GW-715 EXP 01/14/95	GW-723 EXP 02/20/95	GW-724 EXP 02/19/95
ACETONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-725 EXP 02/28/95	GW-736 EXP 02/28/95	GW-737 EXP 03/01/95	GW-738 EXP 02/18/95	GW-739 EXP 02/17/95	GW-740 EXP 02/16/95	GW-793 AGLLSF 01/23/95	GW-794 AGLLSF 01/24/95	GW-795 AGLLSF 01/25/95	GW-800 OLF 03/25/95
ACETONE	10U	10U	10U	7 JB	2 JB	10U	10U	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	8 JB	12 B	10U	10U	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	4 J	10U	10U	1 J	1 J	2 J	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	1 J	10U	1 J	1 J	1 J	1 J	10U	10U	10U	10U
CHLOROFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	4 J	2 J	6 J	3 J	2 J	3 J	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	3 J	10U	4 J	1 J	1 JB	1 JB	10U	10U	10U	10U
TETRACHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	2 J	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	130	5 J	15	48	45	76	10U	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	1 J	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-828-100 OLF 02/14/95	GW-828-200 OLF 02/18/95	GW-829-029 OLF 03/01/95	GW-829-116 OLF 03/07/95	NT-01 EXP 03/09/95	NT-02 EXP 03/09/95	SS-1 EXP 03/09/95	SS-4 EXP 03/09/95	SS-5 EXP 03/09/95	SS-6 EXP 03/09/95
ACETONE (UG/L)	10U	10U	49	173	10U	10U	10U	10U	10U	10U
BENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE (UG/L)	10U	10U	10U	10U	10U	10U	9 J	10U	10U	10U
CARBON DISULFIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM (UG/L)	10U	2 J	3 J	4 J	10U	10U	10U	10U	10U	10U
CHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE (UG/L)	10U	4 J	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE (UG/L)	10U	10U	10U	10U	10U	10U	1 J	10U	10U	10U
1,1,1-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	1 J	10U	10U	10U
VINYL ACETATE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
SUMMARY OF VOCs DETECTED IN GROUNDWATER AND SURFACE WATER SAMPLES

Total Samples 48
Samples without VOCs 39
Samples with VOCs 9

COMPOUND	SECOND QUARTER
ACETONE	1
BENZENE	0
BROMODICHLOROMETHANE	0
BROMOFORM	0
BROMOMETHANE	0
2-BUTANONE	0
CARBON DISULFIDE	0
CARBON TETRACHLORIDE	2
CHLOROBENZENE	0
CHLORODIBROMOMETHANE	0
CHLOROETHANE	0
CHLOROFORM	4
CHLOROMETHANE	0
1,1-DICHLOROETHANE	2
1,2-DICHLOROETHANE	0
1,1-DICHLOROETHENE	0
1,2-DICHLOROETHENE	4
TRANS-1,2-DICHLOROETHENE	0
1,2-DICHLOROPROPANE	0
CIS-1,3-DICHLOROPROPENE	0
TRANS-1,3-DICHLOROPROPENE	0
ETHYLBENZENE	0
2-HEXANONE	0
4-METHYL-2-PENTANONE	0
METHYLENE CHLORIDE	0
STYRENE	0
1,1,2,2-TETRACHLOROETHANE	0
TETRACHLOROETHENE	4
TOLUENE	0
1,1,1-TRICHLOROETHANE	0
1,1,2-TRICHLOROETHANE	0
TRICHLOROETHENE	6
VINYL ACETATE	0
VINYL CHLORIDE	1
XYLENES	0

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GCS1 EXP 05/23/95	GW-040 BG 06/06/95	GW-042 BG 06/06/95	GW-043 OLF 06/01/95	GW-044 OLF 06/01/95	GW-047 BG 06/18/95	GW-053 BG 06/28/95	GW-061 BG 06/28/95	GW-064 OLF 06/07/95	GW-069 BG 06/27/95
ACETONE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-079 BG 06/19/95	GW-080 BG 06/19/95	GW-084 OLF 06/07/95	GW-085 OLF 06/08/95	GW-095 BG 06/20/95	GW-162 BG 05/31/95	GW-287 BG 06/20/95	GW-311 RS 06/06/95	GW-312 RS 06/06/95	GW-315 SPI 06/26/95
ACETONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-317 SP1 06/21/95	GW-347 S3 06/21/95	GW-348 S3 06/26/95	GW-363 OLF 06/17/95	GW-370 BG 06/05/95	GW-372 BG 06/02/95	GW-373 BG 06/05/95	GW-537 OLF 06/08/95	GW-627 BG 06/22/95	GW-637 OLF 06/17/95
ACETONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOCHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GH-642 BG 06/02/95	GH-652 BG 06/20/95	GH-653 BG 06/20/95	GH-654 BG 06/19/95	GH-793 AGLLSF 06/17/95	GH-794 AGLLSF 06/18/95	GH-795 AGLLSF 06/18/95	GH-800 OLF 05/31/95	GH-828 OLF 06/27/95	GH-829 OLF 06/27/95
ACETONE	10U	10U	10U	10U	10U	10U	10U	10U	24	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	10U	10U	17	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	2 J	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	10U	10U	2	10U	10U	10U	10U	10U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	MS-1 S3 05/03/95	NT-1N S3 05/03/95	NT-1S S3 05/03/95	SS-5.95K EXP 05/23/95	SS-6.6K EXP 05/23/95	SS-6W EXP 05/23/95	SS-7 EXP 05/23/95	TS S3 05/03/95
ACETONE	(UG/L)	.	.	10U	10U	10U	10U	.
BENZENE	(UG/L)	.	.	10U	10U	10U	10U	.
BROMODICHLOROMETHANE	(UG/L)	.	.	10U	10U	10U	10U	.
BROMOFORM	(UG/L)	.	.	10U	10U	10U	10U	.
BROMOMETHANE	(UG/L)	.	.	10U	10U	10U	10U	.
2-BUTANONE	(UG/L)	.	.	10U	10U	10U	10U	.
CARBON DISULFIDE	(UG/L)	.	.	10U	10U	10U	10U	.
CARBON TETRACHLORIDE	(UG/L)	.	.	10U	10U	10U	10U	.
CHLOROBENZENE	(UG/L)	.	.	10U	10U	10U	10U	.
CHLORODIBROMOMETHANE	(UG/L)	.	.	10U	10U	10U	10U	.
CHLOROETHANE	(UG/L)	.	.	10U	10U	10U	10U	.
CHLOROFORM	(UG/L)	.	.	10U	10U	10U	10U	.
CHLOROMETHANE	(UG/L)	.	.	10U	10U	10U	10U	.
1,1-DICHLOROETHANE	(UG/L)	.	.	10U	10U	10U	10U	.
1,2-DICHLOROETHANE	(UG/L)	.	.	10U	10U	10U	10U	.
1,1-DICHLOROETHENE	(UG/L)	.	.	10U	10U	10U	10U	.
1,2-DICHLOROETHENE	(UG/L)	.	.	10U	10U	10U	10U	.
1,2-DICHLOROPROPANE	(UG/L)	.	.	10U	10U	10U	10U	.
CIS-1,3-DICHLOROPROPENE	(UG/L)	.	.	10U	10U	10U	10U	.
TRANS-1,3-DICHLOROPROPENE	(UG/L)	.	.	10U	10U	10U	10U	.
ETHYLBENZENE	(UG/L)	.	.	10U	10U	10U	10U	.
2-HEXANONE	(UG/L)	.	.	10U	10U	10U	10U	.
4-METHYL-2-PENTANONE	(UG/L)	.	.	10U	10U	10U	10U	.
METHYLENE CHLORIDE	(UG/L)	.	.	10U	10U	10U	10U	.
STYRENE	(UG/L)	.	.	10U	10U	10U	10U	.
1,1,2,2-TETRACHLOROETHANE	(UG/L)	.	.	10U	10U	10U	10U	.
TETRACHLOROETHENE	(UG/L)	.	.	10U	10U	10U	10U	.
TOLUENE	(UG/L)	.	.	10U	10U	10U	10U	.
1,1,1-TRICHLOROETHANE	(UG/L)	.	.	10U	10U	10U	10U	.
1,1,2-TRICHLOROETHANE	(UG/L)	.	.	10U	10U	10U	10U	.
TRICHLOROETHENE	(UG/L)	.	.	10U	10U	10U	10U	.
VINYL ACETATE	(UG/L)	.	.	10U	10U	10U	10U	.
VINYL CHLORIDE	(UG/L)	.	.	10U	10U	10U	10U	.
XYLENES	(UG/L)	.	.	10U	10U	10U	10U	.

APPENDIX E.2
SUMMARY OF VOCs DETECTED IN GROUNDWATER AND SURFACE WATER SAMPLES

Total Samples 94
Samples without VOCs 52
Samples with VOCs 42

COMPOUND	THIRD QUARTER
ACETONE (UG/L)	0
BENZENE (UG/L)	1
BROMODICHLOROMETHANE (UG/L)	0
BROMOFORM (UG/L)	0
BROMOMETHANE (UG/L)	0
2-BUTANONE (UG/L)	4
CARBON DISULFIDE (UG/L)	0
CARBON TETRACHLORIDE (UG/L)	4
CHLOROBENZENE (UG/L)	0
CHLORODIBROMOMETHANE (UG/L)	0
CHLOROETHANE (UG/L)	0
CHLOROFORM (UG/L)	9
CHLOROMETHANE (UG/L)	0
1,1-DICHLOROETHANE (UG/L)	6
1,2-DICHLOROETHANE (UG/L)	8
1,1-DICHLOROETHENE (UG/L)	4
1,2-DICHLOROETHENE (UG/L)	20
CIS-1,2-DICHLOROETHENE (UG/L)	0
TRANS-1,2-DICHLOROETHENE (UG/L)	0
1,2-DICHLOROPROPANE (UG/L)	0
CIS-1,3-DICHLOROPROPENE (UG/L)	0
TRANS-1,3-DICHLOROPROPENE (UG/L)	0
ETHYLBENZENE (UG/L)	0
2-HEXANONE (UG/L)	0
4-METHYL-2-PENTANONE (UG/L)	0
METHYLENE CHLORIDE (UG/L)	0
STYRENE (UG/L)	0
1,1,2,2-TETRACHLOROETHANE (UG/L)	0
TETRACHLOROETHENE (UG/L)	18
TOLUENE (UG/L)	0
1,1,1-TRICHLOROETHANE (UG/L)	3
1,1,2-TRICHLOROETHANE (UG/L)	0
TRICHLOROETHENE (UG/L)	26
VINYL ACETATE (UG/L)	0
VINYL CHLORIDE (UG/L)	3
XYLENES (UG/L)	0

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	BCK-00.63 EXP 07/25/95	BCK-04.55 EXP 07/25/95	BCK-09.40 EXP 07/25/95	BCK-11.97 EXP 07/25/95	GW-014 BG 08/04/95	GW-040 BG 08/10/95	GW-042 BG 08/09/95	GW-043 OLF 08/04/95	GW-044 OLF 08/04/95	GW-046 BG 08/09/95
ACETONE (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
BENZENE (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
BROMODICHLOROMETHANE (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
BROMOFORM (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
BROMOMETHANE (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
2-BUTANONE (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
CARBON DISULFIDE (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
CARBON TETRACHLORIDE (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
CHLOROBENZENE (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
CHLORODIBROMOMETHANE (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
CHLOROETHANE (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
CHLOROFORM (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
CHLOROMETHANE (UG/L)	10U	10U	10U	10U	200U	10U	10U	10U	10U	100U
1,1-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	450	10U	10U	10U	10U	100U
1,2-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	75 JB	10U	10U	10U	10U	100U
1,1-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	100 J	10U	10U	10U	10U	100U
1,2-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	2300	10U	10U	10U	10U	100U
CIS-1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
TRANS-1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
1,2-DICHLOROPROPANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
CIS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
TRANS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
ETHYLBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
2-HEXANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
4-METHYL-2-PENTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
METHYLENE CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
STYRENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
1,1,2,2-TETRACHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
TETRACHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
TOLUENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
1,1,1-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
1,1,2-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
TRICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
VINYL ACETATE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
VINYL CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U
XYLENES (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	100U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-047 BG 07/24/95	GW-053 BG 09/25/95	GW-056 EXP 08/04/95	GW-057 EXP 08/05/95	GW-061 BG 09/21/95	GW-064 OLF 08/06/95	GW-066 OLF 09/27/95	GW-069 BG 08/15/95	GW-079 BG 09/18/95	GW-080 BG 09/21/95
ACETONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-084 OLF 08/05/95	GW-085 OLF 08/06/95	GW-087 OLF 09/27/95	GW-095 BG 09/20/95	GW-100 S3 09/06/95	GW-115 S3 07/30/95	GW-124 S3 09/16/95	GW-162 BG 08/03/95	GW-228 OLF 09/17/95	GW-229 OLF 09/17/95
ACETONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE	10U	10U	5 J	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	10U	10U	18	10U	10U	10U	1 J	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	4 J	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	7 J	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	4 J	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	10U	10U	120	10U	10U	10U	10U	10U	10U	10U
CIS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	10U	10U	220 D	10U	10U	10U	1 J	10U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	10U	10U	410 D	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-236 S3 09/16/95	GW-248 BG 08/08/95	GW-257 BG 08/08/95	GW-276 S3 07/29/95	GW-287 BG 09/18/95	GW-288 BG 08/09/95	GW-289 BG 08/08/95	GW-290 BG 08/07/95	GW-291 BG 08/03/95	GW-312 RS 08/06/95
ACETONE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
BENZENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
BROMOFORM	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
2-BUTANONE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
CHLOROFORM	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
CIS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
TRANS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
2-HEXANONE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
STYRENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
TETRACHLOROETHENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
TOLUENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
TRICHLOROETHENE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U
XYLENES	10U	10U	10U	10U	10U	100U	100U	10U	100U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-315 SPI 08/21/95	GW-317 SPI 08/15/95	GW-346 S3 08/31/95	GW-347 S3 08/15/95	GW-348 S3 08/21/95	GW-363 OLF 07/19/95	GW-370 BG 08/08/95	GW-372 BG 08/07/95	GW-373 BG 08/08/95	GW-537 OLF 08/03/95
ACETONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10 J	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	2 J	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	15	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,2-DICHLOROETHENE	•	•	•	•	•	•	•	•	•	•
TRANS-1,2-DICHLOROETHENE	•	•	•	•	•	•	•	•	•	•
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	26	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	11	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-613 S3 07/24/95	GW-614 S3 07/24/95	GW-621 EXP 08/30/95	GW-627 BG 09/25/95	GW-637 OLF 07/19/95	GW-642 BG 08/07/95	GW-652 BG 09/19/95	GW-653 BG 09/20/95	GW-654 BG 09/18/95	GW-683 EXP 08/06/95
ACETONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-684 EXP 08/06/95	GW-685 EXP 08/06/95	GW-694 EXP 08/31/95	GW-695 EXP 08/30/95	GW-703 EXP 08/30/95	GW-704 EXP 08/31/95	GW-706 EXP 08/30/95	GW-710 EXP 07/27/95	GW-711 EXP 07/27/95	GW-712 EXP 07/25/95
ACETONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,2-DICHLOROETHENE (UG/L)	2 J	2 J	23	2 J	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE (UG/L)	2 J	2 J	23	2 J	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE (UG/L)	2 J	10U	19	3 J	17	85	10U	10U	10U	10U
VINYL CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-713 EXP 07/27/95	GW-714 EXP 07/29/95	GW-715 EXP 07/29/95	GW-723 EXP 09/13/95	GW-724 EXP 09/24/95	GW-725 EXP 09/25/95	GW-736 EXP 09/26/95	GW-737 EXP 09/26/95	GW-738 EXP 09/17/95	GW-739 EXP 09/16/95
ACETONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-740 EXP 09/17/95	GW-793 AGLLSF 07/19/95	GW-794 AGLLSF 07/24/95	GW-795 AGLLSF 07/24/95	GW-800 OLF 08/05/95	GW-828 OLF 08/24/95	GW-829 OLF 08/30/95	GW-830 B9714 09/14/95	NT-01 EXP 07/25/95	NT-02 EXP 09/22/95
ACETONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE (UG/L)	2 J	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM (UG/L)	1 J	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE (UG/L)	3 J	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,2-DICHLOROETHENE (UG/L)	•	•	•	•	•	•	•	•	•	•
TRANS-1,2-DICHLOROETHENE (UG/L)	•	•	•	•	•	•	•	•	•	•
1,2-DICHLOROPROPANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE (UG/L)	1 J	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE (UG/L)	76	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	SS-1 EXP 09/22/95	SS-4 EXP 07/25/95	SS-5 EXP 07/25/95	SS-6 EXP 07/25/95
ACETONE	10U	10U	10U	10U
BENZENE	(UG/L)	10U	10U	10U
BROMODICHLOROMETHANE	(UG/L)	10U	10U	10U
BROMOFORM	(UG/L)	10U	10U	10U
BROMOMETHANE	(UG/L)	10U	10U	10U
2-BUTANONE	(UG/L)	10U	10U	10U
CARBON DISULFIDE	(UG/L)	10U	10U	10U
CARBON TETRACHLORIDE	(UG/L)	10U	10U	10U
CHLOROBENZENE	(UG/L)	10U	10U	10U
CHLORODIBROMOMETHANE	(UG/L)	10U	10U	10U
CHLOROETHANE	(UG/L)	10U	10U	10U
CHLOROFORM	(UG/L)	10U	10U	10U
CHLOROMETHANE	(UG/L)	10U	10U	10U
1,1-DICHLOROETHANE	(UG/L)	10U	10U	10U
1,2-DICHLOROETHANE	(UG/L)	10U	10U	10U
1,1-DICHLOROETHENE	(UG/L)	10U	10U	10U
1,2-DICHLOROETHENE	(UG/L)	10U	10U	10U
CIS-1,2-DICHLOROETHENE	(UG/L)	5 J	3 J	10U
TRANS-1,2-DICHLOROETHENE	(UG/L)	.	.	.
1,2-DICHLOROPROPANE	(UG/L)	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	(UG/L)	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	(UG/L)	10U	10U	10U
ETHYLBENZENE	(UG/L)	10U	10U	10U
2-HEXANONE	(UG/L)	10U	10U	10U
4-METHYL-2-PENTANONE	(UG/L)	10U	10U	10U
METHYLENE CHLORIDE	(UG/L)	10U	10U	10U
STYRENE	(UG/L)	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	(UG/L)	10U	10U	10U
TETRACHLOROETHENE	(UG/L)	10U	10U	10U
TOLUENE	(UG/L)	10U	10U	10U
1,1,1-TRICHLOROETHANE	(UG/L)	10U	10U	10U
1,1,2-TRICHLOROETHANE	(UG/L)	10U	10U	10U
TRICHLOROETHENE	(UG/L)	10U	10U	10U
VINYL ACETATE	(UG/L)	3 J	2 J	10U
VINYL CHLORIDE	(UG/L)	10U	10U	10U
XYLENES	(UG/L)	10U	10U	10U

APPENDIX E.2
SUMMARY OF VOCs DETECTED IN GROUNDWATER AND SURFACE WATER SAMPLES

Total Samples	32
Samples without VOCs	22
Samples with VOCs	10
COMPOUND	FOURTH QUARTER
ACETONE	2
BENZENE	0
BROMODICHLOROMETHANE	0
BROMOFORM	0
BROMOMETHANE	0
2-BUTANONE	6
CARBON DISULFIDE	0
CARBON TETRACHLORIDE	0
CHLOROBENZENE	0
CHLORODIBROMOMETHANE	0
CHLOROETHANE	0
CHLOROFORM	2
CHLOROMETHANE	0
1,1-DICHLOROETHANE	3
1,2-DICHLOROETHANE	0
1,1,1-TRICHLOROETHANE	1
1,2-DICHLOROETHENE	3
CIS-1,2-DICHLOROETHENE	0
TRANS-1,2-DICHLOROETHENE	0
1,2-DICHLOROPROPANE	0
CIS-1,3-DICHLOROPROPENE	0
TRANS-1,3-DICHLOROPROPENE	0
ETHYLBENZENE	0
2-HEXANONE	0
4-METHYL-2-PENTANONE	0
METHYLENE CHLORIDE	0
STYRENE	0
1,1,2,2-TETRACHLOROETHANE	0
TETRACHLOROETHENE	4
TOLUENE	0
1,1,1-TRICHLOROETHANE	1
1,1,2-TRICHLOROETHANE	0
TRICHLOROETHENE	5
VINYL ACETATE	0
VINYL CHLORIDE	1
XYLENES	0

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GC51 EXP 10/26/95	GM-040 BG 10/11/95	GM-042 BG 10/11/95	GM-043 OLF 10/18/95	GM-044 OLF 10/18/95	GM-053 BG 12/10/95	GM-069 BG 12/07/95	GM-079 BG 12/09/95	GM-080 BG 12/09/95	GM-084 OLF 10/19/95
ACETONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 4TH QUARTER 1995

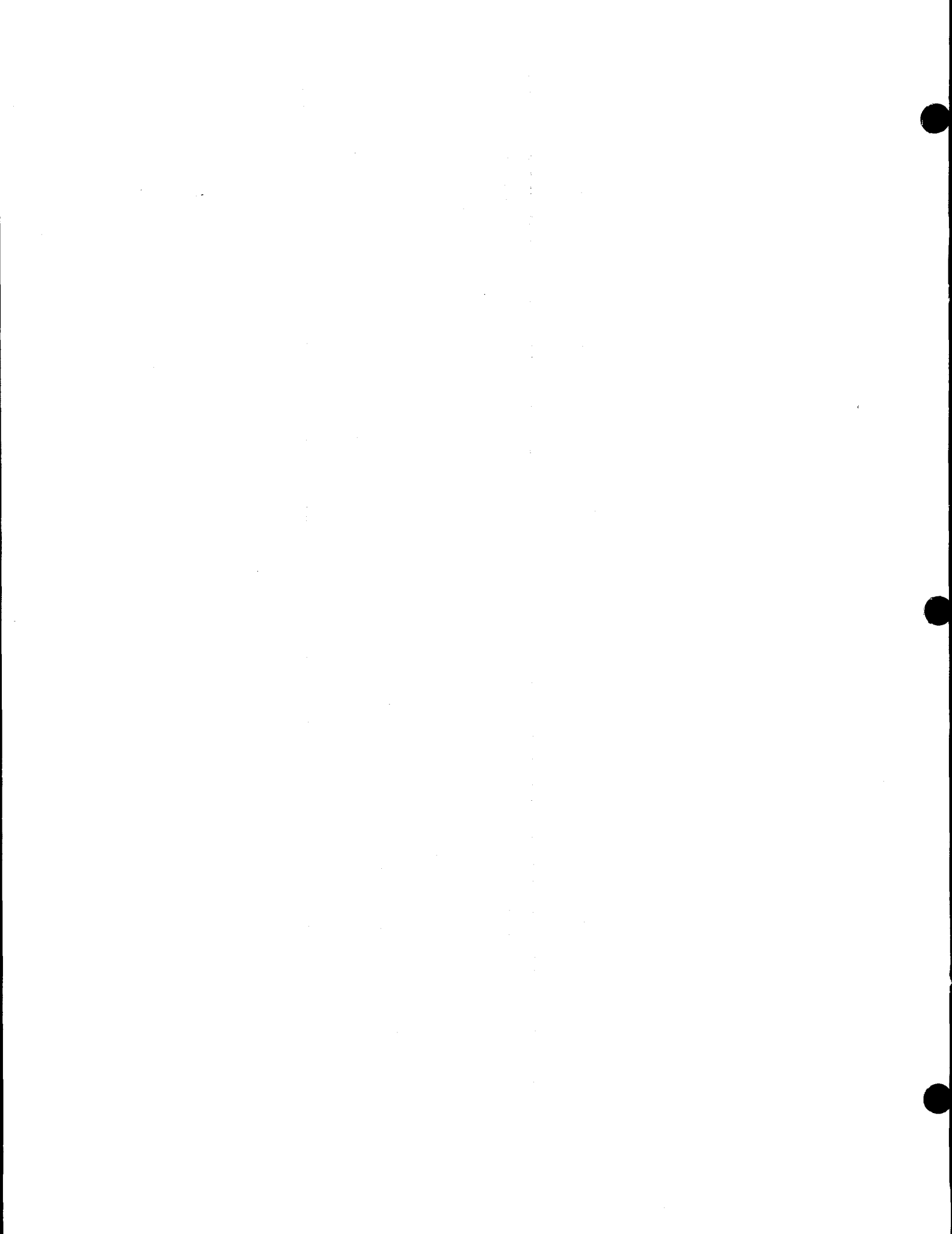
SAMPLING POINT LOCATION DATE SAMPLED	GW-085 OLF 10/25/95	GW-095 BG 12/11/95	GW-162 BG 10/11/95	GW-287 BG 12/10/95	GW-311 RS 10/25/95	GW-315 SPI 12/07/95	GW-363 OLF 10/19/95	GW-372 BG 10/12/95	GW-373 BG 10/12/95	GW-537 OLF 10/25/95
ACETONE (UG/L)	10U	5 JB 10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE (UG/L)	10U	9 JB 10U	10U	10U	10U	9 J 10U	10U	10U	10U	10U
CARBON DISULFIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM (UG/L)	10U	10U	10U	10U	10U	2 J 10U	10U	10U	10U	1 J 10U
CHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	7 J 10U	10U	10U	10U	10U
CIS-1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	14 10U	10U	10U	10U	10U
TOLUENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE (UG/L)	10U	10U	10U	10U	11 10U	6 J 10U	10U	10U	10U	10U
VINYL ACETATE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-627 BG 12/10/95	GW-642 BG 10/10/95	GW-653 BG 12/08/95	GW-654 BG 12/09/95	GW-793 AGLLSF 10/19/95	GW-794 AGLLSF 10/24/95	GW-795 AGLLSF 10/24/95	GW-828 OLF 12/08/95	GW-829 OLF 12/10/95	SS-5.95K EXP 10/26/95
ACETONE	10U	10U	4 JB	10U	10U	10U	10U	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	9 JB	10	9 J	10U	10U	10U	10 J	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	4 J	10U	2 J	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	1 J	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	10U	10U	31	10U	10U	10U	10U	10U	10U	10U
CIS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	4 J	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE	58	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE	10U	10U	1 J	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	2 J	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	9 J	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX E.2
VOLATILE ORGANIC COMPOUNDS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	SS-6W EXP 10/26/95	SS-7 EXP 10/26/95
ACETONE	(UG/L) 10U	10U
BENZENE	(UG/L) 10U	10U
BROMODICHLOROMETHANE	(UG/L) 10U	10U
BROMOFORM	(UG/L) 10U	10U
BROMOMETHANE	(UG/L) 10U	10U
2-BUTANONE	(UG/L) 10U	10U
CARBON DISULFIDE	(UG/L) 10U	10U
CARBON TETRACHLORIDE	(UG/L) 10U	10U
CHLOROBENZENE	(UG/L) 10U	10U
CHLORODIBROMOMETHANE	(UG/L) 10U	10U
CHLOROETHANE	(UG/L) 10U	10U
CHLOROFORM	(UG/L) 10U	10U
CHLOROMETHANE	(UG/L) 10U	10U
1,1-DICHLOROETHANE	(UG/L) 10U	10U
1,2-DICHLOROETHANE	(UG/L) 10U	10U
1,1-DICHLOROETHENE	(UG/L) 10U	10U
1,2-DICHLOROETHENE	(UG/L) 10U	10U
CIS-1,2-DICHLOROETHENE	(UG/L) 10U	10U
TRANS-1,2-DICHLOROETHENE	(UG/L) 10U	10U
1,2-DICHLOROPROPANE	(UG/L) 10U	10U
CIS-1,3-DICHLOROPROPENE	(UG/L) 10U	10U
TRANS-1,3-DICHLOROPROPENE	(UG/L) 10U	10U
ETHYLBENZENE	(UG/L) 10U	10U
2-HEXANONE	(UG/L) 10U	10U
4-METHYL-2-PENTANONE	(UG/L) 10U	10U
METHYLENE CHLORIDE	(UG/L) 10U	10U
STYRENE	(UG/L) 10U	10U
1,1,2,2-TETRACHLOROETHANE	(UG/L) 10U	10U
TETRACHLOROETHENE	(UG/L) 10U	10U
TOLUENE	(UG/L) 10U	10U
1,1,1-TRICHLOROETHANE	(UG/L) 10U	10U
1,1,2-TRICHLOROETHANE	(UG/L) 10U	10U
TRICHLOROETHENE	(UG/L) 10U	10U
VINYL ACETATE	(UG/L) 10U	10U
VINYL CHLORIDE	(UG/L) 10U	10U
XYLENES	(UG/L) 10U	10U



APPENDIX E.3

**FIELD MEASUREMENTS
AND MISCELLANEOUS PARAMETERS**

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	BCK-00.63 EXP 03/09/95	BCK-04.55 EXP 03/09/95	BCK-09.40 EXP 03/09/95	BCK-11.97 EXP 03/09/95	GW-040 BG 02/01/95	GW-042 BG 02/01/95	GW-043 OLF 03/16/95	GW-044 OLF 03/16/95	GW-047 BG 01/25/95	GW-053 BG 03/28/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	.	.	.	.	-15.5	-16.42	-29.2	-20.71	-6.72	-6.48
WATER LEVEL ELEV. (FT. ABOVE MSL)	7.8	8.4	9.3	6.4	992.52	986.97	982.3	992.79	921.53	896.19
WATER TEMP, FIELD MMT (DEG. CENT.)	8.7	8.2	7.5	7.4	14.8	14.8	15.1	14.7	13.5	14.9
PH, FIELD MMT. (PH UNITS)	110	125	1.5	430	6.2	6.6	6.4	7.1	6.1	7.2
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	21	21.5	21	10.4	138	77	183	285	56	830
DISSOLVED OXYGEN, FIELD MMT. (PPM)	.	.	.	.	2.3	1.4	3.2	3	3.7	1.8
REDOX, FIELD MMT. (MV)	.	.	.	.	194	48	217	192	186	24
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	7.8	7.8	8.1	7.8	6.5	6.2	6.9	7.5	6.4	7.5
CONDUCTIVITY (UMHOS/CM)	156	179	251	683	150	75	154	274	60	702
DISSOLVED SOLIDS (MG/L)	90	106	192	394	106	86	164	224	20	406
TOTAL SUSPENDED SOLIDS (MG/L)	5	5	4	5	11	<1	<1	<1	7	9.5
TURBIDITY (NTU)	15	13	17	7.3	9	2.2	16	0.3	9	6.1

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-056 EXP 03/05/95	GW-057 EXP 03/05/95	GW-061 BG 03/28/95	GW-064 OLF 03/26/95	GW-069 BG 03/25/95	GW-079 BG 03/26/95	GW-080 BG 03/25/95	GW-084 OLF 03/23/95	GW-085 OLF 03/26/95	GW-095 BG 03/27/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-6.75	-4.81	-13.76	-24.9	-8.35	-18.24	-21.18	-13.94	-13.22	-5.72
WATER LEVEL ELEV. (FT. ABOVE MSL)	883.96	884.55	890.68	956.66	918.66	962.26	959.13	982.66	969.65	905.15
WATER TEMP, FIELD MMT (DEG. CENT.)	13.5	13.3	11.8	12.6	15.2	12.9	13.3	16	14.8	16.1
PH, FIELD MMT. (PH UNITS)	7.4	7.1	7.5	7.6	9.3	7.9	6	7.6	7.4	9
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	861	798	517	585	343	218	64	321	1631	534
DISSOLVED OXYGEN, FIELD MMT. (PPM)	9.4	9.4	3.9	2	1.2	1.5	2	1.4	1.5	0.4
REDOX, FIELD MMT. (MV)	99	272	147	245	138	157	87	152	218	9.8
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	7.5	7.2	7.4	7.3	9	8.1	6.4	7.9	7.3	8.9
CONDUCTIVITY (UMHOS/CM)	1004	907	510	657	394	226	88	311	1664	509
DISSOLVED SOLIDS (MG/L)	544	510	370	176	240	152	92	210	1204	482
TOTAL SUSPENDED SOLIDS (MG/L)	2	<1	228	770	<1	<1	268	18	<1	<1
TURBIDITY (NTU)	4.3	1.2	240	1350	0.7	0.3	400	4.9	42	0.2

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-115 S3 01/14/95	GW-162 BG 01/26/95	GW-276 S3 01/24/95	GW-287 BG 03/26/95	GW-311 RS 03/25/95	GW-312 RS 03/25/95	GW-315 SPI 03/15/95	GW-317 SPI 03/14/95	GW-347 S3 03/15/95	GW-348 S3 03/15/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-9.94	-19.66	-6.1	-9.52	-34.77	-33.12	-53.4	-68.46	-16	-21.44
WATER LEVEL ELEV. (FT. ABOVE MSL)	1044.46	1020.74	995.2	917.35	964.58	963.37	993.9	994.54	985.6	978.66
WATER TEMP, FIELD MMT (DEG. CENT.)	16.4	15	11.8	13.2	12.9	19.8	15.6	16.2	15	14.9
PH, FIELD MMT. (PH UNITS)	7.6	8.2	4.7	6.4	7.7	12.1	7.4	7.9	7.2	7.5
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	410	232	1863	170	424	1200	545	410	139	559
DISSOLVED OXYGEN, FIELD MMT. (PPM)	2.8	1.9	3.7	3	7.7	3.8	4	8.1	7.4	4.1
REDOX, FIELD MMT. (MV)	-89	-14	298	213	181	-12	163	202	200	180
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	7.7	8.2	4.3	6.6	7.7	11.7	7.4	8.1	7.5	7.6
CONDUCTIVITY (UMHOS/CM)	485	217	1860	185	434	1028	543	400	151	550
DISSOLVED SOLIDS (MG/L)	262	60	1046	404	218	108	334	224	98	328
TOTAL SUSPENDED SOLIDS (MG/L)	2	41	9	49	<1	<1	<1	<1	4.5	<1
TURBIDITY (NTU)	0.3	60	5.5	320	0.9	0.5	0.4	1	38	0.6

APPENDIX E-3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-363 OLF 01/23/95	GW-370 BG 02/01/95	GW-372 BG 01/31/95	GW-373 BG 01/31/95	GW-537 OLF 03/26/95	GW-613 S3 01/11/95	GW-614 S3 01/11/95	GW-621 EXP 03/29/95	GW-627 BG 03/28/95	GW-637 OLF 01/24/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-4.82	-14	-17.85	-18.82	-6.35	-12.85	-7.53	-12.79	-22.88	-7.73
WATER LEVEL ELEV. (FT. ABOVE MSL)	953.09	946.62	965.68	963.98	969.89	1000.55	1004.67	912.45	919.97	934.1
WATER TEMP. FIELD MMT (DEG. CENT.)	11.8	13.9	12.3	13.4	14.8	13.5	13.3	14.1	14.5	12.4
PH, FIELD MMT. (PH UNITS)	9	6.7	7.7	9.3	7.1	7.3	7.3	7.8	9.6	7.5
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	382	169	354	408	5450	140	262	350	1167	413
DISSOLVED OXYGEN, FIELD MMT. (PPM)	6.1	3	4.8	9.2	0.8	5.8	0.8	4.7	2	2.5
REDOX, FIELD MMT. (MV)	148	185	-0.5	28	232	183	148	179	-14.8	183
MISCELLANEOUS PARAMETERS										
PH	8.9	6.8	7.9	8.9	7.3	7.4	8.1	7.8	9	7.8
CONDUCTIVITY (UMHOS/CM)	465	192	412	494	5970	187	348	338	1191	425
DISSOLVED SOLIDS (MG/L)	228	132	240	284	4670	106	188	206	652	140
TOTAL SUSPENDED SOLIDS (MG/L)	24	53	2	4	<1	4	12	11	<1	3
TURBIDITY (NTU)	16	21	4.5	12	1	1.7	2.7	27	0.5	4.4

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-642 BG 01/31/95	GW-652 BG 03/27/95	GW-653 BG 03/27/95	GW-654 BG 03/26/95	GW-683 EXP 03/09/95	GW-684 EXP 03/10/95	GW-685 EXP 03/08/95	GW-694 EXP 03/30/95	GW-695 EXP 03/29/95	GW-703 EXP 03/29/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-18	-10.1	-21.52	-6.84	-86.08	-14.25	-6.98	-29.16	-27.82	-40.3
WATER LEVEL ELEV. (FT. ABOVE MSL)	996.7	890.73	910.08	933.95	885.98	884.41	884.53	912.22	911.55	914.39
WATER TEMP, FIELD MMT (DEG. CENT.)	14.1	13.8	14.4	11.8	11.8	13.8	11	13.4	15	15.2
PH, FIELD MMT. (PH UNITS)	6.6	7.7	5.9	7	7.7	7.7	7.3	7.2	8	7.9
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	139	369	41	210	207	332	650	630	514	658
DISSOLVED OXYGEN, FIELD MMT. (PPM)	4.6	2	6	5.1	8.3	5.5	6.5	2.7	7.5	2.4
REDOX, FIELD MMT. (MV)	-19	169	244	134	151	124.8	177	89	172	128
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	6.8	7.6	5.7	7.4	7.5	7.7	7.8	7.2	7.9	8
CONDUCTIVITY (UMHOS/CM)	160	414	35	239	227	320	747	660	465	654
DISSOLVED SOLIDS (MG/L)	200	272	84	206	328	184	468	390	270	378
TOTAL SUSPENDED SOLIDS (MG/L)	5	13	178	14	1	<1	10	<1	82	<1
TURBIDITY (NTU)	6.6	58	39	31	3	7	28	3.1	40	5.4

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-704 EXP 03/30/95	GW-706 EXP 03/31/95	GW-710 EXP 01/15/95	GW-711 EXP 01/13/95	GW-712 EXP 01/13/95	GW-713 EXP 01/14/95	GW-714 EXP 01/14/95	GW-715 EXP 01/14/95	GW-723 EXP 02/20/95	GW-724 EXP 02/19/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-32.72	-16.56	-66.75	-63.3	-32.95	-38.86	-28.65	-25.45	-71	-27.24
WATER LEVEL ELEV. (FT. ABOVE MSL)	912.01	912.11	844.51	841.9	844.14	841.77	846.43	849.27	951.23	952.03
WATER TEMP, FIELD MNT (DEG. CENT.)	13.1	13.3	13.5	14.6	12.3	13.3	13.7	13.8	14.3	13.8
PH, FIELD MNT. (PH UNITS)	7.8	7.5	7.8	7.3	7.3	7.6	7.7	7.1	8.1	7.3
CONDUCTIVITY, FIELD MNT (UMHOS/CM)	591	644	4200	6900	591	497	398	491	647	994
DISSOLVED OXYGEN, FIELD MNT. (PPM)	1.5	4.1	1.8	0.2	3	1.4	7	1.6	5.6	2
REDOX, FIELD MNT. (MV)	93	148	-73	-83	-11	-61	-27	75	191	102
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	7.8	7.6	7.5	7.5	7.9	7.8	7.8	7.3	8.3	7.8
CONDUCTIVITY (UMHOS/CM)	574	606	4030	8290	742	601	476	584	610	945
DISSOLVED SOLIDS (MG/L)	300	398	3638	5948	498	372	228	328	358	520
TOTAL SUSPENDED SOLIDS (MG/L)	3	<1	20	5	<1	2	18	2	<1	<1
TURBIDITY (NTU)	13	0.5	50	25	7.4	2	65	5	3	1.5

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-725 EXP 02/28/95	GW-736 EXP 02/28/95	GW-737 EXP 03/01/95	GW-738 EXP 02/18/95	GW-739 EXP 02/17/95	GW-740 EXP 02/16/95	GW-793 AGLLSF 01/23/95	GW-794 AGLLSF 01/24/95	GW-795 AGLLSF 01/25/95	GW-800 OLF 03/25/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-10.94	-9.75	-9.12	-24.98	-73.8	-69.35	-6.55	-12.42	-4.28	-19.2
WATER LEVEL ELEV. (FT. ABOVE MSL)	950.11	950.37	950.79	958.1	949.9	950.25	961.63	921.75	921.7	945.16
WATER TEMP, FIELD MMT (DEG. CENT.)	14.2	14.2	13	13.6	13.4	12.9	13.3	11.4	13.5	10.1
PH, FIELD MMT. (PH UNITS)	7	6.8	6.8	7.1	7.4	7.3	7.2	7.5	7.2	7.6
CONDUCTIVITY, FIELD MMT (UMHOS/CN)	1187	1095	1087	818	548	530	286	428	367	294
DISSOLVED OXYGEN, FIELD MMT. (PPM)	0.6	1.6	0.9	1.7	3.7	2.1	1.5	8.9	1	8.9
REDOX, FIELD MMT. (MV)	70	122	146	215	96	23	186	144	224	195
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	7.2	7.3	7.3	7.4	7.7	7.7	7.5	7.6	7.6	7.7
CONDUCTIVITY (UMHOS/CN)	1176	1056	1049	772	537	553	304	523	414	317
DISSOLVED SOLIDS (MG/L)	776	664	654	448	260	298	146	246	232	114
TOTAL SUSPENDED SOLIDS (MG/L)	<1	<1	<1	2	6	1	1	458	<1	4
TURBIDITY (NTU)	1.3	0.1	1	12	6.2	2.5	2.4	360	1.1	5

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-828-100 OLF 02/14/95	GW-828-200 OLF 02/18/95	GW-829-029 OLF 03/01/95	GW-829-116 OLF 03/07/95	NT-01 EXP 03/09/95	NT-02 EXP 03/09/95	SS-1 EXP 03/09/95	SS-4 EXP 03/09/95	SS-5 EXP 03/09/95	SS-6 EXP 03/09/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-11.35	-11.5	-9.85	.	.	.	.	.	.	.
WATER LEVEL ELEV. (FT. ABOVE MSL)	971.57	971.42	975.93	.	.	.	.	.	.	.
WATER TEMP, FIELD MMT (DEG. CENT.)	13.3	14.1	14.3	14.2	9.4	10.4	11.3	11.1	10.3	10.3
PH, FIELD MMT. (PH UNITS)	7.5	6.8	6.7	6.4	7.3	7.2	7.1	7	7.8	7.8
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	954	5250	2180	13300	100	680	310	1.5	10	10
DISSOLVED OXYGEN, FIELD MMT. (PPM)	2.2	7.2	7.1	5.6	9.2	7.9	8.4	18	19	19
REDOX, FIELD MMT. (MV)	151	128	254	194	.	.	.	.	.	.
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	.	.	.	.	7.4	7.4	7.8	7.4	7.8	7.8
CONDUCTIVITY (UMHOS/CM)	.	.	.	.	473	149	408	209	136	136
DISSOLVED SOLIDS (MG/L)	.	.	.	.	330	110	210	110	76	76
TOTAL SUSPENDED SOLIDS (MG/L)	.	.	.	.	5	10	22	<1	<1	<1
TURBIDITY (NTU)	.	.	.	.	16	20	15	4.7	3.6	3.6

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GCS1 EXP 05/23/95	GW-040 BG 06/06/95	GW-042 BG 06/06/95	GW-043 OLF 06/01/95	GW-044 OLF 06/01/95	GW-047 BG 06/18/95	GW-053 BG 06/28/95	GW-061 BG 06/28/95	GW-064 OLF 06/07/95	GW-069 BG 06/27/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	.	-19	-20.83	-22.25	-23.1	-8.75	-9.75	-17.72	-26.3	-10.3
WATER LEVEL ELEV. (FT. ABOVE MSL)	.	989.02	982.56	989.25	990.4	919.5	892.92	886.72	955.26	916.71
WATER TEMP, FIELD MMT (DEG. CENT.)	15.7	16.4	17.1	15.4	15.1	14.5	18.2	14.6	16.9	16.6
PH, FIELD MMT. (PH UNITS)	7.2	6.4	6.4	6.6	7.3	6.3	7.1	7.3	7.2	8.6
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	247	215	107	173	303	65	804	600	667	402
DISSOLVED OXYGEN, FIELD MMT. (PPM)	10.4	3.4	5.7	4.2	4.1	4.7	3.2	2	2.1	1.6
REDOX, FIELD MMT. (MV)	.	151	84	195	180	187	94	141	150	-105
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	7.6	6.6	6.6	6.9	8	6.9	7.2	7.5	7.3	8.6
CONDUCTIVITY (UMHOS/CM)	295	148	76	138	268	66	715	586	617	380
DISSOLVED SOLIDS (MG/L)	172	162	60	134	196	90	494	436	380	234
TOTAL SUSPENDED SOLIDS (MG/L)	4	37	<1	6	2.5	12	8.5	2150	441	<1
TURBIDITY (NTU)	0.9	72	3.7	12	1.5	35	4.5	1440	440	1.1

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 2ND QUARTER 1995

SAMPLING POINT LOCATION	GW-079 BG	GW-080 BG	GW-084 OLF	GW-085 OLF	GW-095 BG	GW-162 BG	GW-287 BG	GW-311 RS	GW-312 RS	GW-315 SPI
DATE SAMPLED	06/19/95	06/19/95	06/07/95	06/08/95	06/20/95	05/31/95	06/20/95	06/06/95	06/06/95	06/26/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-21.35	-23.85	-15.3	-13.95	-5.12	-18.62	-9.87	-35.01	-36.72	-61.28
WATER LEVEL ELEV. (FT. ABOVE MSL)	959.15	956.46	981.3	968.92	905.75	1021.78	917	964.34	959.77	986.02
WATER TEMP, FIELD MMT (DEG. CENT.)	16.6	14.8	16.1	17.7	14.8	19.2	16.3	16.5	17.5	17.2
PH, FIELD MMT. (PH UNITS)	7.4	6.2	7.9	7.2	9.2	8.5	6.7	7	7	6.9
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	225	113	292	1486	483	260	325	427	1723	598
DISSOLVED OXYGEN, FIELD MMT. (PPM)	7	3.3	1.3	1.7	1	6.4	6.4	6.1	2.8	2.7
REDOX, FIELD MMT. (MV)	181	133	66	166	78	98	204	167	-60	149
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	8.1	6.5	8	7.2	9.2	8.1	7.2	7.9	12	7.2
CONDUCTIVITY (UMHOS/CM)	215	99	297	1499	500 L	250	230 L	436	1479	599
DISSOLVED SOLIDS (MG/L)	146	108	192	1540	338	164	226	320	440	354
TOTAL SUSPENDED SOLIDS (MG/L)	<1	16	14	280	<1	5.5	4	89	2	<1
TURBIDITY (NTU)	1	33	6.6	175	0.3	9.5	80	1.1	13	0.5

APPENDIX E-3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-317 SPI 06/21/95	GW-347 S3 06/21/95	GW-348 S3 06/26/95	GW-363 OLF 06/17/95	GW-370 BG 06/05/95	GW-372 BG 06/02/95	GW-373 BG 06/05/95	GW-537 OLF 06/08/95	GW-627 BG 06/22/95	GW-637 OLF 06/17/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOL)	-76.41	-18.78	-25.47	-5.84	-18.6	-20.6	-18.02	-6.84	-24	-11.85
WATER LEVEL ELEV. (FT. ABOVE MSL)	986.59	982.82	974.63	952.07	942.02	962.93	964.78	969.4	918.85	929.98
WATER TEMP, FIELD MMT (DEG. CENT.)	15.9	17.2	16	16.4	16.4	16.8	17.2	17.4	16.3	16.9
PH, FIELD MMT. (PH UNITS)	7.9	7.2	7.3	9.4	5.8	7.5	9.2	6.8	8.9	7.6
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	390	150	550	427	109	511	450	5560	1232	400
DISSOLVED OXYGEN, FIELD MMT. (PPM)	8	9	2.1	1.8	4.1	2.1	2.2	1.3	0.9	4.9
REDOX, FIELD MMT. (MV)	180	222	176	82	189	-9	70	177	19	-66
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	8	7.5	7.5	9.3	6.3	7.8	9.2	7.1	9.1	7.7
CONDUCTIVITY (UMHOS/CM)	392	140	550	450	87	378	460	5740	1172	426
DISSOLVED SOLIDS (MG/L)	204	104	330	328	70	242	308	6034	728	278
TOTAL SUSPENDED SOLIDS (MG/L)	<1	13	<1	10	5.5	5.5	4.5	<1	<1	1.5
TURBIDITY (NTU)	0.2	24	1	4.3	26	3.6	7.9	2.6	1.2	5.1

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GH-642 BG 06/02/95	GH-652 BG 06/20/95	GH-653 BG 06/20/95	GH-654 BG 06/19/95	GH-793 AGLLSF 06/17/95	GH-794 AGLLSF 06/18/95	GH-795 AGLLSF 06/18/95	GH-800 OLF 05/31/95	GH-828 OLF 06/27/95	GH-829 OLF 06/27/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-20.85	-11.45	-23.25	-7.92	-9.25	-18.72	-7.94	-19.24	-3.6	-14.21
WATER LEVEL ELEV. (FT. ABOVE MSL)	993.85	889.38	908.35	932.87	958.93	915.45	918.04	945.12	979.32	971.57
WATER TEMP, FIELD MMT (DEG. CENT.)	17.8	14	14.5	15.7	15.9	14.6	14	13.9	16.6	17.1
PH, FIELD MMT. (PH UNITS)	6.4	7.5	5.4	7.5	7.3	7.7	7.4	7.2	9.3	7.8
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	159	363	47	246	273	468	345	361	638	1230
DISSOLVED OXYGEN, FIELD MMT. (PPM)	5.3	2	4.7	4.3	0.5	7	0.6	5.3	7.2	7
REDOX, FIELD MMT. (MV)	-6	-58	220	23	190	192	190	190	137	178
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	7	7.7	5.8	7.6	7.5	7.8	7.5	7.6	9.1	7.9
CONDUCTIVITY (UMHOS/CM)	152	400 L	33 L	237	288	487	406	364	724	1872
DISSOLVED SOLIDS (MG/L)	128	238	56	210	200	348	260	264	594	1538
TOTAL SUSPENDED SOLIDS (MG/L)	<1	<1	22	30	<1	<1	<1	266	980	227
TURBIDITY (NTU)	4.2	3.2	19	34	0.8	7.1	0.6	230	280	85

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	MS-1 S3 05/03/95	NT-1N S3 05/03/95	NT-1S S3 05/03/95	SS-5.95K EXP 05/23/95	SS-6.6K EXP 05/23/95	SS-6W EXP 05/23/95	SS-7 EXP 05/23/95	TS S3 05/03/95
FIELD MEASUREMENTS								
STATIC WATER LEVEL (FT. BELOW TOC)	.	.	.	.	.	.	.	.
WATER LEVEL ELEV. (FT. ABOVE MSL)	.	.	.	.	.	.	.	.
WATER TEMP, FIELD MMT (DEG. CENT.)	.	.	.	14.4	16.5	13	14.5	.
PH, FIELD MMT. (PH UNITS)	.	.	.	7.1	7	7.2	7	.
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	.	.	.	265	310	182	189	.
DISSOLVED OXYGEN, FIELD MMT. (PPM)	.	.	.	12.2	4.8	9.6	7.8	.
REDOX, FIELD MMT. (MV)	.	.	.	.	.	.	.	.
MISCELLANEOUS PARAMETERS								
PH (PH UNITS)	.	.	.	7.7	7.2	7.6	7.4	.
CONDUCTIVITY (UMHOS/CM)	.	.	.	337	359	229	227	.
DISSOLVED SOLIDS (MG/L)	.	.	.	188	214	134	144	.
TOTAL SUSPENDED SOLIDS (MG/L)	.	.	.	<1	36	<1	<1	.
TURBIDITY (NTU)	.	.	.	0.5	4.6	1.8	3	.

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	BCK-00.63 EXP 07/25/95	BCK-04.55 EXP 07/25/95	BCK-09.40 EXP 07/25/95	BCK-11.97 EXP 07/25/95	GW-014 BG 08/04/95	GW-040 BG 08/10/95	GW-042 BG 08/09/95	GW-043 OLF 08/04/95	GW-044 OLF 08/04/95	GW-046 BG 08/09/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	.	.	.	.	-6.5	-22.92	-22.45	-28.55	-29.7	-4.36
WATER LEVEL ELEV. (FT. ABOVE MSL)	17.8	15.7	16.1	21.6	927.26	985.1	980.94	982.95	983.8	915.25
WATER TEMP, FIELD MMT (DEG. CENT.)	7.6	7.2	7.1	7.5	21.6	19.2	18.6	16.4	17	17.2
PH, FIELD MMT. (PH UNITS)	320	300	430	1825	7.5	5.9	6.2	6.6	7.5	5.3
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	6	5.9	8.2	6.5	741	154	81	188	275	202
DISSOLVED OXYGEN, FIELD MMT. (PPM)	.	.	.	.	5.3	1.4	1	0.5	4.2	0.6
REDOX, FIELD MMT. (MV)	.	.	.	.	118	37	19	149	88	192
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	8.1	7.7	7.4	8	7.7	6.8	6.4	6.8	7.6	5.7
PH, REP. 2 (PH UNITS)	8.1	7.7	7.4	8	7.7	6.8	6.4	6.8	7.6	5.7
CONDUCTIVITY (UMHOS/CM)	345	332	493	1900	790	153	78.6	133	287	212
CONDUCTIVITY, REP. 2 (UMHOS/CM)	345	332	493	1900	.	.	.	.	.	.
TPH DIESEL RANGE X-10 LAB (MG/L)	.	.	.	.	.	.	.	.	.	.
TPH GASOLINE RANGE X-10 LAB (MG/L)	.	.	.	.	.	.	.	.	.	.
DISSOLVED SOLIDS (MG/L)	222	214	338	2034	524	190	96	132	198	164
TOTAL SUSPENDED SOLIDS (MG/L)	1.5	3	2.5	<1	<1	637	<1	21	<1	<1
TURBIDITY (NTU)	2.3	3.7	3.4	0.5	0.7	850	2.7	70	1.5	0.2

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-047 BG 07/24/95	GW-053 BG 09/25/95	GW-056 EXP 08/04/95	GW-057 EXP 08/05/95	GW-061 BG 09/21/95	GW-064 OLF 08/06/95	GW-066 OLF 09/27/95	GW-069 BG 08/15/95	GW-079 BG 09/18/95	GW-080 BG 09/21/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-9.67	-9.2	-8.5	-7.29	-17	-28.35	-10.25	-11.55	-25	-25.42
WATER LEVEL ELEV. (FT. ABOVE MSL)	918.58	893.47	882.21	882.07	887.44	953.21	951.47	915.46	955.5	954.89
WATER TEMP, FIELD MMT (DEG. CENT.)	16.3	15.6	16	16.6	16	18.4	15.8	17.2	16.2	15.1
PH, FIELD MMT. (PH UNITS)	6	7	7.5	7	7.3	7.1	7.2	8.4	7.8	5.7
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	77	715	716	1316	640	696	728	306	216	107
DISSOLVED OXYGEN, FIELD MMT. (PPM)	3.4	0.7	0.9	1.2	1.8	1.9	3.8	0.2	0.8	1.8
REDOX, FIELD MMT. (MV)	106	51	-31	-16	56	174	192	-154	169	180
MISCELLANEOUS PARAMETERS										
PH	6.5	7.2	7.4	7.5	7.5	7.4	7.5	8.3	8.1	6.4
PH, REP. 2 (PH UNITS)										
CONDUCTIVITY (UMHOS/CM)	70.9	712	871	1020	633	648	843	423	211	99.5
CONDUCTIVITY, REP. 2 (UMHOS/CM)										
TPH DIESEL RANGE X-10 LAB (MG/L)										
TPH GASOLINE RANGE X-10 LAB (MG/L)										
DISSOLVED SOLIDS (MG/L)	88	438	554	638	476	777	582	252	140	182
TOTAL SUSPENDED SOLIDS (MG/L)	6.5	1	3	<1	34	654	5	<1	1	51
TURBIDITY (NTU)	14	1.5	6.1	2	100	480	1.6	0.45	1.1	50

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-084 OLF 08/05/95	GW-085 OLF 08/06/95	GW-087 OLF 09/27/95	GW-095 BG 09/20/95	GW-100 S3 09/06/95	GW-115 S3 07/30/95	GW-124 S3 09/16/95	GW-162 BG 08/03/95	GW-228 OLF 09/17/95	GW-229 OLF 09/17/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-16.45	-15.4	-11.95	-9.52	-6.55	-14.85	-22.67	-21.65	-20.13	-31.79
WATER LEVEL ELEV. (FT. ABOVE MSL)	980.15	967.47	948.55	901.35	980.11	1039.55	984.13	1018.75	926.34	917.21
WATER TEMP, FIELD MMT (DEG. CENT.)	16	18	17.3	14.5	19.3	17.8	16.3	16.8	20.9	15.9
PH, FIELD MMT. (PH UNITS)	7.6	7	6.8	9	6.8	7.4	6.9	8	7.8	6.6
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	294	1477	570	486	2228	435	1022	268	876	1281
DISSOLVED OXYGEN, FIELD MMT. (PPM)	3.5	1.4	1.8	0.4	2	2.8	0.9	3.1	8.7	0.6
REDOX, FIELD MMT. (MV)	91	195	35	159	142	-26	154	169	138	-20
MISCELLANEOUS PARAMETERS										
PH	7.9	7.4	6.8	9.1	7.1	7.8	7.2	8.1	7.9	6.8
PH, REP. 2 (PH UNITS)										
CONDUCTIVITY (UMHOS/CM)	305	1530	480	503	2320	477	1000	266	941	1250 L
CONDUCTIVITY, REP. 2 (UMHOS/CM)										
TPH DIESEL RANGE X-10 LAB (MG/L)										
TPH GASOLINE RANGE X-10 LAB (MG/L)										
DISSOLVED SOLIDS (MG/L)	226	442	346	314	2388	304	908	182	668	786
TOTAL SUSPENDED SOLIDS (MG/L)	12	78	66	<1	1	<1	<1	<1	502	6
TURBIDITY (NTU)	5.6	50	90	0.4	6.2	4.5	2.3	5.9	1100	25

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-236 S3 09/16/95	GW-248 BG 08/08/95	GW-257 BG 08/08/95	GW-276 S3 07/29/95	GW-287 BG 09/18/95	GW-288 BG 08/09/95	GW-289 BG 08/08/95	GW-290 BG 08/07/95	GW-291 BG 08/03/95	GW-312 RS 08/06/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-11.85	-29.78	-30.26	-7	-9.45	-19.67	-20.05	-9.78	-12.54	-39.95
WATER LEVEL ELEV. (FT. ABOVE MSL)	971.36	931.47	931.42	994.3	917.42	928.69	928.42	938.68	935.82	956.54
WATER TEMP, FIELD MMT (DEG. CENT.)	17	17.6	18.2	21	20.1	18.2	17.7	19.2	19.9	16.5
PH, FIELD MMT. (PH UNITS)	4.5	7.4	6.6	4.1	6.9	6.8	6.3	8.2	6.4	11.7
CONDUCTIVITY, FIELD MMT (UMHOS/CN)	839	472	216	1570	274	226	167	565	352	1608
DISSOLVED OXYGEN, FIELD MMT. (PPH)	1.3	1.4	3.1	3.8	1.2	1.1	1.9	2	1.4	4.6
REDOX, FIELD MMT. (MV)	229	-7	143	238	174	126	155	34	28	-22
MISCELLANEOUS PARAMETERS										
PH	5	7.7	6.8	5.6	7.5	7.2	7	7.9	6.8	12
PH, REP. 2										
CONDUCTIVITY (PH UNITS)										
CONDUCTIVITY (UMHOS/CN)	806	484	202	2030	254	236	187	315	332	2150
TPH DIESEL RANGE X-10 LAB (MG/L)										
TPH GASOLINE RANGE X-10 LAB (MG/L)										
DISSOLVED SOLIDS (MG/L)	696	322	166	1586	288	196	152	208	222	332
TOTAL SUSPENDED SOLIDS (MG/L)	16	1	197	234	15	28	54	22	2.5	40
TURBIDITY (NTU)	22	1.2	125	1400	84	19	34	7	2	36

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-315 SPI 08/21/95	GW-317 SPI 08/15/95	GW-346 S3 08/31/95	GW-347 S3 08/15/95	GW-348 S3 08/21/95	GW-363 OLF 07/19/95	GW-370 BG 08/08/95	GW-372 BG 08/07/95	GW-373 BG 08/08/95	GW-537 OLF 08/03/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-63.2	-79.23	-18.76	-20.61	-26.15	-7.34	-16.08	-25.8	-20.05	-8.02
WATER LEVEL ELEV. (FT. ABOVE MSL)	984.1	983.77	976.89	980.99	973.95	950.57	944.54	957.73	962.75	968.22
WATER TEMP. FIELD MMT (DEG. CENT.)	16.8	17.8	17.2	22.4	16.1	17.9	17.4	18.2	17.1	20
PH, FIELD MMT. (PH UNITS)	7	7.7	7.2	6.8	7.2	9.3	6.8	7.7	9.2	6.7
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	619	389	5690	126	522	447	231	452	426	6.5
DISSOLVED OXYGEN, FIELD MMT. (PPM)	2.9	8.5	1.1	8.5	0.9	3.1	1.2	0.6	1.1	1.2
REDOX, FIELD MMT. (MV)	156	161	187	153	206	82	173	57	108	178
MISCELLANEOUS PARAMETERS										
PH	7.2	8	7.5	7.2	7.6	9.2	7.1	7.8	9.2	7.1
PH, REP. 2 (PH UNITS)	.	.	.	.	.	.	.	.	.	.
CONDUCTIVITY (UMHOS/CM)	625	401	5800	132	559	461	236	396	470	6130
CONDUCTIVITY, REP. 2 (UMHOS/CM)	.	.	.	.	.	.	.	.	.	.
TPH DIESEL RANGE X-10 LAB (MG/L)	.	.	.	.	.	.	.	.	.	.
TPH GASOLINE RANGE X-10 LAB (MG/L)	.	.	.	.	.	.	.	.	.	.
DISSOLVED SOLIDS (MG/L)	396	234	5316	84	350	312	220	258	320	7468
TOTAL SUSPENDED SOLIDS (MG/L)	<1	<1	<1	1	<1	55	45	<1	<1	3
TURBIDITY (NTU)	0.16	1.7	1.4	5.4	0.41	36	20	22	2.4	2.1

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-613 S3 07/24/95	GW-614 S3 07/24/95	GW-621 EXP 08/30/95	GW-627 BG 09/25/95	GW-637 OLF 07/19/95	GW-642 BG 08/07/95	GW-652 BG 09/19/95	GW-653 BG 09/20/95	GW-654 BG 09/18/95	GW-683 EXP 08/06/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-15.73	-8.65	-21.42	-25.25	-13.92	-22.95	-11.35	-26.1	-8.28	-88.98
WATER LEVEL ELEV. (FT. ABOVE MSL)	997.67	1003.55	903.82	917.6	927.91	991.75	889.48	905.5	932.51	883.08
WATER TEMP, FIELD MMT (DEG. CENT.)	15.5	16.1	15.8	15.3	16.2	17.1	13.7	14.5	19.8	16.1
PH, FIELD MMT. (PH UNITS)	7.1	7.6	7.6	9	7.2	6.4	7.6	5.1	7.3	7.4
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	184	428	343	1117	368	336	438	33	287	757
DISSOLVED OXYGEN, FIELD MMT. (PPM)	3.3	2.5	0.8	0.4	1.7	1.4	3.1	6.3	1.2	3.9
REDOX, FIELD MMT. (MV)	183	139	156	66	-20	-34	148	243	160	130.1
MISCELLANEOUS PARAMETERS										
PH	7	7.7	7.8	9.1	7.4	6.6	7.7	5.8	7.8	7.5
PH, REP. 2 (PH UNITS)	.	7.7	.	.	.	.	.	.	.	.
CONDUCTIVITY (UMHOS/CM)	179	329	358	1170	436	157	404	33.3	275	516
CONDUCTIVITY, REP. 2 (UMHOS/CM)	.	329	.	.	.	.	.	.	.	.
TPH DIESEL RANGE X-10 LAB (MG/L)	.	.	.	.	.	.	.	.	.	.
TPH GASOLINE RANGE X-10 LAB (MG/L)	.	.	.	.	.	.	.	.	.	.
DISSOLVED SOLIDS (MG/L)	130	224	262	728	264	134	278	50	200	372
TOTAL SUSPENDED SOLIDS (MG/L)	<1	16	43	<1	<1	8.5	25	72	3	<1
TURBIDITY (NTU)	0.5	5.5	55	0.9	3	2.9	93	36	7.7	0.4

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-684 EXP 08/06/95	GW-685 EXP 08/06/95	GW-694 EXP 08/31/95	GW-695 EXP 08/30/95	GW-703 EXP 08/30/95	GW-704 EXP 08/31/95	GW-706 EXP 08/30/95	GW-710 EXP 07/27/95	GW-711 EXP 07/27/95	GW-712 EXP 07/25/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-16.54	-8.81	-31.72	-31.95	-46.47	-37.35	-19	-69.13	-62.97	-35.37
WATER LEVEL ELEV. (FT. ABOVE MSL)	882.12	882.7	909.66	907.42	908.22	907.58	909.67	842.13	842.23	841.72
WATER TEMP, FIELD MMT (DEG. CENT.)	15.6	17.2	15.6	17.6	17	16.7	16	16.2	16.2	16.5
PH, FIELD MMT. (PH UNITS)	7.7	7.2	6.7	8.1	7.7	7.7	7	7.4	7.4	7.4
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	520	673	776	420	557	569	768	3.52	7.93	619
DISSOLVED OXYGEN, FIELD MMT. (PPM)	1.7	0.31	0.2	0.8	0.5	1.2	0.5	0.8	1.2	0.7
REDOX, FIELD MMT. (MV)	91	-69.3	19	146	159	150	60	-139	-160	-16
MISCELLANEOUS PARAMETERS										
PH	7.8	7.5	7.1	8.1	8	7.8	7.2	7.2	7.5	7.7
PH, REP. 2 (PH UNITS)										
CONDUCTIVITY (UMHOS/CM)	483	665 L	834	430	613	589	848	4040	8250	700
CONDUCTIVITY, REP. 2 (UMHOS/CM)										
TPH DIESEL RANGE X-10 LAB (MG/L)										
TPH GASOLINE RANGE X-10 LAB (MG/L)										
DISSOLVED SOLIDS (MG/L)	350	412	562	346	382	436	514	3866	6208	518
TOTAL SUSPENDED SOLIDS (MG/L)	16	3.5	<1	66	3.5	2.5	<1	4	2	<1
TURBIDITY (NTU)	14	13	2.8	32	14	22	11	23	95	5.6

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-713 EXP 07/27/95	GW-714 EXP 07/29/95	GW-715 EXP 07/29/95	GW-723 EXP 09/13/95	GW-724 EXP 09/24/95	GW-725 EXP 09/25/95	GW-736 EXP 09/26/95	GW-737 EXP 09/26/95	GW-738 EXP 09/17/95	GW-739 EXP 09/16/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-39.3	-31.29	-30.13	-74.45	-34.4	-16.14	-13.55	-14.52	-31.6	-79.12
WATER LEVEL ELEV. (FT. ABOVE MSL)	841.33	843.79	844.59	947.78	944.87	944.91	946.57	945.39	951.48	944.58
WATER TEMP, FIELD MMT (DEG. CENT.)	15.8	16.6	15.3	16.5	14.6	15.1	15.5	15.9	16.2	14.5
PH, FIELD MMT. (PH UNITS)	7.4	7.7	7.1	7.9	7	6.9	6.8	6.9	7.2	7.4
CONDUCTIVITY, FIELD MMT (UMHOS/CN)	509	410	465	494	855	1008	985	972	776	539
DISSOLVED OXYGEN, FIELD MMT. (PPM)	0.3	7.8	1.4	2.6	1.3	0.5	1.8	0.9	1.5	1.7
REDOX, FIELD MMT. (MV)	-49	108	118	154	169	69	181	172	78.9	109
MISCELLANEOUS PARAMETERS										
PH	7.9	7.9	7.6	7.9	7.4	7.2	7.2	7.1	7.7	7.8
PH, REP. 2										
CONDUCTIVITY (PH UNITS)	585	453	525	503	937	1100	1040	1040	774	524
CONDUCTIVITY, REP. 2 (UMHOS/CN)										
TPH DIESEL RANGE X-10 LAB (MG/L)										
TPH GASOLINE RANGE X-10 LAB (MG/L)										
DISSOLVED SOLIDS (MG/L)	534	276	306	366	658	774	724	756	548	358
TOTAL SUSPENDED SOLIDS (MG/L)	<1	126	<1	5	<1	<1	<1	<1	39	<1
TURBIDITY (NTU)	16	4.9	3.4	20	1.4	2.1	0.25	1	81	6.8

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-740 EXP 09/17/95	GW-793 AGLLSF 07/19/95	GW-794 AGLLSF 07/24/95	GW-795 AGLLSF 07/24/95	GW-800 OLF 08/05/95	GW-828 OLF 08/24/95	GW-829 OLF 08/30/95	GW-830 B9714 09/14/95	NT-01 EXP 07/25/95	NT-02 EXP 09/22/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-75.87	-10.37	-21.05	-10.91	-21.55	-5.9	-15.65	-47.5	.	.
WATER LEVEL ELEV. (FT. ABOVE MSL)	943.73	957.81	913.12	915.07	942.81	977.02	970.13	795.04	23.5	20.5
WATER TEMP. FIELD MMT (DEG. CENT.)	15	16.2	16.6	16.4	16.6	20.6	20.1	15	6.4	7.4
PH, FIELD MMT. (PH UNITS)	7.4	7.1	7.5	4.5	7.1	9.1	8	7.2	4.6	4.6
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	543	269	479	408	515	705	1142	341	4100	420
DISSOLVED OXYGEN, FIELD MMT. (PPM)	2.1	1	5.8	0.9	1	6.3	2.2	5.9	4.6	6.6
REDOX, FIELD MMT. (MV)	-90	170	158	135	154	152	111	174	.	.
MISCELLANEOUS PARAMETERS										
PH	7.8	7.4	7.7	7.4	7.8	9.3	8.2	7.8	7.6	7.7
PH, REP. 2 (PH UNITS)	.	.	.	.	.	.	.	.	7.6	.
CONDUCTIVITY (UMHOS/CM)	531	294	463	408	487	822	926	250	1920	467
CONDUCTIVITY, REP. 2 (UMHOS/CM)	.	.	.	.	.	.	.	.	1920	.
TPH DIESEL RANGE X-10 LAB (MG/L)	.	.	.	.	.	.	.	.	.	.
TPH GASOLINE RANGE X-10 LAB (MG/L)	.	.	.	.	.	.	.	.	.	.
DISSOLVED SOLIDS (MG/L)	346	206	314	264	302	990	286	<0.10	2010	392
TOTAL SUSPENDED SOLIDS (MG/L)	2	7.5	24	<1	233	5550	570	168	1	7.5
TURBIDITY (NTU)	7.1	6.4	35	0.3	240	1330	340	26	2.5	17

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	SS-1 EXP 09/22/95	SS-4 EXP 07/25/95	SS-5 EXP 07/25/95	SS-6 EXP 07/25/95
FIELD MEASUREMENTS				
STATIC WATER LEVEL (FT. BELOW TOC)	.	.	.	.
WATER LEVEL ELEV. (FT. ABOVE MSL)	20.0	16.1	13.3	15.6
WATER TEMP, FIELD MMT (DEG. CENT.)	7.2	7.7	6.9	7.3
PH, FIELD MMT. (PH UNITS)	400	600	425	240
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	6.8	8.4	5.4	7.1
DISSOLVED OXYGEN, FIELD MMT. (PPM)	.	.	.	.
REDOX, FIELD MMT. (MV)	.	.	.	.
MISCELLANEOUS PARAMETERS				
PH	7.7	8.2	7.4	7.9
PH, REP. 2 (PH UNITS)	.	8.2	7.4	7.9
CONDUCTIVITY (UMHOS/CM)	1220	719	515	279
TPH DIESEL RANGE X-10 LAB (MG/L)	.	719	515	279
TPH GASOLINE RANGE X-10 LAB (MG/L)	.	.	.	.
DISSOLVED SOLIDS (MG/L)	956	496	332	174
TOTAL SUSPENDED SOLIDS (MG/L)	3.5	<1	24	<1
TURBIDITY (NTU)	4.1	1.5	0.8	2.3

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GCS1 EXP 10/26/95	GW-040 BG 10/11/95	GW-042 BG 10/11/95	GW-043 OLF 10/18/95	GW-044 OLF 10/18/95	GW-053 BG 12/10/95	GW-069 BG 12/07/95	GW-079 BG 12/09/95	GW-080 BG 12/09/95	GW-084 OLF 10/19/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)										
WATER LEVEL ELEV. (FT. ABOVE MSL)		-26.5	-21.55	-31.3	-33.81	-5.78	-9.46	-22.6	-23.9	-16.67
WATER TEMP, FIELD MMT (DEG. CENT.)	13.1	981.52	981.84	980.2	979.69	896.89	917.55	957.9	956.41	979.93
PH, FIELD MMT. (PH UNITS)	7.8	16.6	16.6	17.1	14.9	12.1	13.8	6.8	12.9	15.7
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	341	6	5.8	6.7	7.1	7.2	8.8	8.1	6.1	7.7
DISSOLVED OXYGEN, FIELD MMT. (PPM)	10.1	160	84	210	260	643	423	213	108	301
REDOX, FIELD MMT. (MV)	169	1.3	1.8	4.1	2.9	5.6	1	1.3	2	1.8
		46	62	230	268	79	-8	95	139	236
MISCELLANEOUS PARAMETERS										
PH	7.85	6.4	6.4	7	7.6	7.02	7.15	7.22	6.31	7.8
CONDUCTIVITY (UMHOS/CM)	337	154	75.2	175	277 h	711	396	211	102	309
DISSOLVED SOLIDS (MG/L)	170	136	38	162	194	416	190	100	70	180
TOTAL SUSPENDED SOLIDS (MG/L)	4	489	<1	46	2	7	<1	<1	47	18
TURBIDITY (NTU)	0.55	590	5	97	0.7	7.4	0.15	1.3	78	16

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 4TH QUARTER 1995

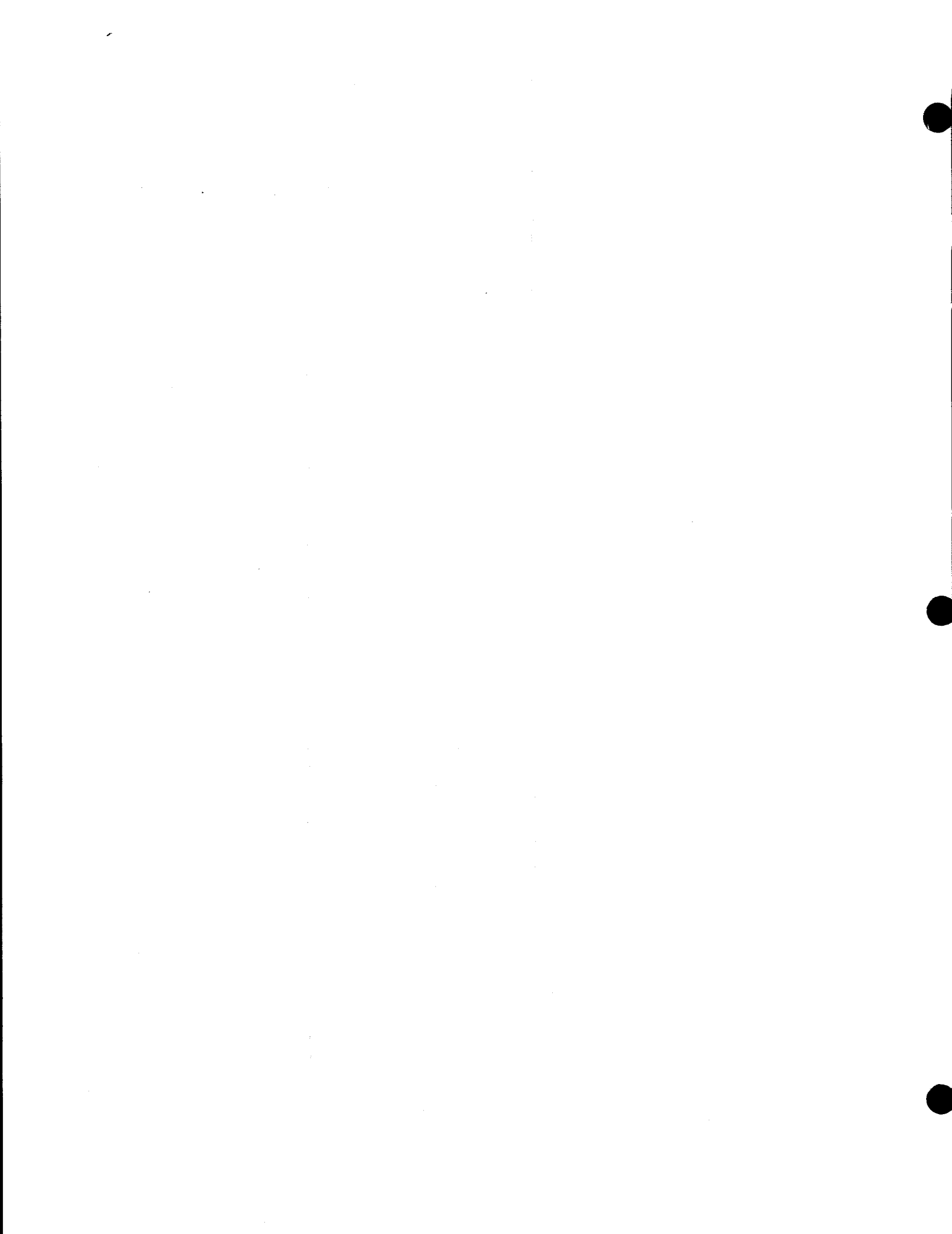
SAMPLING POINT LOCATION DATE SAMPLED	GW-085 OLF 10/25/95	GW-095 BG 12/11/95	GW-162 BG 10/11/95	GW-287 BG 12/10/95	GW-311 RS 10/25/95	GW-315 SPI 12/07/95	GW-363 OLF 10/19/95	GW-372 BG 10/12/95	GW-373 BG 10/12/95	GW-537 OLF 10/25/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-15.83	-4.75	-23.3	-8.8	-39.95	-57.32	-6	-27.85	-21.3	-7.97
WATER LEVEL ELEV. (FT. ABOVE MSL)	967.04	906.12	1017.1	918.07	959.4	989.98	951.91	955.68	961.5	968.27
WATER TEMP, FIELD MMT (DEG. CENT.)	15.7	12.7	16.1	4.1	14.4	13.4	15.3	16.2	16	16.1
PH, FIELD MMT. (PH UNITS)	7	9.1	8.1	7	7.4	7.1	9.3	7.7	9.4	6.7
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	1608	470	270	262	430	798	429	365	427	5570
DISSOLVED OXYGEN, FIELD MMT. (PPM)	1.6	8.7	2	6.7	7	2.4	1.8	1.7	2.4	1.8
REDOX, FIELD MMT. (MV)	158	142	113	188	143	199	113	26	38	199
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	7.09	8.94	8	7.04	7.53	6.82	9.2	7.73	9.2	6.79
CONDUCTIVITY (UMHOS/CM)	1670	488	257	4.4	422	765	430	400	465	5580
DISSOLVED SOLIDS (MG/L)	2018	270	148	122	244	448	290	294	320	6194
TOTAL SUSPENDED SOLIDS (MG/L)	22	<1	59	2	<1	<1	5	<1	2.5	3
TURBIDITY (NTU)	18	0.3	120	263	0.45	0.05	2.8	0.85	7.8	1.9

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 4TH QUARTER 1995

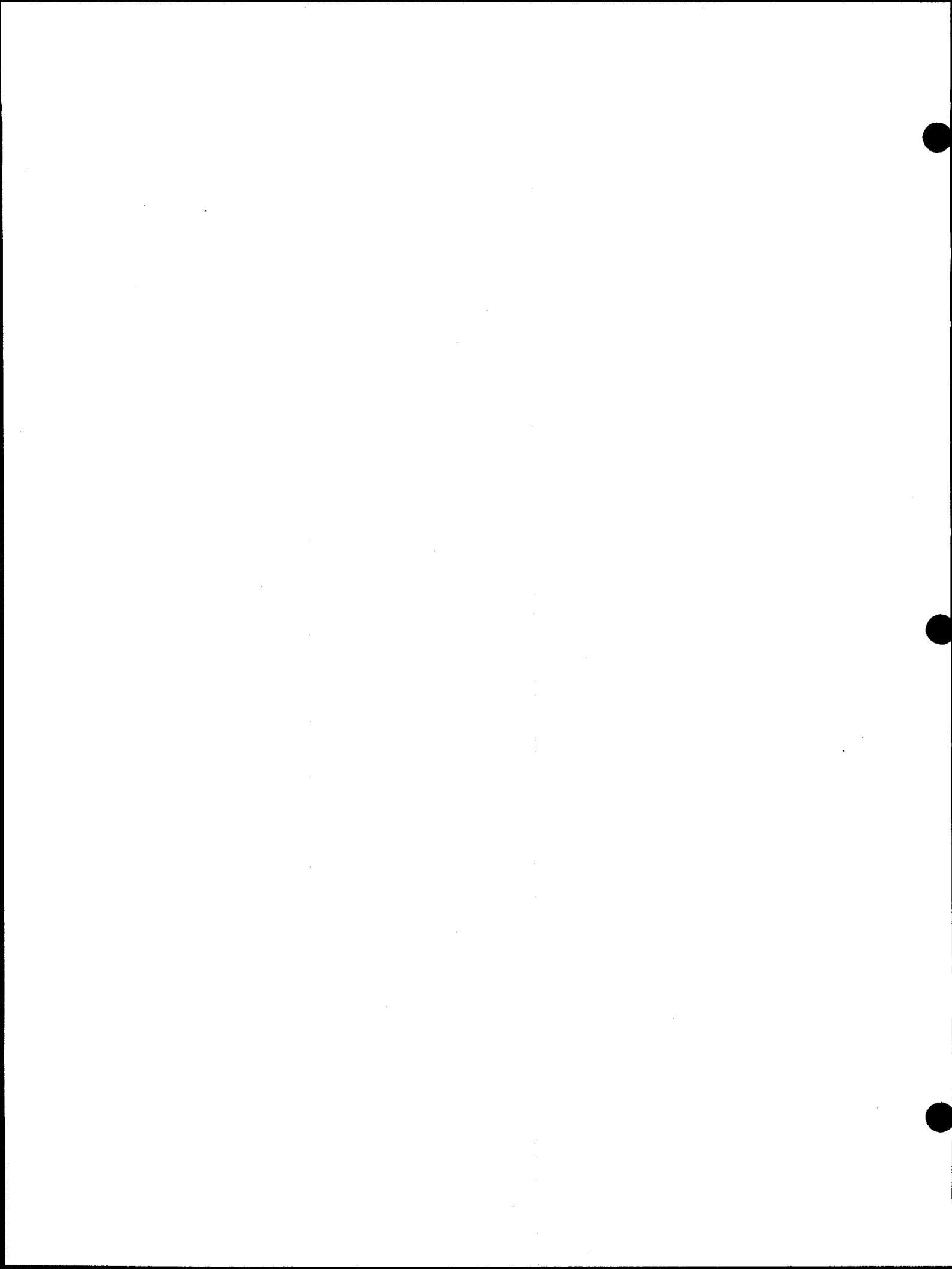
SAMPLING POINT LOCATION DATE SAMPLED	GW-627 BG 12/10/95	GW-642 BG 10/10/95	GW-653 BG 12/08/95	GW-654 BG 12/09/95	GW-793 AGLLSF 10/19/95	GW-794 AGLLSF 10/24/95	GW-795 AGLLSF 10/24/95	GW-828 OLF 12/08/95	GW-829 OLF 12/10/95	SS-5.95K EXP 10/26/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-24.25	-22.6	-23.8	-7.38	-9.3	-21.2	-10.47	-3.7	-14.85	.
WATER LEVEL ELEV. (FT. ABOVE MSL)	918.6	992.1	907.8	933.41	958.88	912.97	915.51	979.22	970.93	
WATER TEMP, FIELD MMT (DEG. CENT.)	12.1	16.8	12.2	8.7	16.5	13.6	16	12.9	10.3	12.8
PH, FIELD MMT. (PH UNITS)	9.3	6.4	5.2	7.3	7.4	7.5	7.1	9.7	8.8	7.8
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	1120	168	31	255	263	522	476	760	735	388
DISSOLVED OXYGEN, FIELD MMT. (PPM)	7.4	2.6	11.8	2.2	1.6	3.7	1.9	1.7	8	10
REDOX, FIELD MMT. (MV)	-74	-52	283	115	128	191	205	151	165	172
MISCELLANEOUS PARAMETERS										
PH (PH UNITS)	8.94	6.6	5.56	7.34	7.6	7.4	7.2	9.14	8.4	7.85
CONDUCTIVITY (UMHOS/CM)	1175	147	33.5	261	295	504	490	709	798	371
DISSOLVED SOLIDS (MG/L)	724	104	<1	152	202	340	284	444	502	188
TOTAL SUSPENDED SOLIDS (MG/L)	<1	<1	1	23	<1	<1	<1	20	16.5	1.5
TURBIDITY (NTU)	1	1.4	2.4	36	0.6	4	0.25	8.4	13	0.75

APPENDIX E.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	SS-6W EXP 10/26/95	SS-7 EXP 10/26/95
FIELD MEASUREMENTS		
STATIC WATER LEVEL (FT. BELOW TOC)	.	.
WATER LEVEL ELEV. (FT. ABOVE MSL)	12.3	13.8
WATER TEMP, FIELD MMT (DEG. CENT.)	7.4	7.4
PH, FIELD MMT. (PH UNITS)	7.63	437
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	7.6	6.9
DISSOLVED OXYGEN, FIELD MMT. (PPM)	196	177
REDOX, FIELD MMT. (MV)		
MISCELLANEOUS PARAMETERS		
PH (PH UNITS)	7.53	7.47
CONDUCTIVITY (UMHOS/CM)	419 h	450
DISSOLVED SOLIDS (MG/L)	272	228
TOTAL SUSPENDED SOLIDS (MG/L)	6	3
TURBIDITY (NTU)	2.4	1.2



APPENDIX E.4
RADIONUCLIDES



APPENDIX E.4
RADIONUCLIDES, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	BCK-00.63 EXP 03/09/95	BCK-04.55 EXP 03/09/95	BCK-09.40 EXP 03/09/95	BCK-11.97 EXP 03/09/95	GW-040 BG 02/01/95	GW-042 BG 02/01/95	GW-043 OLF 03/16/95	GW-044 OLF 03/16/95	GW-047 BG 01/25/95	GW-053 BG 03/28/95
GROSS ALPHA (PCI/L)	6.71	7.06	27.6	28.4	0.632	0.775	0.887	1.37	-0.00512	1.34
COUNTING ERROR	2.3	2.4	5.1	5.6	0.78	0.83	1.8	1.9	0.73	1.6
GROSS BETA (PCI/L)	7.93	9.99	37.2	85.4	3.91	2.64	3.13	2.31	1.38	2.27
COUNTING ERROR	3.2	3.3	5.7	10	2.4	2.3	2.8	2.7	2.3	2.3
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	.	.	.	.	1.4	0.892	1.49	0.902	.	.
COUNTING ERROR	.	.	.	.	2	2	1.8	1.6	.	.
137-CESIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
129-IODINE (BQ/L)	.	.	.	.	0.1	0.1	-0.1	-0.5	.	.
COUNTING ERROR	.	.	.	.	2	2	1.3	2.3	.	.
237-NEPTUNIUM (PCI/L)	.	.	.	.	0	0	0.0697	0.0717	.	.
COUNTING ERROR	.	.	.	.	0.49	0.49	0.14	0.14	.	.
238-PLUTONIUM (PCI/L)	.	.	.	.	-0.317	-0.341	0.334	0.143	.	.
COUNTING ERROR	.	.	.	.	0.63	0.68	0.33	0.2	.	.
239-PLUTONIUM (PCI/L)	.	.	.	.	0	0	0	0	.	.
COUNTING ERROR	.	.	.	.	0.55	0.59	0.29	0.25	.	.
RADIUM (BQ/L)	.	.	.	.	0.029	-0.013	0.016	0.014	.	.
COUNTING ERROR	.	.	.	.	0.034	0.023	0.029	0.022	.	.
STRONTIUM (PCI/L)	.	.	.	.	0.296	7.24	2.81	1.58	.	.
COUNTING ERROR	.	.	.	.	10.1	7.4	5.8	5.6	.	.
99-TECHNETIUM (PCI/L)	.	.	.	.	30.5	34.8	11.8	12.9	.	.
COUNTING ERROR	.	.	.	.	38	37.7	15	15	.	.
TRITIUM (BQ/L)	.	.	.	.	-2	10	19	1	.	.
COUNTING ERROR	.	.	.	.	25	23	29	28	.	.
234-URANIUM (PCI/L)	.	.	.	.	0	0.121	0	0.129	.	.
COUNTING ERROR	.	.	.	.	0.4	0.24	0.34	0.45	.	.
235-URANIUM (PCI/L)	.	.	.	.	-0.721 F	-1.71 F	3.3 E	-6.96 F	.	.
COUNTING ERROR	.	.	.	.	19	7.2	7.4	20	.	.
238-URANIUM (PCI/L)	.	.	.	.	0.114	-0.121	0.121	0	.	.
COUNTING ERROR	.	.	.	.	0.4	0.48	0.24	0.45	.	.

APPENDIX E.4
RADIONUCLIDES, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GM-056 EXP 03/05/95	GM-057 EXP 03/05/95	GM-061 BG 03/28/95	GM-064 OLF 03/26/95	GM-069 BG 03/25/95	GM-079 BG 03/26/95	GM-080 BG 03/25/95	GM-084 OLF 03/23/95	GM-085 OLF 03/26/95	GM-095 BG 03/27/95
GROSS ALPHA (PCI/L)	1.77	0.409	15.9	14.9	-0.00584	-0.00518	4.64	-0.339	1.57	-0.575
COUNTING ERROR	1.9	1.4	3.9	21	1.1	1.2	3.4	1.2	1.5	1
GROSS BETA (PCI/L)	3.68	1.32	38.2	43.7	3.47	0.152	2.68	1.02	119	1.57
COUNTING ERROR	2.6	2.4	4.5	28	2.4	2.3	4.8	2.3	14	2.3
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	.	.	.	.	.	1.21	0	2.11	.	.
COUNTING ERROR	.	.	.	.	.	2.1	2.7	2.1	.	.
137-CESIUM (PCI/L)	.	.	.	.	.	.	18	.	.	.
COUNTING ERROR	.	.	.	.	.	.	14	.	.	.
129-IODINE X10-LAB (BQ/L)	.	.	.	.	.	0.4	0.2	-0.1	.	.
COUNTING ERROR	.	.	.	.	.	2.1	2.1	1.6	.	.
237-NEPTUNIUM (PCI/L)	.	.	.	.	.	0.279	0.298	0.143	.	.
COUNTING ERROR	.	.	.	.	.	0.39	0.6	0.29	.	.
238-PLUTONIUM (PCI/L)	.	.	.	.	.	0.536	-0.306	0.285	.	.
COUNTING ERROR	.	.	.	.	.	0.8	1.2	0.57	.	.
239-PLUTONIUM (PCI/L)	.	.	.	.	.	0.179	0.306	0	.	.
COUNTING ERROR	.	.	.	.	.	0.36	0.61	0.49	.	.
RADIUM X10-LAB (BQ/L)	.	.	.	.	.	0.029	0.077	-0.013	.	.
COUNTING ERROR	.	.	.	.	.	0.044	0.067	0.005	.	.
STRONTIUM (PCI/L)	.	.	.	.	.	0.0858 N	4.17	3.29	2.1	.
COUNTING ERROR	.	.	-8.89	.	.	5.1	5.6	5.5	6.2	.
99-TECHNETIUM (PCI/L)	.	.	41.6	.	.	43.4	25.7	31	234	.
COUNTING ERROR	.	.	9.2	.	.	22	22	22	12	.
TRITIUM X10-LAB (BQ/L)	.	.	-23	.	.	-13	-11	-9	15	.
COUNTING ERROR	.	.	27	.	.	23	24	23	25	.
234-URANIUM (PCI/L)	.	.	.	.	.	-0.111	0.247	0.119	0.366 *	.
COUNTING ERROR	.	.	.	.	.	0.44	0.49	0.41	0.42	.
235-URANIUM (PCI/L)	.	.	.	.	.	8.11	3.67 E	0.66 E	2.44 E	.
COUNTING ERROR	.	.	.	.	.	7.8	19	7.1	7.3	.
238-URANIUM (PCI/L)	.	.	.	.	.	0	0.124	0	0.122	.
COUNTING ERROR	.	.	.	.	.	0.38	0.25	0.41	0.24	.

APPENDIX E.4
RADIONUCLIDES, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-115 S3 01/14/95	GW-162 BG 01/26/95	GW-276 S3 01/24/95	GW-287 BG 03/26/95	GW-311 RS 03/25/95	GW-312 RS 03/25/95	GW-315 SPI 03/15/95	GW-317 SPI 03/14/95	GW-347 S3 03/15/95	GW-348 S3 03/15/95
GROSS ALPHA (PCI/L)	0.883	0.968	469 D	2.07	1.68	2.05	1.23	0.672	0.771	0.667
COUNTING ERROR	1.1	1.3	54	1.6	2.1	2.2	1.5	1.3	1.2	1.3
GROSS BETA (PCI/L)	1.18	3.58	978 D	3.48	2.81	6.73	10.4	0.464	5.61	21.8
COUNTING ERROR	2.5	2.7	100	2.4	2.7	3	3.1	2.3	2.7	4.1
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	0.79	2.83	1.6	.	.	.	.	.	.	.
COUNTING ERROR	1.4	1.9	1.4	.	.	.	.	.	.	.
137-CESIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	0.1	0.1	0.1	.	.	.	.	.	.	.
129-IODINE X10-LAB (BQ/L)	1.8	1.9	9.25	.	.	.	.	.	.	.
COUNTING ERROR	0	0.145	2.4	.	.	.	.	.	.	.
237-NEPTUNIUM (PCI/L)	0.51	0.5	0.139	.	.	.	.	.	.	.
COUNTING ERROR	0.141	-0.291	0.62	.	.	.	.	.	.	.
238-PLUTONIUM (PCI/L)	0.28	0.65	0	.	.	.	.	.	.	.
COUNTING ERROR	0	0	0	.	.	.	.	.	.	.
239-PLUTONIUM (PCI/L)	0.49	0.5	0.48	.	.	.	.	.	.	.
COUNTING ERROR	-0.018	0.003	0.18	.	.	.	.	.	.	.
RADIUM X10-LAB (BQ/L)	0.02	0.01	0.12	.	.	.	.	.	.	.
COUNTING ERROR	9.72	-14.7	-14.1	.	.	.	.	.	.	.
STRONTIUM (PCI/L)	21	23	23	.	.	.	.	.	.	.
99-TECHNETIUM (PCI/L)	-15.8	-7.62	1350	.	.	.	.	.	.	.
COUNTING ERROR	36	36	68	.	.	.	.	.	.	.
TRITIUM X10-LAB (BQ/L)	14	5	9	.	.	.	.	.	.	.
COUNTING ERROR	31	23	23	.	.	.	.	.	.	.
234-URANIUM (PCI/L)	0.355	0.12	271 D	.	.	.	.	.	.	.
COUNTING ERROR	0.41	0.42	12	.	.	.	.	.	.	.
235-URANIUM (PCI/L)	4.71 E	27.7 E	23.9	.	.	.	.	.	.	.
COUNTING ERROR	12	44	13	.	.	.	.	.	.	.
238-URANIUM (PCI/L)	-0.118	0.361	603 D	.	.	.	.	.	.	.
COUNTING ERROR	0.47	0.42	18	.	.	.	.	.	.	.

APPENDIX E.4
RADIONUCLIDES, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-363 OLF 01/23/95	GW-370 BG 02/01/95	GW-372 BG 01/31/95	GW-373 BG 01/31/95	GW-537 OLF 03/26/95	GW-613 S3 01/11/95	GW-614 S3 01/11/95	GW-621 EXP 03/29/95	GW-627 BG 03/28/95	GW-637 OLF 01/24/95
GROSS ALPHA (PCI/L)	0.572	2.62	1.04	-0.971	4.7	0.315	0.167	1.19	0.489	1.74
GROSS ALPHA (GROSS ALPHA)	1.2	2	1.5	1	3.8	0.78	0.77	1.6	1.7	1.4
GROSS BETA (PCI/L)	1.87	1.63	5.63	1.51	365	0.901	-0.482	7.48	1.8	1.09
COUNTING ERROR (GROSS BETA)	2.3	2.5	2.7	2.3	40	2.6	2.4	2.9	2.4	2.2
RADIONUCLIDES										
241-AMERICIUM (PCI/L)			1.83	0 J		1.78	0.944			
COUNTING ERROR (241-AMERICIUM)			1.7	2.5		1.5	1.1			
137-CESIUM (PCI/L)							14.8			
COUNTING ERROR (137-CESIUM)							13			
129-IODINE (BQ/L)			0.1	0.1		0.1	0.1			
COUNTING ERROR (129-IODINE)			2	1.9		1	1.9			
237-NEPTUNIUM (PCI/L)			-0.146	-0.142		0	0			
COUNTING ERROR (237-NEPTUNIUM)			0.58	0.57		0.51	0.48			
238-PLUTONIUM (PCI/L)			0.139	0.135		0	0.133			
COUNTING ERROR (238-PLUTONIUM)			0.28	0.27		0.49	0.27			
239-PLUTONIUM (PCI/L)			-0.139	-0.135		0	0			
COUNTING ERROR (239-PLUTONIUM)			0.56	0.54		0.49	0.46			
X10-LAB (BQ/L)			0.003	0.014		-0.008	0.045			
RADIUM (RAD)			0.013	0.033		0.0038	0.038			
COUNTING ERROR (RADIUM)			5.05	-13.4	-4.25	0.546	-6.02			
STRONTIUM (PCI/L)			27	25	5.4	25	24			
COUNTING ERROR (STRONTIUM)			-27.2	-6.32	1030	9.19	2.73			
99-TECHNETIUM (PCI/L)			36	36	20	21	21			
COUNTING ERROR (99-TECHNETIUM)			-7	6		15	10			
X10-LAB (BQ/L)			22	23		24	24			
TRITIUM (TRITIUM)			0.313	0	1.46	-0.227	0			
COUNTING ERROR (TRITIUM)			0.47	0.26	1.2	0.91	0.59			
234-URANIUM (PCI/L)			4.34 E	-0.0176 F	5.52 E	4.18 E	-10.6 F			
COUNTING ERROR (234-URANIUM)			18	19	7.1	7.2	19			
235-URANIUM (PCI/L)			0.208	0.0924	0.729	0.227	0			
COUNTING ERROR (235-URANIUM)			0.42	0.32	0.84	0.45	0.73			
238-URANIUM (PCI/L)										
COUNTING ERROR (238-URANIUM)										

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RADIONUCLIDES, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-642 BG 01/31/95	GW-652 BG 03/27/95	GW-653 BG 03/27/95	GW-654 BG 03/26/95	GW-683 EXP 03/09/95	GW-684 EXP 03/10/95	GW-685 EXP 03/08/95	GW-694 EXP 03/30/95	GW-695 EXP 03/29/95	GW-703 EXP 03/29/95
GROSS ALPHA (PCI/L)	0.324	0.706	4.29	0.69	2.02	8.41	2.1	51.2	1.88	1.49
COUNTING ERROR	1.2	1.3	2.1	1.3	1.5	2.7	1.8	6.2	1.9	1.8
GROSS BETA (PCI/L)	4.22	6.79	7.69	4.84	6	17.4	6	75.8	17.2	18.7
COUNTING ERROR	2.6	2.7	2.8	2.5	2.8	3.7	2.7	5.9	3.7	3.8
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	1.31									
COUNTING ERROR	1.6									
137-CESIUM (PCI/L)										
COUNTING ERROR										
129-IODINE (137-CESIUM)	0.1									
COUNTING ERROR	2									
237-NEPTUNIUM (129-IODINE)	-0.146									
COUNTING ERROR	0.58									
238-PLUTONIUM (PCI/L)	0									
COUNTING ERROR	0.48									
239-PLUTONIUM (PCI/L)	-0.139									
COUNTING ERROR	0.55									
RADIUM (239-PLUTONIUM)	0.026									
COUNTING ERROR	0.031									
STRONTIUM (RADIUM)	-11.5									
COUNTING ERROR	26							-2.15		
99-TECHNETIUM (PCI/L)	28.4							6.1		
COUNTING ERROR	37							116		
TRITIUM (99-TECHNETIUM)	5							40		
COUNTING ERROR	23							-17		
234-URANIUM (TRITIUM)	0.343							27		
COUNTING ERROR	0.51									
235-URANIUM (PCI/L)	-3.25 F									
COUNTING ERROR	7.3									
238-URANIUM (PCI/L)	0									
COUNTING ERROR	0.32									

APPENDIX E.4
RADIONUCLIDES, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-704 EXP 03/30/95	GW-706 EXP 03/31/95	GW-710 EXP 01/15/95	GW-711 EXP 01/13/95	GW-712 EXP 01/13/95	GW-713 EXP 01/14/95	GW-714 EXP 01/14/95	GW-715 EXP 01/14/95	GW-723 EXP 02/20/95	GW-724 EXP 02/19/95
GROSS ALPHA (GROSS ALPHA) (PCI/L)	4.29 2.4	37.6 5.3	13.8 16	11.2 20	0.392 N 0.98	2.41 1.6	3.66 2.4	1.26 1.2	4.14 3	4.25 3.2
GROSS BETA (GROSS BETA) (PCI/L)	11.2 3.3	48.6 5	4.79 15	-1.71 49	1.42 2.5	1.24 2.5	8.82 3.3	1.88 2.6	28.1 4.2	39.8 4.7
COUNTING ERROR										
RADIONUCLIDES										
241-AMERICIUM (241-AMERICIUM) (PCI/L)			0.325 1.5	1.13 NA 2	1.53 1.8	2.12 2	0.314 1.4	0.298 1.3		
COUNTING ERROR										
137-CESIUM (137-CESIUM) (PCI/L)										
COUNTING ERROR										
129-IODINE (129-IODINE) (PCI/L)			0.1 1	0.1 1.8	0.1 1.9	0.1 1.7	0.1 1	0.1 2		
COUNTING ERROR										
237-NEPTUNIUM (237-NEPTUNIUM) (PCI/L)			0 0.51	0.29 0.41	0 0.49	0 0.28	0 0.28	0 0.49		
COUNTING ERROR										
238-PLUTONIUM (238-PLUTONIUM) (PCI/L)			0.139 0.28	0 0.48	0 0.47	0.27 0.38	0 0.46	0.27 0.38		
COUNTING ERROR										
239-PLUTONIUM (239-PLUTONIUM) (PCI/L)			0 0.48	0 0.48	0 0.47	0 0.47	0 0.46	0 0.47		
COUNTING ERROR										
RADIUM (RADIUM) (PCI/L)			0.11 0.06	0.12 0.06	0.057 0.041	0.012 0.028	0.041 0.036	0.031 0.031		
COUNTING ERROR										
STRONTIUM (STRONTIUM) (PCI/L)			4.46 21	6.42 21	8.6 21	18.5 22	2.67 5.7	14.6 22		
COUNTING ERROR										
99-TECHNETIUM (99-TECHNETIUM) (PCI/L)			-63.3 34	-1.2 36	-21.8 36	3.2 36	19.9 37	-30.4 35		
COUNTING ERROR										
TRITIUM (TRITIUM) (PCI/L)			17 32	3 23	8 28	-5 24	-15 24	-20 24		
COUNTING ERROR										
234-URANIUM (234-URANIUM) (PCI/L)			0 0.42	0.121 0.24	0.93 0.66	0.65 0.58	0.979 0.69	1.01 0.71		
COUNTING ERROR										
235-URANIUM (235-URANIUM) (PCI/L)			-19.2 F 44	2.02 E 44	28.4 E 91	15.2 E 44	-4.3 F 13	74.2 E 91		
COUNTING ERROR										
238-URANIUM (238-URANIUM) (PCI/L)			0 0.34	0 0.34	0 0.33	0 0.37	0.49 0.6	0.378 0.56		
COUNTING ERROR										

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RADIONUCLIDES, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-725 EXP 02/28/95	GW-736 EXP 02/28/95	GW-737 EXP 03/01/95	GW-738 EXP 02/18/95	GW-739 EXP 02/17/95	GW-740 EXP 02/16/95	GW-793 AGLLSF 01/23/95	GW-794 AGLLSF 01/24/95	GW-795 AGLLSF 01/25/95	GW-800 OLF 03/25/95
GROSS ALPHA (PCI/L)	2.68	3.41	3.84	6.07	1.25	0.156	-0.335	1.46	0.689	4.18
COUNTING ERROR	2	2.1	2.2	3.3	2.6	2.5	0.66	1.4	1.1	2.4
GROSS BETA (PCI/L)	34	43.7	42.8	42.3	11.5	7.55	0.793	4.45	2.51	3.13
COUNTING ERROR	5.2	6.2	6.1	4.7	3.5	3.3	2.2	2.5	2.3	2.7
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
137-CESIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
129-IODINE (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
237-NEPTUNIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
238-PLUTONIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
239-PLUTONIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
RADIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
STRONTIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
99-TECHNETIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
TRITIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
234-URANIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
235-URANIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
238-URANIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.

APPENDIX E.4
RADIONUCLIDES, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-828-100 OLF 02/14/95	GW-828-200 OLF 02/18/95	GW-829-029 OLF 03/01/95	GW-829-116 OLF 03/07/95	NT-01 EXP 03/09/95	NT-02 EXP 03/09/95	SS-1 EXP 03/09/95	SS-4 EXP 03/09/95	SS-5 EXP 03/09/95	SS-6 EXP 03/09/95
GROSS ALPHA (PCI/L)	.	.	-0.0784	70.4	0.873	3.36	13.5	19.8	5.19	2.17
COUNTING ERROR (GROSS ALPHA)	.	.	12	35	1.1	1.8	3.8	4.3	2.1	1.6
GROSS BETA (PCI/L)	.	.	65.7	535	18.1	9.55	46.8	28.1	4.1	2.38
COUNTING ERROR (GROSS BETA)	.	.	30	49	3.9	3.3	6.5	4.8	3	2.9
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (241-AMERICIUM)	.	.	.	.	.	.	.	.	.	.
137-CESIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (137-CESIUM)	.	.	.	.	.	.	.	.	.	.
129-IODINE X10-LAB (Bq/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (129-IODINE)	.	.	.	.	.	.	.	.	.	.
237-NEPTUNIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (237-NEPTUNIUM)	.	.	.	.	.	.	.	.	.	.
238-PLUTONIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (238-PLUTONIUM)	.	.	.	.	.	.	.	.	.	.
239-PLUTONIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (239-PLUTONIUM)	.	.	.	.	.	.	.	.	.	.
RADIUM X10-LAB (Bq/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (RADIUM)	.	.	.	.	.	.	.	.	.	.
STRONTIUM (PCI/L)	.	.	.	.	7.47	.	-6.63	5.2	.	.
COUNTING ERROR (STRONTIUM)	.	.	.	.	8	.	-6.7	7.8	.	.
99-TECHNETIUM (PCI/L)	.	.	.	.	165	.	50.8	17.8	.	.
COUNTING ERROR (99-TECHNETIUM)	.	.	.	.	42	.	38	37	.	.
TRITIUM X10-LAB (Bq/L)	.	.	.	.	-9	.	-2	10	.	.
COUNTING ERROR (TRITIUM)	.	.	.	.	25	.	25	28	.	.
234-URANIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (234-URANIUM)	.	.	.	.	.	.	.	.	.	.
235-URANIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (235-URANIUM)	.	.	.	.	.	.	.	.	.	.
238-URANIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (238-URANIUM)	.	.	.	.	.	.	.	.	.	.

APPENDIX E.4
RADIONUCLIDES, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GCS1 EXP 05/23/95	GW-040 BG 06/06/95	GW-042 BG 06/06/95	GW-043 OLF 06/01/95	GW-044 OLF 06/01/95	GW-047 BG 06/18/95	GW-053 BG 06/28/95	GW-061 BG 06/28/95	GW-064 OLF 06/07/95	GW-069 BG 06/27/95
GROSS ALPHA (PCI/L)	0.989	2.74	1.04	0.305	-0.467	1.72	3.03	18.5	3.18	-0.561
GROSS ALPHA (GROSS ALPHA)	0.94	2.2	1.8	1.8	1.7	1.6	1.9	4	3.8	0.83
GROSS BETA (PCI/L)	-1.38	2.29	2.27	-2.02	-3.78	3.15	3.44	41.8	17.4	0.551
GROSS BETA (GROSS BETA)	2.6	3	3	3	2.9	2.5	2.6	6.3	6.1	2.4
RADIONUCLIDES										
241-AMERICIUM (PCI/L)		0.193 J	0.326	0.146	0.135					
COUNTING ERROR		0.86	0.34	0.29	0.27					
137-CESIUM (PCI/L)										
COUNTING ERROR										
129-IODINE (137-CESIUM)										
COUNTING ERROR										
237-NEPTUNIUM (129-IODINE)										
COUNTING ERROR										
238-PLUTONIUM (PCI/L)										
COUNTING ERROR										
239-PLUTONIUM (PCI/L)										
COUNTING ERROR										
40-POTASSIUM (PCI/L)										
COUNTING ERROR										
RADIUM (40-POTASSIUM)										
COUNTING ERROR										
STRONTIUM (RADIUM)										
COUNTING ERROR										
99-TECHNETIUM (PCI/L)										
COUNTING ERROR										
231+234-THORIUM (PCI/L)										
COUNTING ERROR										
TRITIUM (231+234-THORIUM)										
COUNTING ERROR										
234-URANIUM (TRITIUM)										
COUNTING ERROR										
235-URANIUM (PCI/L)										
COUNTING ERROR										
238-URANIUM (PCI/L)										
COUNTING ERROR										

APPENDIX E.4
RADIONUCLIDES, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GM-079 BG 06/19/95	GM-080 BG 06/19/95	GM-084 OLF 06/07/95	GM-085 OLF 06/08/95	GM-095 BG 06/20/95	GM-162 BG 05/31/95	GM-287 BG 06/20/95	GM-311 RS 06/06/95	GM-312 RS 06/06/95	GM-315 SPI 06/26/95
GROSS ALPHA (PCI/L)	-1.17	-0.0217	1.74	1.48	0.981	-0.946	7.12	1.23	-0.824	2.16
GROSS BETA (PCI/L)	4	4.5	2	18	2.3	1.7	3.3	1.8	1.6	1.5
COUNTING ERROR (GROSS BETA)	-8.87	-0.357	1.5	37.6	3.64	-1.85	9.51	6.63	7.84	22.9
COUNTING ERROR	9.5	10	3	34	3.3	3.1	3.6	2.9	3	4.2
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	0.171	0.204	0.965 J	.	.	0.261	.	.	.	.
COUNTING ERROR	0.2	0.24	0.84	.	.	0.32	.	.	.	.
137-CESIUM (PCI/L)	.	.	106	6.22	.	.	.	.	.	.
COUNTING ERROR	.	.	9.4	5.2	.	.	.	.	.	.
129-IODINE (BQ/L)	0.1	0.01	0.1	.	.	0.1	.	.	.	.
COUNTING ERROR	1.6	0.98	1.8	.	.	1.3	.	.	.	.
237-NEPTUNIUM (PCI/L)	0	0.114	0	.	.	0.0789	.	.	.	.
COUNTING ERROR	0.27	0.16	0.25	.	.	0.16	.	.	.	.
238-PLUTONIUM (PCI/L)	0.436	0.269	0.246	.	.	0.578	.	.	.	.
COUNTING ERROR	0.33	0.25	0.28	.	.	0.37	.	.	.	.
239-PLUTONIUM (PCI/L)	0	0.0623	0	.	.	0	.	.	.	.
COUNTING ERROR	0.22	0.12	0.28	.	.	0.2	.	.	.	.
40-POTASSIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
RADIUM (BQ/L)	0.026	0.066	0.013	.	.	0.022	.	.	.	.
COUNTING ERROR	0.03	0.042	0.029	.	.	0.024	.	.	.	.
STRONTIUM (RADIUM)	4.71 J	51.7	-19.7	0.844	.	-8.04	.	.	.	.
COUNTING ERROR	8.1	11	22	8	.	7.1	.	.	.	.
99-TECHNETIUM (PCI/L)	8.07	6.13	-19.5	212	.	8.21	.	.	.	.
COUNTING ERROR	8.7	8.5	8.1	43	.	8.6	.	.	.	.
231+234-THORIUM (PCI/L)	78.8 H	.	93.6 H	.	.	.	.	.	.	.
COUNTING ERROR	57	.	62	.	.	.	.	.	.	.
TRITIUM (BQ/L)	13	30	4	20	.	6.8	.	.	.	.
COUNTING ERROR	23	23	24	26	.	1.1	.	.	.	.
234-URANIUM (PCI/L)	0.0604	0.898	0.194	219	.	0.0609	.	.	.	.
COUNTING ERROR	0.17	0.68	0.24	140	.	0.12	.	.	.	.
235-URANIUM (PCI/L)	3.89 E	4.02 E	7.29 E	3.9 E	.	0.75 E	.	.	.	.
COUNTING ERROR	7.5	7.2	10	7.3	.	7.1	.	.	.	.
238-URANIUM (PCI/L)	0	0.321	0	65.6	.	0.0609	.	.	.	.
COUNTING ERROR	0.42	0.41	0.14	76	.	0.12	.	.	.	.

APPENDIX E.4
RADIONUCLIDES, 2ND QUARTER 1995

SAMPLING POINT LOCATION	GW-317 SP1	GW-347 S3	GW-348 S3	GW-363 OLF	GW-370 BG	GW-372 BG	GW-373 BG	GW-537 OLF	GW-627 BG	GW-637 OLF
DATE SAMPLED	06/21/95	06/21/95	06/26/95	06/17/95	06/05/95	06/02/95	06/05/95	06/08/95	06/22/95	06/17/95
GROSS ALPHA (GROSS ALPHA)	0.478	0.589	1.21	-0.38	0.464	0	1.06	28.4	4.26	-0.00581
COUNTING ERROR	1.8	1.7	1.2	1.4	1.5	1.9	2.1	24	3.2	1.4
GROSS BETA (GROSS BETA)	2.73	3.4	17.2	1.96	2.08	-1.33	-0.267	619	2.49	3.31
COUNTING ERROR	3	3	3.7	2.3	2.7	3.1	2.9	57	3.3	2.4
RADIONUCLIDES										
241-AMERICIUM (241-AMERICIUM)						0.142	0.282			
COUNTING ERROR						0.28	0.34			
137-CESIUM (137-CESIUM)										
COUNTING ERROR										
129-IODINE (129-IODINE)						0.1	0.1			
COUNTING ERROR						1.9	1.9			
237-NEPTUNIUM (237-NEPTUNIUM)						0	0.0708			
COUNTING ERROR						0.28	0.14			
238-PLUTONIUM (238-PLUTONIUM)						0.493	0.392			
COUNTING ERROR						0.35	0.35			
239-PLUTONIUM (239-PLUTONIUM)						0	0			
COUNTING ERROR						0.21	0.27			
40-POTASSIUM (40-POTASSIUM)										
COUNTING ERROR										
RADIUM (RADIUM)										
COUNTING ERROR										
STRONTIUM (STRONTIUM)						-0.012	0.007			
COUNTING ERROR						0.024	0.021			
99-TECHNETIUM (99-TECHNETIUM)						25.3 J	-15.6	-2.11		
COUNTING ERROR						9.8	22	7.7		
231+234-THORIUM (231+234-THORIUM)						10.5	-5.55	837		
COUNTING ERROR						8.7	8.3	58		
TRITIUM (TRITIUM)						53.9 H	88 H	69		
COUNTING ERROR						53	57	57		
234-URANIUM (234-URANIUM)						9.1	18	9		
COUNTING ERROR						1.4	3	26		
235-URANIUM (235-URANIUM)						0.177	0.209	371		
COUNTING ERROR						0.2	0.26	190		
238-URANIUM (238-URANIUM)						0.57 E	0.285 E	-1.14 F		
COUNTING ERROR						7.3	7.5	7.4		
						0.177	0.0523	24.7		
						0.2	0.18	49		

APPENDIX E-4

**SAMPLING POINT
LOCATION
DATE SAMPLED**

APPENDIX E.4
RADIONUCLIDES, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	MS-1 S3 05/03/95	NT-1N S3 05/03/95	NT-1S S3 05/03/95	SS-5.95K EXP 05/23/95	SS-6.6K EXP 05/23/95	SS-6W EXP 05/23/95	SS-7 EXP 05/23/95	TS S3 05/03/95
GROSS ALPHA COUNTING ERROR	(PCI/L) (GROSS ALPHA)	.	.	0.499	0.844	1.94	0.483	.
GROSS BETA COUNTING ERROR	(PCI/L) (GROSS BETA)	.	.	0.75 -0.407 2.6	0.9 0.952 2.7	1.4 1.43 2.7	0.73 -2.37 2.5	.
RADIONUCLIDES								
241-AMERICIUM COUNTING ERROR	(PCI/L) (241-AMERICIUM)	.	.	.	.	.	.	.
137-CESIUM COUNTING ERROR	(PCI/L) (137-CESIUM)	.	.	.	.	.	.	.
129-IODINE COUNTING ERROR	X10-LAB (BQ/L) (129-IODINE)	.	.	.	.	.	.	.
237-NEPTUNIUM COUNTING ERROR	(PCI/L) (237-NEPTUNIUM)	.	.	.	.	.	.	.
238-PLUTONIUM COUNTING ERROR	(PCI/L) (238-PLUTONIUM)	.	.	.	.	.	.	.
239-PLUTONIUM COUNTING ERROR	(PCI/L) (239-PLUTONIUM)	.	.	.	.	.	.	.
40-POTASSIUM COUNTING ERROR	(PCI/L) (40-POTASSIUM)	.	.	.	.	.	.	.
RADIUM COUNTING ERROR	X10-LAB (BQ/L) (RADIUM)	.	.	.	.	.	.	.
STRONTIUM COUNTING ERROR	(PCI/L) (STRONTIUM)	.	.	.	.	.	.	.
99-TECHNETIUM COUNTING ERROR	(PCI/L) (99-TECHNETIUM)	.	.	.	.	.	.	.
231+234-THORIUM COUNTING ERROR	(PCI/L) (231+234-THORIUM)	.	.	.	.	.	.	.
TRITIUM COUNTING ERROR	X10-LAB (BQ/L) (TRITIUM)	.	.	.	.	.	.	.
234-URANIUM COUNTING ERROR	(PCI/L) (234-URANIUM)	.	.	.	.	.	.	.
235-URANIUM COUNTING ERROR	(PCI/L) (235-URANIUM)	.	.	.	.	.	.	.
238-URANIUM COUNTING ERROR	(PCI/L) (238-URANIUM)	.	.	.	.	.	.	.

APPENDIX E.4
RADIONUCLIDES, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	BCK-00.63 EXP 07/25/95	BCK-04.55 EXP 07/25/95	BCK-09.40 EXP 07/25/95	BCK-11.97 EXP 07/25/95	GW-014 BG 08/04/95	GW-040 BG 08/10/95	GW-042 BG 08/09/95	GW-043 OLF 08/04/95	GW-044 OLF 08/04/95	GW-046 BG 08/09/95
GROSS ALPHA (PCI/L)	10.1	7.9	33.2	38.6	0.77	2.09	0.904	-0.33	0.169	0.153
COUNTING ERROR	3	2.6	6.1	7.6	1.6	1.7	1.4	1	1.2	0.84
GROSS BETA (PCI/L)	6.77	6.36	32.6	600	2.25	1.81	2.41	0.333	-2.33	0.476
COUNTING ERROR	3	5.5	5.5	62	2.5	2.8	2.2	2.8	2.6	2.3
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	.	.	.	.	.	0	0	0	0.0894	.
COUNTING ERROR	.	.	.	.	.	0.29	0.19	0.24	0.15	.
129-IODINE (X10-LAB (BQ/L)	.	.	.	.	.	0.1	-0.1	0.01	0.1	.
COUNTING ERROR	.	.	.	.	.	2.3	1.1	0.97	1.3	.
237-NEPTUNIUM (PCI/L)	.	.	.	.	.	0	0.0585	0	0.07	.
COUNTING ERROR	.	.	.	.	.	0.27	0.17	0.27	0.14	.
238-PLUTONIUM (PCI/L)	.	.	.	.	.	0.458	0.171	0.0998	0.2	.
COUNTING ERROR	.	.	.	.	.	0.35	0.28	0.16	0.2	.
239-PLUTONIUM (PCI/L)	.	.	.	.	.	0.0654	0	0.133	0.0577	.
COUNTING ERROR	.	.	.	.	.	0.13	0.4	0.19	0.12	.
40-POTASSIUM (PCI/L)	.	.	.	.	.	.	.	93.8	.	.
COUNTING ERROR	.	.	.	.	.	.	.	65	.	.
RADIUM (X10-LAB (BQ/L)	.	.	.	.	.	0.032	0.083	-0.028	0.01	.
COUNTING ERROR	.	.	.	.	.	0.042	0.051	0.007	0.031	.
STRONTIUM (PCI/L)	.	-8.02	15	-6.22	.	18.3	0.255	4.91	2.51	.
COUNTING ERROR	.	15	15	15	.	6.9	21	5.5	5.2	.
99-TECHNETIUM (PCI/L)	.	8.18	994	20	.	3.9	1.32	2.95	7.24	.
COUNTING ERROR	.	8.5	8.5	20	.	8.7	8.4	8.5	8.5	.
231+234-THORIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
TRITIUM (X10-LAB (BQ/L)	.	.	21	-5	.	-1	-8	18	8	.
COUNTING ERROR	.	.	23	23	.	23	22	24	24	.
234-URANIUM (PCI/L)	.	.	.	.	.	0.287	0	0.0872	0.177	.
COUNTING ERROR	.	.	.	.	.	0.27	0.21	0.14	0.2	.
235-URANIUM (PCI/L)	.	.	.	.	.	4.84 E	3.72 E	-2.04 F	5.79 E	.
COUNTING ERROR	.	.	.	.	.	7.9	7.1	7.2	7.5	.
238-URANIUM (PCI/L)	.	.	.	.	.	0.191	0.0594	0.145	0.177	.
COUNTING ERROR	.	.	.	.	.	0.22	0.12	0.18	0.2	.

APPENDIX E.4
RADIONUCLIDES, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-047 BG 07/24/95	GW-053 BG 09/25/95	GW-056 EXP 08/04/95	GW-057 EXP 08/05/95	GW-061 BG 09/21/95	GW-064 OLF 08/06/95	GW-066 OLF 09/27/95	GW-069 BG 08/15/95	GW-079 BG 09/18/95	GW-080 BG 09/21/95
GROSS ALPHA (GROSS ALPHA)	0.773	-4.46	4.36	0.613	20.6	2.25	5.22	-0.559 N	0.331	-0.00084
COUNTING ERROR	1	7.8	2.4	1.6	4.6	1.9	2.5	1.1	0.67	0.46
GROSS BETA (PCI/L)	-0.264	-0.905	3.01	3.66	56.2	16.1	13.6	2.36	2.93	3.61
COUNTING ERROR	2.6	25	2.6	2.6	7.4	3.7	3.3	2.5	2.7	2.7
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	.	.	.	.	.	.	.	.	0.337 J	0.0855 J
COUNTING ERROR	.	.	.	.	.	.	.	.	0.48	0.17
129-IODINE (X10-LAB (BQ/L)	.	.	.	.	.	.	.	.	0.1	0.01
COUNTING ERROR	.	.	.	.	.	.	.	.	1.4	0.92
237-NEPTUNIUM (PCI/L)	.	.	.	.	.	.	.	.	0	0
COUNTING ERROR	.	.	.	.	.	.	.	.	0.18	0.18
238-PLUTONIUM (PCI/L)	.	.	.	.	.	.	.	.	0 *J	0.251 J
COUNTING ERROR	.	.	.	.	.	.	.	.	0.3	0.32
239-PLUTONIUM (PCI/L)	.	.	.	.	.	.	.	.	0 J	0.151 J
COUNTING ERROR	.	.	.	.	.	.	.	.	0.3	0.25
40-POTASSIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
RADIUM (X10-LAB (BQ/L)	.	.	.	.	.	.	.	.	0.02	0.22
COUNTING ERROR	.	.	.	.	.	.	.	.	0.029	0.041
STRONTIUM (PCI/L)	.	.	.	.	.	.	.	.	-0.617	6.52
COUNTING ERROR	.	.	.	.	.	.	.	.	7	7.7
99-TECHNETIUM (PCI/L)	.	.	.	.	.	.	.	.	8.89	10.8
COUNTING ERROR	.	.	.	.	.	.	.	.	8.5	8.5
231+234-THORIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
TRITIUM (X10-LAB (BQ/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	17	12
234-URANIUM (PCI/L)	.	.	.	.	.	.	.	.	23	22
COUNTING ERROR	.	.	.	.	.	.	.	.	0.245 *	0.475
235-URANIUM (PCI/L)	.	.	.	.	.	.	.	.	0.24	0.34
COUNTING ERROR	.	.	.	.	.	.	.	.	0.19 E	-0.19 F
238-URANIUM (PCI/L)	.	.	.	.	.	.	.	.	9.3	9.4
COUNTING ERROR	.	.	.	.	.	.	.	.	0.0918	0
	.	.	.	.	.	.	.	.	0.15	0.21

APPENDIX E.4
RADIONUCLIDES, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-084 OLF 08/05/95	GW-085 OLF 08/06/95	GW-087 OLF 09/27/95	GW-095 BG 09/20/95	GW-100 S3 09/06/95	GW-115 S3 07/30/95	GW-124 S3 09/16/95	GW-162 BG 08/03/95	GW-228 OLF 09/17/95	GW-229 OLF 09/17/95
GROSS ALPHA (PCI/L)	-0.00081	3.47	188	-3.05	0.498	-0.639	0.654	-1.23	7.11	6.13
COUNTING ERROR	1.2	4.6	23	8.5	1.6	4.1	1.5	3.8	2.9	2.8
GROSS BETA (PCI/L)	0.327	141	221	-10.4	4.88	-3.07	177 *	-3.48	33.6	11
COUNTING ERROR	2.7	22	24	24	2.8	11	19	12	5.2	3.1
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	0.0978	.	.	.	.	0.199	.	0.0625	.	.
COUNTING ERROR	0.16	.	.	.	.	0.23	.	0.13	.	.
129-IODINE (BQ/L)	0.01	.	.	.	.	0.1	.	0.01	.	.
COUNTING ERROR	0.95	.	.	.	.	1.9	.	0.96	.	.
237-NEPTUNIUM (PCI/L)	0.284	.	.	.	.	2.07	.	0.53	.	.
COUNTING ERROR	0.3	.	.	.	.	1.2	.	0.307 J	.	.
238-PLUTONIUM (PCI/L)	0.527	.	.	.	.	0.17	.	0.35	.	.
COUNTING ERROR	0.41	.	.	.	.	0.24	.	0.46 J	.	.
239-PLUTONIUM (PCI/L)	0.203	.	.	.	.	0.256	.	0.43	.	.
COUNTING ERROR	0.26	.	.	.	.	0.3	.	.	.	.
40-POTASSIUM (PCI/L)	90	.	.	.	.	.	.	.	.	.
COUNTING ERROR	53	.	.	.	.	.	.	.	.	.
RADIUM (BQ/L)	0.001	.	.	.	.	0.056	.	-0.002	.	.
X10-LAB (BQ/L)	0.033	.	.	.	.	0.044	.	0.034	.	.
COUNTING ERROR	6.52	14	.	.	.	3.94	.	-2.8	.	.
STRONTIUM (PCI/L)	5.7	11	.	.	.	6.2	.	5.4	.	.
COUNTING ERROR	10.6	194	.	.	.	3.54	.	0.523	.	.
99-TECHNETIUM (PCI/L)	8.5	12	.	.	.	8.4	.	8.3	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
231+234-THORIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	38	-22	.	.	.	14	.	-2	.	.
TRITIUM (BQ/L)	25	24	.	.	.	24	.	23	.	.
COUNTING ERROR	0.468	0.252 *	.	.	.	0.678	.	0.0575	.	.
234-URANIUM (PCI/L)	0.33	0.25	.	.	.	0.38	.	0.12	.	.
COUNTING ERROR	2.47 E	-1.29 F	.	.	.	3.51 E	.	3.3 E	.	.
235-URANIUM (PCI/L)	7.5	7.2	.	.	.	7.7	.	7.2	.	.
COUNTING ERROR	2.05	0.0944	.	.	.	1.79	.	0.0863	.	.
238-URANIUM (PCI/L)	0.69	0.15	.	.	.	0.62	.	0.14	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.

APPENDIX E-4
RADIONUCLIDES, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-236 S3 09/16/95	GW-248 BG 08/08/95	GW-257 BG 08/08/95	GW-276 S3 07/29/95	GW-287 BG 09/18/95	GW-288 BG 08/09/95	GW-289 BG 08/08/95	GW-290 BG 08/07/95	GW-291 BG 08/03/95	GW-312 RS 08/06/95
GROSS ALPHA (GROSS ALPHA)	3.26	0.353	1.62	852	-2.99	-0.166	1.42	0.506	-0.00643	-0.652
COUNTING ERROR	2.1	1	1.3	100	8.4	0.72	1.2	1	1.4	1.1
GROSS BETA (PCI/L)	97.5	2.97	6.51	1130	2.58	-0.321	1.67	1.49	0.942	8.82
COUNTING ERROR	11	2.5	2.8	120	25	2.3	2.4	2.4	2.5	3.1
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	.	.	.	0.219 J	.	.	.	.	.	.
COUNTING ERROR	.	.	.	0.28	.	.	.	.	.	.
129-IODINE (GROSS ALPHA)	.	.	.	0.1	.	.	.	.	.	.
COUNTING ERROR	.	.	.	1.1	.	.	.	.	.	.
237-NEPTUNIUM (PCI/L)	.	.	.	20.2	.	.	.	.	.	.
COUNTING ERROR	.	.	.	3.5	.	.	.	.	.	.
238-PLUTONIUM (PCI/L)	.	.	.	0.232 J	.	.	.	.	.	.
COUNTING ERROR	.	.	.	0.33	.	.	.	.	.	.
239-PLUTONIUM (PCI/L)	.	.	.	0.637 J	.	.	.	.	.	.
COUNTING ERROR	.	.	.	0.54	.	.	.	.	.	.
40-POTASSIUM (PCI/L)	.	.	.	76.1	.	.	.	.	.	.
COUNTING ERROR	.	.	.	66	.	.	.	.	.	.
RADIUM (GROSS ALPHA)	.	.	.	0.34	.	.	.	.	.	.
COUNTING ERROR	.	.	.	0.1	.	.	.	.	.	.
STRONTIUM (PCI/L)	.	.	.	9.35	.	.	.	.	.	.
COUNTING ERROR	.	.	.	6.7	.	.	.	.	.	.
99-TECHNETIUM (PCI/L)	.	.	.	1280	.	.	.	.	.	.
COUNTING ERROR	.	.	.	22	.	.	.	.	.	.
231+234-THORIUM (PCI/L)	.	.	.	490 H	.	.	.	.	.	.
COUNTING ERROR	.	.	.	59	.	.	.	.	.	.
TRITIUM (GROSS ALPHA)	.	.	.	2	.	.	.	.	.	.
COUNTING ERROR	.	.	.	23	.	.	.	.	.	.
234-URANIUM (PCI/L)	.	.	.	260	.	.	.	.	.	.
COUNTING ERROR	.	.	.	9.1	.	.	.	.	.	.
235-URANIUM (PCI/L)	.	.	.	14.7	.	.	.	.	.	.
COUNTING ERROR	.	.	.	7.3	.	.	.	.	.	.
238-URANIUM (PCI/L)	.	.	.	552	.	.	.	.	.	.
COUNTING ERROR	.	.	.	13	.	.	.	.	.	.

APPENDIX E.4
RADIONUCLIDES, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GM-315 SPI 08/21/95	GM-317 SPI 08/15/95	GM-346 S3 08/31/95	GM-347 S3 08/15/95	GM-348 S3 08/21/95	GM-363 OLF 07/19/95	GM-370 BG 08/08/95	GM-372 BG 08/07/95	GM-373 BG 08/08/95	GM-537 OLF 08/03/95
GROSS ALPHA (PCI/L)	1.62	0.851	-0.0652	0.15	0.521	0.761	1.35	-0.352	-0.00707	-3.51
COUNTING ERROR	1.7	1.4	10	1.1	1.4	1.3	1.4	1.2	1.4	21
GROSS BETA (PCI/L)	36.3	2.38	34.7	3.1	17.8	-0.247	1.66	2.36	3.35	575
COUNTING ERROR	5.5	2.6	26	2.7	3.8	2.4	2.7	2.2	2.2	55
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	.	.	.	.	.	.	.	0 *	0.196	.
COUNTING ERROR	.	.	.	.	.	.	.	0.2	0.21	.
129-IODINE (BQ/L)	.	.	.	.	.	.	.	0.1	0.1	.
COUNTING ERROR	.	.	.	.	.	.	.	1.4	1.9	.
237-NEPTUNIUM (PCI/L)	.	.	.	.	.	.	.	0	0.543	.
COUNTING ERROR	.	.	.	.	.	.	.	0.38	0.51	.
238-PLUTONIUM (PCI/L)	.	.	.	.	.	.	.	0.226	0.577	.
COUNTING ERROR	.	.	.	.	.	.	.	0.32	0.52	.
239-PLUTONIUM (PCI/L)	.	.	.	.	.	.	.	0.113	0	.
COUNTING ERROR	.	.	.	.	.	.	.	0.23	0.4	.
40-POTASSIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
RADIUM (BQ/L)	.	.	.	.	.	.	.	0.004	0.069	.
COUNTING ERROR	.	.	.	.	.	.	.	0.037	0.5	.
STRONTIUM (RADIUM)	.	.	.	.	.	.	.	-39.4	36.9	-10.5
COUNTING ERROR	.	.	.	.	.	.	.	60	25	7.3
99-TECHNETIUM (PCI/L)	.	.	.	.	.	.	.	1.91	-8.29	1160
COUNTING ERROR	.	.	.	.	.	.	.	8.35	8.2	21
231+234-THORIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
TRITIUM (BQ/L)	.	.	.	.	.	.	.	-17	-12	-2
COUNTING ERROR	.	.	.	.	.	.	.	22	22	23
234-URANIUM (PCI/L)	.	.	.	.	.	.	.	0.323	0.337	0.806 *
COUNTING ERROR	.	.	.	.	.	.	.	0.29	0.28	0.46
235-URANIUM (PCI/L)	.	.	.	.	.	.	.	8.83	7.78	1.02 E
COUNTING ERROR	.	.	.	.	.	.	.	7.6	3.9	7.4
238-URANIUM (PCI/L)	.	.	.	.	.	.	.	0.194	0	0.387
COUNTING ERROR	.	.	.	.	.	.	.	0.22	0.19	0.32

APPENDIX E-4
RADIONUCLIDES, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-613 S3 07/24/95	GW-614 S3 07/24/95	GW-621 EXP 08/30/95	GW-627 BG 09/25/95	GW-637 OLF 07/19/95	GW-642 BG 08/07/95	GW-652 BG 09/19/95	GW-653 BG 09/20/95	GW-654 BG 09/18/95	GW-683 EXP 08/06/95
GROSS ALPHA (GROSS ALPHA)	1.55 *	0.498	1.86	3.13	0.891	-0.64	-1.52	-1.47	5.84	25
COUNTING ERROR (PCI/L)	1.3	1.1	1.5	11	1.3	1	8.9	8.6	11	5.2
GROSS BETA (GROSS BETA)	1.83	0.625	9.34	-0.0968	1.96	2.16	-0.0582	2.57	3.38	42.8
COUNTING ERROR (GROSS BETA)	2.5	2.4	3.1	24	2.5	2.2	25	25	25	6.2
RADIONUCLIDES										
241-AMERICIUM (241-AMERICIUM)	0 J	0.226 J	.	.	.	0.146	.	.	.	.
COUNTING ERROR (241-AMERICIUM)	0.53	0.45	.	.	.	0.18	.	.	.	.
129-IODINE (129-IODINE)	0.1	0.01	.	.	.	0.1	.	.	.	.
COUNTING ERROR (129-IODINE)	1.8	0.95	.	.	.	1	.	.	.	.
237-NEPTUNIUM (237-NEPTUNIUM)	0	0.0286 N	.	.	.	0.117	.	.	.	.
COUNTING ERROR (237-NEPTUNIUM)	0.2	0.081	.	.	.	0.23	.	.	.	.
238-PLUTONIUM (238-PLUTONIUM)	0.243	0.122	.	.	.	0.337	.	.	.	.
COUNTING ERROR (238-PLUTONIUM)	0.24	0.17	.	.	.	0.43	.	.	.	.
239-PLUTONIUM (239-PLUTONIUM)	0.0304	0.0304	.	.	.	0	.	.	.	.
COUNTING ERROR (239-PLUTONIUM)	0.086	0.086	.	.	.	0.47	.	.	.	.
40-POTASSIUM (40-POTASSIUM)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (40-POTASSIUM)	0.01	0.042	.	.	.	0.016	.	.	.	.
RADIUM (RADIUM)	0.04	0.045	.	.	.	0.023	.	.	.	.
COUNTING ERROR (RADIUM)	3.94	1.14	.	.	.	-51.1	.	.	.	.
STRONTIUM (STRONTIUM)	6.6	6.3	.	.	.	59	.	.	.	.
COUNTING ERROR (STRONTIUM)	6.68	5.75	.	.	.	-1.04	.	.	.	.
99-TECHNETIUM (99-TECHNETIUM)	8.4	8.4	.	.	.	8.3	.	.	.	.
231+234-THORIUM (231+234-THORIUM)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (231+234-THORIUM)	-1	21	.	.	.	.	.	.	.	.
TRITIUM (TRITIUM)	21	23	.	.	.	-8	.	.	.	.
COUNTING ERROR (TRITIUM)	0 *	0.0373	.	.	.	23	.	.	.	.
234-URANIUM (234-URANIUM)	0.23	0.11	.	.	.	0.0608	.	.	.	.
COUNTING ERROR (234-URANIUM)	2.14 E	1.62 E	.	.	.	0.12	.	.	.	.
235-URANIUM (235-URANIUM)	7.2	7.1	.	.	.	-1.51 F	.	.	.	.
COUNTING ERROR (235-URANIUM)	0.0663	0.373	.	.	.	7.19	.	.	.	.
238-URANIUM (238-URANIUM)	0.13	0.33	.	.	.	0.0608	.	.	.	.
COUNTING ERROR (238-URANIUM)	0.13	0.33	.	.	.	0.12	.	.	.	.

APPENDIX E.4
RADIONUCLIDES, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-684 EXP 08/06/95	GW-685 EXP 08/06/95	GW-694 EXP 08/31/95	GW-695 EXP 08/30/95	GW-703 EXP 08/30/95	GW-704 EXP 08/31/95	GW-706 EXP 08/30/95	GW-710 EXP 07/27/95	GW-711 EXP 07/27/95	GW-712 EXP 07/25/95
GROSS ALPHA (PCI/L)	16.1	2.83	43.1	4.76	3.02	1.6	29.9	-0.00971	-24.4	0.191
COUNTING ERROR	4	2	7.7	2.2	1.8	1.5	6.1	19	18	1.2
GROSS BETA (PCI/L)	47.7	9.04	62.1	17.4	18.7	7.65	56.1	14.5	20.6	1.63
COUNTING ERROR	6.7	3.2	8.1	3.7	3.8	2.9	7.5	27	28	2.4
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	.	.	.	.	.	.	.	0.0315	0	0.0976
COUNTING ERROR	.	.	.	.	.	.	.	0.089	0.24	0.16
129-IODINE (Bg/L)	.	.	.	.	.	.	.	0.1	0.1	0.01
COUNTING ERROR	.	.	.	.	.	.	.	1.2	2.1	0.96
237-NEPTUNIUM (PCI/L)	.	.	.	.	.	.	.	0 *	0	0
COUNTING ERROR	.	.	.	.	.	.	.	0.49	0.55	0.2
238-PLUTONIUM (PCI/L)	.	.	.	.	.	.	.	0.086 *	0	0.0352
COUNTING ERROR	.	.	.	.	.	.	.	0.24	0.67	0.1
239-PLUTONIUM (PCI/L)	.	.	.	.	.	.	.	0.172 *	0.389	0
COUNTING ERROR	.	.	.	.	.	.	.	0.34	0.55	0.24
40-POTASSIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
RADIUM (40-POTASSIUM)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	.	.	.	.	.	0.15	0.22	0.012
STRONTIUM (PCI/L)	.	.	.	.	.	.	.	0.07	0.09	0.032
COUNTING ERROR	.	.	3.3	.	.	.	-0.575	-6.84	-16.2	-0.534
99-TECHNETIUM (PCI/L)	.	.	7.5	.	.	.	7.2	15	14	6.1
COUNTING ERROR	.	.	26.2	.	.	.	25.3	3.54	6.22	-2.67
231+234-THORIUM (PCI/L)	.	.	8.8	.	.	.	8.8	8.4	8.4	8.3
COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
TRITIUM (231+234-THORIUM)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	.	.	5	.	.	.	-1	-19	-19	1
234-URANIUM (Bg/L)	.	.	24	.	.	.	23	22	24	23
COUNTING ERROR	.	.	.	.	.	.	.	0.375	0.66	0.0963
235-URANIUM (PCI/L)	.	.	.	.	.	.	.	0.31	0.39	0.16
COUNTING ERROR	.	.	.	.	.	.	.	2.85 E	21.1 E	0.855 E
238-URANIUM (PCI/L)	.	.	.	.	.	.	.	7.5	39	7.4
COUNTING ERROR	.	.	.	.	.	.	.	0	0	0.193
	.	.	.	.	.	.	.	0.22	0.2	0.22

APPENDIX E.4
RADIONUCLIDES, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-713 EXP 07/27/95	GW-714 EXP 07/29/95	GW-715 EXP 07/29/95	GW-723 EXP 09/13/95	GW-724 EXP 09/24/95	GW-725 EXP 09/25/95	GW-736 EXP 09/26/95	GW-737 EXP 09/26/95	GW-738 EXP 09/17/95	GW-739 EXP 09/16/95
GROSS ALPHA COUNTING ERROR	1.76 2.2	1.81 4.7	-0.642 4.1	2.18 1.9	-0.0325 1.6	1.88 2.1	2.31 2.2	1.46 2.1	1.54 1.9	0.347 1.5
GROSS BETA COUNTING ERROR	3.23 2.8	1.32 12	2.34 12	9.76 3.2	44 6.3	37.7 5.7	38.7 5.8	47.4 6.6	44.5 6.3	9.24 3.2
RADIONUCLIDES										
241-AMERICIUM COUNTING ERROR	0.0966 0.16	0.354 0.3	0.111 0.16	.	.	.	.	.	.	.
129-IODINE COUNTING ERROR	0.1 1.8	0.1 1.9	0.1 2.1	.	.	.	.	.	.	.
237-NEPTUNIUM COUNTING ERROR	0 0.52	0.394 0.5	0.7 0.63	.	.	.	.	.	.	.
238-PLUTONIUM COUNTING ERROR	0.307 0.43	0.396 J 0.4	0.184 0.21	.	.	.	.	.	.	.
239-PLUTONIUM COUNTING ERROR	0.23 0.38	0.445 J 0.42	0.275 0.26	.	.	.	.	.	.	.
40-POTASSIUM COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
RADIUM COUNTING ERROR	0.22 0.09	-0.008 0.024	-0.019 0.021	.	.	.	.	.	.	.
STRONTIUM COUNTING ERROR	-8.45 15	5.68 6.3	2.14 6	.	.	.	.	.	.	.
99-TECHNETIUM COUNTING ERROR	11.3 8.5	15.4 8.6	2.13 8.4	.	.	.	.	.	.	.
231+234-THORIUM COUNTING ERROR	.	.	.	.	.	.	.	.	.	.
TRITIUM COUNTING ERROR	-7 24	7 24	9 24	.	.	.	.	.	.	.
234-URANIUM COUNTING ERROR	0.813 0.43	0.916 0.44	0.41 0.47	.	.	.	.	.	.	.
235-URANIUM COUNTING ERROR	1.53 E 7.2	0 F 7.4	0 F 7.4	.	.	.	.	.	.	.
238-URANIUM COUNTING ERROR	0.116 0.16	1.28 0.52	0.273 0.39	.	.	.	.	.	.	.

APPENDIX E.4
RADIONUCLIDES, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-740 EXP 09/17/95	GW-793 AGLLSF 07/19/95	GW-794 AGLLSF 07/24/95	GW-795 AGLLSF 07/24/95	GW-800 OLF 08/05/95	GW-828 OLF 08/24/95	GW-829 OLF 08/30/95	GW-830 B9714 09/14/95	NT-01 EXP 07/25/95	NT-02 EXP 09/22/95
GROSS ALPHA (PCI/L)	-0.363	0.169	1.09	0.347	0.361	33	-0.0667	4.26	23.5	1.77
GROSS ALPHA (GROSS ALPHA)	1.3	1	1.3	1	1.4	20	12	4.4	6	1.6
GROSS BETA (PCI/L)	6.25	-0.564	3.06	-0.403	-0.244	30.6	24	13.6	694	24.7
GROSS BETA (GROSS BETA)	2.9	2.4	2.7	2.5	2.3	25	25	11	71	4.3
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (241-AMERICIUM)	.	.	.	.	.	.	.	.	.	.
129-IODINE (BQ/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (129-IODINE)	.	.	.	.	.	.	.	.	.	.
237-NEPTUNIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (237-NEPTUNIUM)	.	.	.	.	.	.	.	.	.	.
238-PLUTONIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (238-PLUTONIUM)	.	.	.	.	.	.	.	.	.	.
239-PLUTONIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (239-PLUTONIUM)	.	.	.	.	.	.	.	.	.	.
40-POTASSIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (40-POTASSIUM)	.	.	.	.	.	.	.	.	.	.
RADIUM (BQ/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (RADIUM)	.	.	.	.	.	.	.	.	.	.
STRONTIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (STRONTIUM)	.	.	.	.	.	.	.	.	.	.
99-TECHNETIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (99-TECHNETIUM)	.	.	.	.	.	.	.	.	.	.
231+234-THORIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (231+234-THORIUM)	.	.	.	.	.	.	.	.	.	.
TRITIUM (BQ/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (TRITIUM)	.	.	.	.	.	.	.	.	.	.
234-URANIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (234-URANIUM)	.	.	.	.	.	.	.	.	.	.
235-URANIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (235-URANIUM)	.	.	.	.	.	.	.	.	.	.
238-URANIUM (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR (238-URANIUM)	.	.	.	.	.	.	.	.	.	.

APPENDIX E.4
RADIONUCLIDES, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	SS-1 EXP 09/22/95	SS-4 EXP 07/25/95	SS-5 EXP 07/25/95	SS-6 EXP 07/25/95
GROSS ALPHA COUNTING ERROR	(PCI/L) 15.1	48	26.4	1.17
GROSS BETA COUNTING ERROR	(GROSS ALPHA) 4.2	8	5.2	1.2
	(GROSS BETA) 62.8	84.5	29.9	-0.0939
	8	10	5	2.5
RADIONUCLIDES				
241-AMERICIUM COUNTING ERROR	(PCI/L)	.	.	.
129-IODINE COUNTING ERROR	(241-AMERICIUM) X10-LAB (Bq/L)	.	.	.
237-NEPTUNIUM COUNTING ERROR	(129-IODINE) (PCI/L)	.	.	.
238-PLUTONIUM COUNTING ERROR	(237-NEPTUNIUM) (PCI/L)	.	.	.
239-PLUTONIUM COUNTING ERROR	(238-PLUTONIUM) (PCI/L)	.	.	.
40-POTASSIUM COUNTING ERROR	(239-PLUTONIUM) (PCI/L)	.	.	.
RADIUM COUNTING ERROR	(40-POTASSIUM) X10-LAB (Bq/L)	.	.	.
STRONTIUM COUNTING ERROR	(RADIUM) (PCI/L)	.	.	.
99-TECHNETIUM COUNTING ERROR	(STRONTIUM) (PCI/L)	60.3	-1.48	.
231+234-THORIUM COUNTING ERROR	(99-TECHNETIUM) (PCI/L)	24	15	.
TRITIUM COUNTING ERROR	(231+234-THORIUM) X10-LAB (Bq/L)	95.5	87.6	.
234-URANIUM COUNTING ERROR	(TRITIUM) (PCI/L)	10	9.9	.
235-URANIUM COUNTING ERROR	(234-URANIUM) (PCI/L)	.	.	.
238-URANIUM COUNTING ERROR	(235-URANIUM) (PCI/L)	-7	-13	.
	(238-URANIUM) (PCI/L)	23	21	.

APPENDIX E.4
RADIONUCLIDES, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GCS1 EXP 10/26/95	GM-040 BG 10/11/95	GM-042 BG 10/11/95	GM-043 OLF 10/18/95	GM-044 OLF 10/18/95	GM-053 BG 12/10/95	GM-069 BG 12/07/95	GM-079 BG 12/09/95	GM-080 BG 12/09/95	GM-084 OLF 10/19/95
GROSS ALPHA (PCI/L)	-1.29	2.76	0.774	0.616	0.157	2.06	0.358	-0.326	-0.00431	0.306
COUNTING ERROR (GROSS ALPHA)	1.3	1.6	0.93	1.3	1.3	1.5	1.3	0.91	0.98	1.3
GROSS BETA (PCI/L)	1.51	2.89	0.166	2.48	-1.36	4.63	8.35	1.39	0.921	1.92
COUNTING ERROR (GROSS BETA)	2.4	2.8	2.7	2.6	2.4	2.6	2.9	2.5	2.5	2.6
RADIONUCLIDES										
241-AMERICIUM (PCI/L)		0.188	0.0974	0.194	0.0307		0.43	0	0.208	0.0329
COUNTING ERROR (241-AMERICIUM)		0.22	0.16	0.25	0.087		0.46	0.42	0.34	0.093
129-IODINE (129-IODINE)		-0.4	-0.3	0.4	0.1		0.3	0.3	0.1	-0.1
COUNTING ERROR (129-IODINE)		2.4	1.2	2	1.4		1	1	1	2
237-NEPTUNIUM (PCI/L)	0.0502 N	0	0	0.051	0.126		0.555	0	0	0.0753
COUNTING ERROR (237-NEPTUNIUM)		0.14	0.38	0.1	0.16		0.47	0.38	0.35	0.12
238-PLUTONIUM (PCI/L)	0.404	0	0	0.297 J	0.14 *		0.377	0.0753	0.932	0.177
COUNTING ERROR (238-PLUTONIUM)		0.47	0.57	0.32	0.2		0.43	0.21	0.62	0.22
239-PLUTONIUM (PCI/L)	0	0	0.0818	0 J	0		0.0628	0	0.207	0
COUNTING ERROR (239-PLUTONIUM)		0.47	0.23	0.29	0.24		0.18	0.52	0.29	0.23
RADIUM (X10-LAB (BQ/L))	0.056	0.001	0.001	0.001	-0.007		0.014	0.032	0.032	0.046
COUNTING ERROR (X10-LAB (BQ/L))		0.04	0.035	0.029	0.021		0.025	0.037	0.033	0.035
STRONTIUM (PCI/L)	-2.93	10.1	-2.73	10.1	5.2		0.288	1.06	3.92	12.8
COUNTING ERROR (STRONTIUM)		6.5	6.5	6.2	5.7		4.7	4.8	5.2	6.5
99-TECHNETIUM (PCI/L)	-0.204	2.31	2.31	8.7	12.5		-20.2	-18	-13.5	14.2
COUNTING ERROR (99-TECHNETIUM)		8.4	8.5	8.6	8.7		16	16	16	8.6
231+234-THORIUM (PCI/L)										
COUNTING ERROR (X10-LAB (BQ/L))										
TRITIUM (TRITIUM)		5	8	4	18		25	14	25	8
COUNTING ERROR (TRITIUM)		22	22	23	25		25	24	24	24
234-URANIUM (PCI/L)	0.726	0.243	0.243	0.163	0.247		0.796	0	0.583	0.32
COUNTING ERROR (234-URANIUM)		0.4	0.23	0.17	0.23		0.65	0.4	0.52	0.26
235-URANIUM (PCI/L)	-1.42 F	5.76 E	5.76 E	10.2	2.09 E		6.37 E	1.8 E	5.85 E	0.54 E
COUNTING ERROR (235-URANIUM)		7.3	8	8.6	10		7.9	7.5	8.1	10
238-URANIUM (PCI/L)	1.42	0.0811	0.0811	0.0699	0.11		0.133	0	0.117	0.0267
COUNTING ERROR (238-URANIUM)		0.55	0.13	0.11	0.16		0.27	0.4	0.23	0.075

APPENDIX E.4
RADIONUCLIDES, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-085 OLF 10/25/95	GW-095 BG 12/11/95	GW-162 BG 10/11/95	GW-287 BG 12/10/95	GW-311 RS 10/25/95	GW-315 SPI 12/07/95	GW-363 OLF 10/19/95	GW-372 BG 10/12/95	GW-373 BG 10/12/95	GW-537 OLF 10/25/95
GROSS ALPHA (GROSS ALPHA) (PCI/L)	5.78	1.15	1.21	1.15	0.332	1.85	-0.00799	1.11	0.397	31.7
COUNTING ERROR	18	1.2	1.2	1.1	1.7	1.3	1.4	1.2	0.97	23
GROSS BETA (GROSS BETA) (PCI/L)	134	3.14	1.65	3.71	0.379	70	1.56	-1.15	-1.05	556
COUNTING ERROR	35	2.5	2.7	2.6	2.3	8.8	2.5	2.5	2.5	52
RADIONUCLIDES										
241-AMERICIUM (241-AMERICIUM) (PCI/L)	.	.	0.277	.	.	.	0.108	0.414	0.242	.
COUNTING ERROR	.	.	0.26	.	.	.	0.18	0.32	0.23	.
129-IODINE (129-IODINE) (PCI/L)	.	.	-0.3	.	.	.	-0.1	0.3	0.1	.
COUNTING ERROR	.	.	2.2	.	.	.	1.1	2.1	2.8	.
237-NEPTUNIUM (237-NEPTUNIUM) (PCI/L)	.	.	0	.	.	.	0.212	0	0	.
COUNTING ERROR	.	.	0.35	.	.	.	0.21	0.38	0.35	.
238-PLUTONIUM (238-PLUTONIUM) (PCI/L)	.	.	0	.	.	.	0.271	0	0 J	.
COUNTING ERROR	.	.	0.45	.	.	.	0.27	0.51	0.58	.
239-PLUTONIUM (239-PLUTONIUM) (PCI/L)	.	.	0	.	.	.	0	0.294	0	.
COUNTING ERROR	.	.	0.45	.	.	.	0.23	0.42	0.58	.
RADIUM (RADIUM) (PCI/L)	.	.	0.048	.	.	.	0.012	0.026	0.049	.
COUNTING ERROR	.	.	0.037	.	.	.	0.024	0.039	0.045	.
STRONTIUM (STRONTIUM) (PCI/L)	8.27	.	-7.54	.	.	.	4.96	-4.44	-4.53	3.05
COUNTING ERROR	7.4	.	6	.	.	.	5.7	6.3	6.3	6.9
99-TECHNETIUM (99-TECHNETIUM) (PCI/L)	234	.	-7.19	.	.	.	6.06	7.75	0.92	1010
COUNTING ERROR	12	.	8.3	.	.	.	8.5	8.6	8.4	20
231+234-THORIUM (231+234-THORIUM) (PCI/L)	.	.	.	.	.	.	.	.	.	.
COUNTING ERROR	8	.	.	.	.	.	.	.	.	.
TRITIUM (TRITIUM) (PCI/L)	24	.	4	.	.	.	9	7	-3	4
COUNTING ERROR	0	.	23	.	.	.	24	22	21	24
234-URANIUM (234-URANIUM) (PCI/L)	0.24	.	0.219	.	.	.	0.282	0.159	0.422	1.09
COUNTING ERROR	1.96 E	.	0.22	.	.	.	0.25	0.18	0.31	0.57
235-URANIUM (235-URANIUM) (PCI/L)	8.2	.	-2.47 F	.	.	.	-2.38 F	-0.36 F	12	4.75 E
COUNTING ERROR	0	.	7.6	.	.	.	10	8.3	7.4	7.5
238-URANIUM (238-URANIUM) (PCI/L)	0.24	.	0.219	.	.	.	0.0564	0	0.0563	0.679
COUNTING ERROR	.	.	0.22	.	.	.	0.11	0.18	0.11	0.45

APPENDIX E.4
RADIONUCLIDES, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-627 BG 12/10/95	GW-642 BG 10/10/95	GW-653 BG 12/08/95	GW-654 BG 12/09/95	GW-793 AGLLSF 10/19/95	GW-794 AGLLSF 10/24/95	GW-795 AGLLSF 10/24/95	GW-828 OLF 12/08/95	GW-829 OLF 12/10/95	SS-5.95K EXP 10/26/95
GROSS ALPHA (GROSS ALPHA) (PCI/L)	1.01	0.331	-0.148	-0.176	-0.943	1.47	1.09	2.29	2.94	0.667
COUNTING ERROR	1.4	0.81	1.1	1.3	2.1	1.6	1.5	1.9	2.1	1.3
GROSS BETA (GROSS BETA) (PCI/L)	2.06	0.165	-1.55	2.47	5.3	4.65 *	13.3	2.09	5.92	-0.173
COUNTING ERROR	2.5	2.7	2.4	2.6	5.3	2.9	3.6	2.4	2.7	2.6
RADIONUCLIDES										
241-AMERICIUM (PCI/L)		0.0272 *			0.0665					
COUNTING ERROR		0.077			0.19					
129-IODINE (129-IODINE) (PCI/L)		0.1								
COUNTING ERROR		2.1								
237-NEPTUNIUM (PCI/L)		0			0.201					
COUNTING ERROR		0.36			0.28					
238-PLUTONIUM (PCI/L)		0.45 J			0.216					
COUNTING ERROR		0.57			0.35					
239-PLUTONIUM (PCI/L)		0.18 J			0					
COUNTING ERROR		0.36			0.5					
RADIUM (PCI/L)		0.06								
COUNTING ERROR		0.055								
STRONTIUM (STRONTIUM) (PCI/L)		5.04			33			4.67	-1.85	
COUNTING ERROR		7.3			14			5.2	4.3	
99-TECHNETIUM (PCI/L)		3.84			-2.01			33.9	30.3	
COUNTING ERROR		8.5			17			17	17	
231+234-THORIUM (PCI/L)									103	
COUNTING ERROR									51	
TRITIUM (TRITIUM) (PCI/L)		19						8	13	
COUNTING ERROR		23						24	24	
234-URANIUM (PCI/L)		0 *			0.0295			0 *	0.666	
COUNTING ERROR		0.19			0.083			0.54	0.6	
235-URANIUM (PCI/L)		2.16 E			0 F			0.387 F	0.733 F	
COUNTING ERROR		8.2			1.7			7.5	7.5	
238-URANIUM (PCI/L)		0.166			0.118			0.619	0.666	
COUNTING ERROR		0.19			0.17			0.62	0.6	

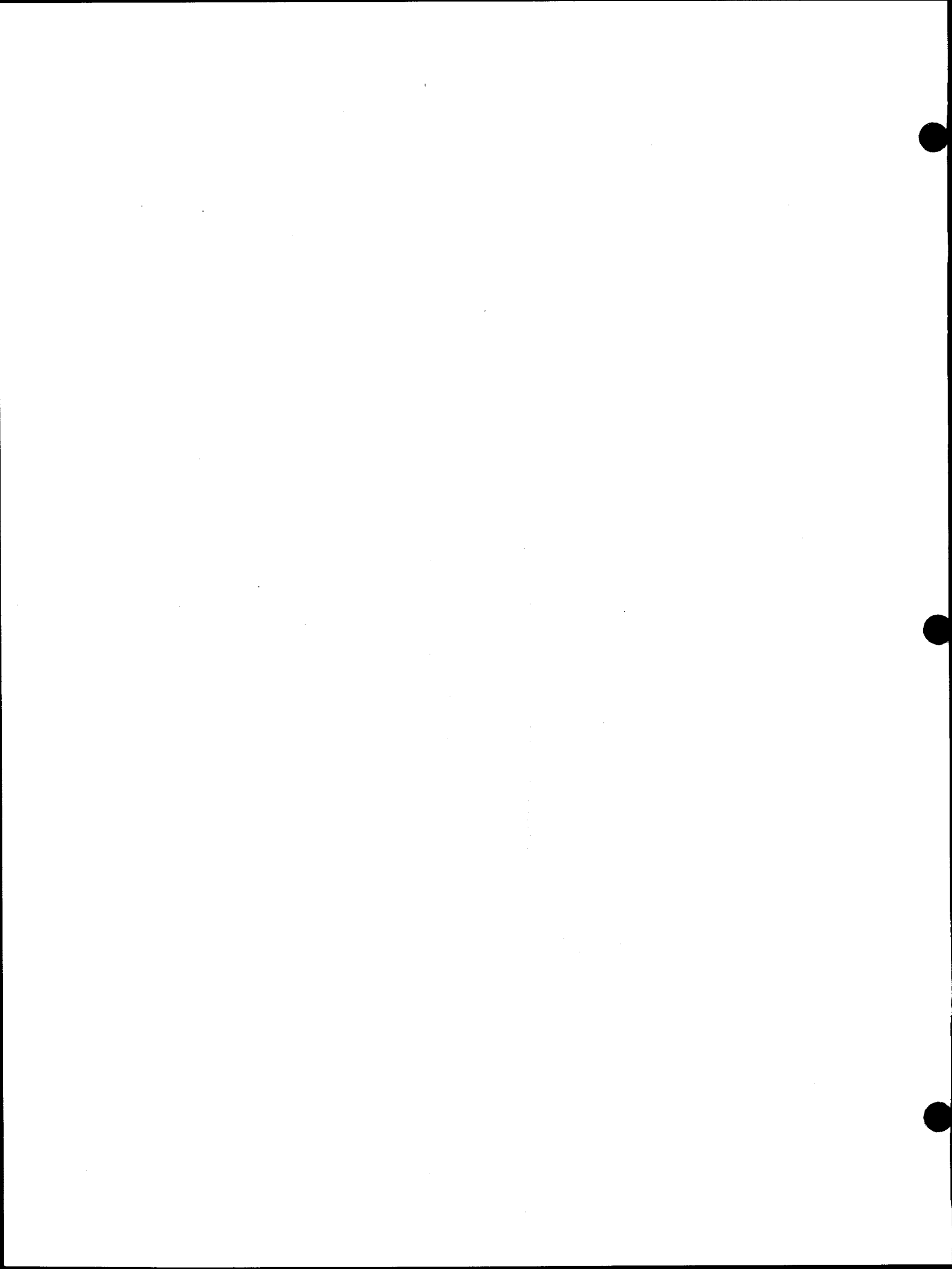
APPENDIX E.4
RADIONUCLIDES, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED		SS-6W EXP 10/26/95	SS-7 EXP 10/26/95
GROSS ALPHA	(PCI/L)	3.45	16.4
COUNTING ERROR	(GROSS ALPHA)	2	3.9
GROSS BETA	(PCI/L)	6.94	23.7
COUNTING ERROR	(GROSS BETA)	3.1	4.5
RADIONUCLIDES			
241-AMERICIUM	(PCI/L)	.	.
COUNTING ERROR	(241-AMERICIUM)	.	.
129-IODINE	X10-LAB (BQ/L)	.	.
COUNTING ERROR	(129-IODINE)	.	.
237-NEPTUNIUM	(PCI/L)	.	.
COUNTING ERROR	(237-NEPTUNIUM)	.	.
238-PLUTONIUM	(PCI/L)	.	.
COUNTING ERROR	(238-PLUTONIUM)	.	.
239-PLUTONIUM	(PCI/L)	.	.
COUNTING ERROR	(239-PLUTONIUM)	.	.
RADIUM	X10-LAB (BQ/L)	.	.
COUNTING ERROR	X10-LAB (RADIUM)	.	.
STRONTIUM	(PCI/L)	.	.
COUNTING ERROR	(STRONTIUM)	.	.
99-TECHNETIUM	(PCI/L)	.	.
COUNTING ERROR	(99-TECHNETIUM)	.	.
231+234-THORIUM	(PCI/L)	.	.
COUNTING ERROR	(231+234-THORIUM)	.	.
TRITIUM	X10-LAB (BQ/L)	.	.
COUNTING ERROR	(TRITIUM)	.	.
234-URANIUM	(PCI/L)	.	.
COUNTING ERROR	(234-URANIUM)	.	.
235-URANIUM	(PCI/L)	.	.
COUNTING ERROR	(235-URANIUM)	.	.
238-URANIUM	(PCI/L)	.	.
COUNTING ERROR	(238-URANIUM)	.	.



APPENDIX E.5

**BEAR CREEK VALLEY OPERABLE UNIT
RADIONUCLIDE DATA
THIRD QUARTER 1995**



APPENDIX E.5
BEAR CREEK VALLEY OPERABLE UNIT RADIONUCLIDE DATA, 3RD QUARTER 1995

SAMPLING POINT DATE SAMPLED TYPE	BCK 4.55 08/02/95 TOT	BCK 9.40 08/02/95 TOT	C WEST TOE 08/03/95 DIS	C WEST TOE 08/03/95 TOT	GH-005 08/02/95 TOT	GH-014 08/04/95 TOT	GH-040 08/10/95 TOT	GH-044 08/04/95 TOT	GH-087 08/09/95 TOT	GH-162 08/03/95 TOT
GROSS ALPHA (GROSS ALPHA) COUNTING ERROR	15 8	38 9.9	13 6.4	3.2 5	7.8 5.3	-3.7 0.2	6.5 12	-1 0.2	360 49	0
GROSS BETA (GROSS BETA) COUNTING ERROR	4.7 5.3	34 8	26 7.2	22 6.8	12 5.5	1.3 5.2	22 12	-1.8 0.05	330 44	0.1 5
RADIONUCLIDES										
241-AMERICIUM (241-AMERICIUM) COUNTING ERROR	-0.046 0.092	-0.044 0.13	-0.012 0.087	-0.034 0.097	-0.005 0.21	-0.21 0.32	-0.03 0.21	-0.03 0.085	0.13 0.33	-0.013 0.13
137-CESIUM (137-CESIUM) COUNTING ERROR	7.5 3.4	1.4 4.1	5 5.3	3.1 4.4	0.18 3.6	8.7 5.5	-1.3 4.3	7.6 4.3	1.2 3.7	10 5.1
237-NEPTUNIUM (237-NEPTUNIUM) COUNTING ERROR	-0.078 0.09	0.037 0.074	0.41 0.24	0.52 0.25	0.081 0.13	0.05 0.12	0.01 0.077	0.12 0.2	0.24 0.19	0
238-PLUTONIUM (238-PLUTONIUM) COUNTING ERROR	0.028 0.057	-0.034 0.067	0.054 0.13	-0.005 0.22	0.32 0.36	0.069 0.098	0.11 0.28	-0.027 0.053	0.11 0.28	0.045 0.09
239-PLUTONIUM (239-PLUTONIUM) COUNTING ERROR	0 0.01221	-0.034 0.00962	0.082 0.00259	-0.041 0.02405	-0.16 0.00962	0 0.00925	0 0.01924	0.038 0.001628	-0.046 0.0592	0 0.037
223+224+226-RADIUM (223+224+226-RADIUM) COUNTING ERROR	0.38 -1	0.36 -0.7	0.43 -0.61	0.41 -1.4	1 -0.32	0.52 0.3	1.3 -0.067	0.075 .	1.6 .	1.4 1.2
228-RADIUM (228-RADIUM) COUNTING ERROR	2.1 -0.79	0.55 -1.7	0.67 -0.19	2 0.02	0.8 -2.4	0.46 -2.6	0.18 -2.8	.	0.83 -1.8	1.7 -1.8
99-TECHNETIUM (99-TECHNETIUM) COUNTING ERROR	0.49 4.5	0.5 4.6	0.62 9	0.59 11	0.63 -1.5	0.63 -4.6	1.3 20	0.54 -0.5	0.68 36	0.55 -2.5
232-THORIUM (232-THORIUM) COUNTING ERROR	0.048 0.096	0.059 0.14	0.039 0.093	-0.027 0.054	0.039 0.078	0.057 0.11	0.27 0.25	0.08 0.13	0.055 0.11	-0.016 0.032
230-THORIUM (230-THORIUM) COUNTING ERROR	0.34 0.26	0.51 0.33	0.24 0.17	0.12 0.13	0.29 0.23	0.3 0.29	0.44 0.32	0.74 0.34	0.24 0.26	0.28 0.17
228-THORIUM (228-THORIUM) COUNTING ERROR	0.015 0.12	0.15 0.26	0.18 0.15	0.12 0.14	0.32 0.27	0.11 0.27	0.96 0.51	0.12 0.16	0.19 0.24	0.047 0.12
TRITIUM (TRITIUM) COUNTING ERROR	-2.59 150	4.44 140	88.8 310	88.8 310	5.92 140	4.44 130	4.44 140	-3.7 130	4.81 150	-1.073 87
234-URANIUM (234-URANIUM) COUNTING ERROR	3.2 0.057	16 0.35	5.3 0.31	3.9 0.34	9.8 0.26	0.48 -0.026	0.54 -0.031	0.14 -0.041	130 8.4	0.11 0
238-URANIUM (238-URANIUM) COUNTING ERROR	7.1 .	31 .	6.7 .	6.1 .	3.5 .	0.89 .	0.022 .	-0.051 .	380 .	0.014 .

APPENDIX E.5
BEAR CREEK VALLEY OPERABLE UNIT RADIONUCLIDE DATA, 3RD QUARTER 1995

SAMPLING POINT DATE SAMPLED TYPE	GW-243 08/01/95 TOT	GW-258 08/04/95 TOT	GW-291 08/03/95 TOT	GW-537 08/03/95 TOT	GW-613 08/14/95 TOT	GW-615 TOT	GW-623 08/02/95 TOT	GW-624 08/03/95 TOT	GW-684 08/06/95 TOT	GW-706 08/30/95 TOT
GROSS ALPHA (PCI/L)	550	-0.4	-1.8	33	-5.3	290	-2.9	-1.5	18	39
COUNTING ERROR (GROSS ALPHA)	240	0.18	0.18	19	0.2	230	0.26	0.2	6.2	10
GROSS BETA (PCI/L)	9300	0	-0.52	570	-0.73	510	-2.8	7.2	33	44
COUNTING ERROR (GROSS BETA)	1200	0.05	0.05	79	0.05	200	0.05	5.6	7.9	9.2
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	0.25	0	0.056	0.049	0.005	0.3	0.063	-0.005	-0.063	0.01
COUNTING ERROR (241-AMERICIUM)	0.5	0	0.14	0.12	0.11	0.72	0.15	0.16	0.12	0.08
137-CESIUM (PCI/L)	2.1	-1.2	11	3.2	9.7	6	2.9	2	1.5	3.6
COUNTING ERROR (137-CESIUM)	3.7	3.7	5.7	2	5.8	4.7	4	3.9	3.8	4.2
237-NEPTUNIUM (PCI/L)	40	0.063	-0.02	0.026	0.042	0.033	0.011	0.011	-0.029	0.13
COUNTING ERROR (237-NEPTUNIUM)	7.6	0.089	0.04	0.052	0.1	0.066	0.086	0.085	0.057	0.14
238-PLUTONIUM (PCI/L)	0	0.059	0.13	0.41	-0.012	0.1	-0.057	0.14	0.034	-0.025
COUNTING ERROR (238-PLUTONIUM)	0	0.27	0.23	0.39	0.09	0.12	0.17	0.15	0.19	0.18
239-PLUTONIUM (PCI/L)	0	-0.044	0	0	0	0	0.016	0.011	0	-0.044
223+224+226-RADIUM (BQ/L)	0	0.01665	0.02923	0.0444	-0.0037	0	0.01258	0.00407	0.00555	0.00962
COUNTING ERROR (223+224+226-RADIUM)	0	1.5	0.97	0.56	0.12	0	1.4	0.31	0.54	0.83
228-RADIUM (PCI/L)	0	-0.79	0.2	0.34	-0.88	0	-0.93	0.57	-0.035	0.1
COUNTING ERROR (228-RADIUM)	0	1.3	1.7	0.51	2.4	0	4	1.1	0.1	0.25
STRONTIUM (PCI/L)	7.4	-4	-6.1	-1.6	-1.8	3.6	-1.6	-2.4	1.2	-0.92
COUNTING ERROR (STRONTIUM)	1.2	1	1.2	0.82	0.54	0.66	0.59	0.73	0.67	0.51
99-TECHNETIUM (PCI/L)	23108	-1	0	1300	-1	50	-2	1.5	28	39
COUNTING ERROR (99-TECHNETIUM)	2300	3.3	4.2	130	4.7	7.2	3.3	4.2	5.8	6.4
232-THORIUM (PCI/L)	0.019	0.011	0.011	-0.04	0.11	0.059	0.051	0.38	0.1	-0.016
COUNTING ERROR (232-THORIUM)	0.15	0.088	0.088	0.08	0.13	0.12	0.13	0.29	0.12	0.031
230-THORIUM (PCI/L)	0.33	0.5	0.5	0.59	0.12	0.41	0.51	0.093	0.17	0.32
COUNTING ERROR (230-THORIUM)	0.32	0.31	0.31	0.41	0.16	0.32	0.26	0.13	0.16	0.18
228-THORIUM (PCI/L)	3.2	0.12	0.12	0.11	0.17	0.32	0.18	0.38	0.16	0.11
COUNTING ERROR (228-THORIUM)	1.1	0.16	0.16	0.28	0.18	0.31	0.18	0.28	0.17	0.15
TRITIUM (BQ/L)	70.3	1.11	22.94	9.25	2.109	22.94	4.07	7.77	0.518	2.368
COUNTING ERROR (TRITIUM)	270	230	170	140	160	160	130	140	240	140
234-URANIUM (PCI/L)	88	0.16	0.15	1.5	0.029	80	1.7	0.6	7.4	22
235-URANIUM (PCI/L)	5.2	0	0	0.012	0	3.6	0.15	0.058	0.048	0.89
238-URANIUM (PCI/L)	230	0	0.071	0.52	0.015	190	0.79	0.46	14	42

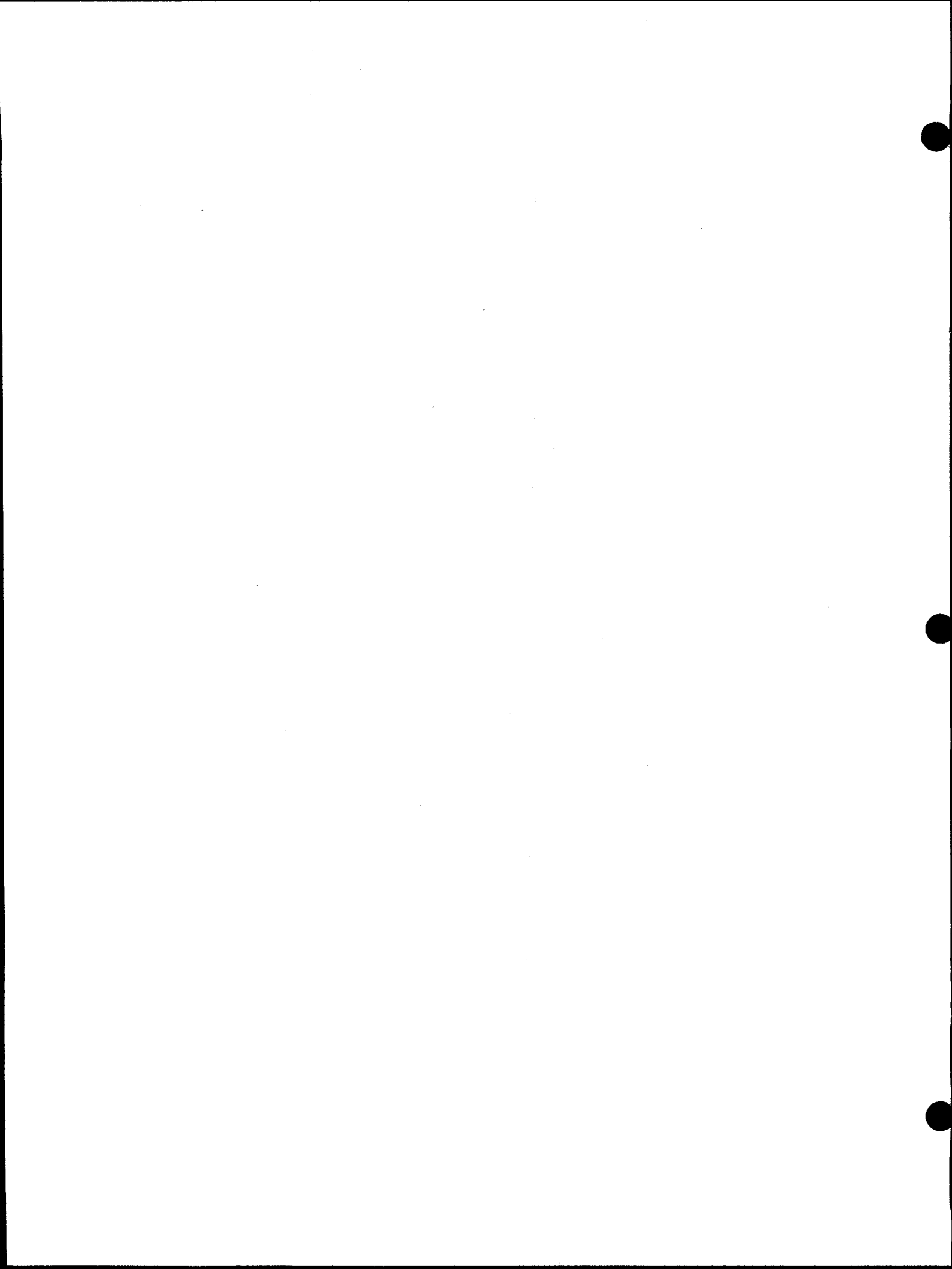
APPENDIX E.5
BEAR CREEK VALLEY OPERABLE UNIT RADIONUCLIDE DATA, 3RD QUARTER 1995

SAMPLING POINT DATE SAMPLED TYPE	GM-710 07/27/95 TOT	GM-711 07/27/95 TOT	GM-712 07/25/95 TOT	GM-713 07/27/95 TOT	GM-714 08/29/95 TOT	GM-715 07/29/95 TOT	GM-794 08/02/95 TOT
GROSS ALPHA (GROSS ALPHA) (PCI/L)	13	-12	21	4.5	5.2	5.2	1
COUNTING ERROR	24	1.5	7	4	4	4	4.3
GROSS BETA (GROSS BETA) (PCI/L)	13	8.8	17	-1.4	8.6	2.9	5.2
COUNTING ERROR	18	27	6.3	0.05	5.4	4.9	4.9
RADIONUCLIDES							
241-AMERICIUM (241-AMERICIUM) (PCI/L)	0.044	0.054	-0.16	0.085	0.01	-0.037	-0.07
COUNTING ERROR	0.18	0.13	0.17	0.12	0.083	0.11	0.36
137-CESIUM (137-CESIUM) (PCI/L)	8.8	3.4	3	1.4	5.6	6.4	4.6
COUNTING ERROR	5	2.1	3.9	4	3.8	3.8	4.2
237-NEPTUNIUM (237-NEPTUNIUM) (PCI/L)	0.031	0.009	0.041	0.057	0.12	-0.002	-0.013
COUNTING ERROR	0.063	0.075	0.099	0.081	0.12	0.11	0.092
238-PLUTONIUM (238-PLUTONIUM) (PCI/L)	0.068	0.033	0.085	0.029	-0.059	-0.021	0.019
COUNTING ERROR	0.17	0.08	0.14	0.13	0.11	0.042	0.15
239-PLUTONIUM (239-PLUTONIUM) (PCI/L)	-0.058	0.008	0	0.032	-0.023	-0.012	0
223+224+226-RADIUM (223+224+226-RADIUM) (BQ/L)	0.1998	0.1591	0.01628	0.037	0.03256	0.01517	0.0074
COUNTING ERROR	1.4	1.2	0.46	0.62	0.59	0.45	1.6
228-RADIUM (228-RADIUM) (PCI/L)	2.4	7.8	-0.19	-0.31	-0.11	-1.5	-0.27
COUNTING ERROR	1.1	2.2	0.63	1	0.71	2	2
STRONTIUM (STRONTIUM) (PCI/L)	0.19	0.23	0.27	1.2	1.7	0.74	-1
COUNTING ERROR	0.72	0.8	0.51	0.61	0.76	0.53	0.54
99-TECHNETIUM (99-TECHNETIUM) (PCI/L)	-3	-3.5	-4	-5.5	8	-2.5	-0.5
COUNTING ERROR	4	4.3	4.4	4.3	4.8	4.1	4.2
232-THORIUM (232-THORIUM) (PCI/L)	0	0.052	0.11	-0.029	0.049	0.09	0.063
COUNTING ERROR	0	0.1	0.13	0.058	0.097	0.1	0.09
230-THORIUM (230-THORIUM) (PCI/L)	0.099	0.38	0.65	0.32	0.49	0.4	0.35
COUNTING ERROR	0.14	0.31	0.33	0.27	0.32	0.23	0.25
228-THORIUM (228-THORIUM) (PCI/L)	0.17	0.92	0.26	0.16	0.068	0.083	0.054
COUNTING ERROR	0.23	0.5	0.23	0.22	0.16	0.14	0.13
TRITIUM (TRITIUM) (BQ/L)	-2.479	-5.92	-0.444	-4.44	-0.407	1.48	4.07
COUNTING ERROR	130	130	23	120	35	240	130
234-URANIUM (234-URANIUM) (PCI/L)	0.011	0.063	0.68	0.58	1.5	0.22	0.26
235-URANIUM (235-URANIUM) (PCI/L)	0.1	-0.083	0	0.055	1	0	0.071
238-URANIUM (238-URANIUM) (PCI/L)	-0.048	0.048	0.17	0.34	1	0.34	0.15

APPENDIX E.5
BEAR CREEK VALLEY OPERABLE UNIT RADIONUCLIDE DATA, 3RD QUARTER 1995

SAMPLING POINT DATE SAMPLED TYPE	SEEP1 08/03/95 DIS	SEEP1 08/03/95 TOT	SEEP2 08/03/95 DIS	SEEP2 08/03/95 TOT	SS-4 08/02/95 TOT	SS-5 08/02/95 TOT	SS-6 WEST 08/02/95 TOT	SS-7 08/02/95 TOT
GROSS ALPHA (GROSS ALPHA)	8.4	10	320	330	49	24	-3	-3
COUNTING ERROR	5.2	5.5	44	45	11	8.1	0.19	0.19
GROSS BETA (GROSS BETA)	7.4	13	190	230	110	32	5.2	0.52
COUNTING ERROR	5.3	5.8	27	32	17	7.8	5.2	4.8
RADIONUCLIDES								
241-AMERICIUM (241-AMERICIUM)	-0.02	-0.048	-0.014	-0.013	0.034	0.21	0.16	0.022
COUNTING ERROR	0.2	0.2	0.14	0.096	0.16	0.27	0.29	0.21
137-CESIUM (137-CESIUM)	2.8	6.1	4.4	2.1	2.9	7.9	1.6	6.8
COUNTING ERROR	2.2	4.1	2.4	4.3	4.6	3.6	3.8	6.5
237-NEPTUNIUM (237-NEPTUNIUM)	0.56	0.75	2.2	0.85	0.32	0.3	0	0.28
COUNTING ERROR	0.29	0.33	0.59	0.39	0.18	0.2	0	0.24
238-PLUTONIUM (238-PLUTONIUM)	0.095	0.21	-0.083	-0.071	-0.066	0.055	-0.078	-0.037
COUNTING ERROR	0.13	0.28	0.096	0.21	0.19	0.13	0.09	0.11
239-PLUTONIUM (239-PLUTONIUM)	0.015	0.058	0.012	0.066	0	-0.017	0.049	-0.071
223+224+226-RADIUM (223+224+226-RADIUM)	0.01776	0.00999	0.00777	0.01591	0.02405	0.01924	0.01554	0.01702
COUNTING ERROR(223+224+226-RADIUM)	0.37	0.37	0.38	0.37	0.46	0.45	0.4	0.44
228-RADIUM (228-RADIUM)	-0.82	-0.2	-0.44	-0.55	-3.1	-0.61	-0.4	-0.96
COUNTING ERROR	1.8	0.79	2.5	1.4	4.7	3.3	2.5	1.6
STRONTIUM (STRONTIUM)	-0.43	-1	6.3	4	-1.2	0.37	-0.81	-1.1
COUNTING ERROR	0.69	0.55	1.4	0.94	0.46	0.47	0.49	0.51
99-TECHNETIUM (99-TECHNETIUM)	2.5	23	36	110	200	46	3	-0.5
COUNTING ERROR	4.1	5.4	5.9	12	21	6.9	3.6	4.2
232-THORIUM (232-THORIUM)	0.009	0.11	0.049	0.053	0.062	-0.033	0.11	0
COUNTING ERROR	0.07	0.13	0.12	0.13	0.12	0.065	0.16	0
230-THORIUM (230-THORIUM)	0.54	0.32	0.34	0.14	0.72	0.59	0.38	0.53
COUNTING ERROR	0.27	0.25	0.23	0.16	0.48	0.38	0.3	0.4
228-THORIUM (228-THORIUM)	0.077	0.14	0	0.21	0.033	0.2	0.11	0.15
COUNTING ERROR	0.13	0.19	0	0.19	0.32	0.23	0.16	0.25
TRITIUM (TRITIUM)	-5.55	-3.515	155.4	155.4	2.516	2.701	0.2738	-1.221
COUNTING ERROR	140	150	480	480	150	130	240	240
234-URANIUM (234-URANIUM)	4.9	6.3	50	58	25	13	1.1	0.25
235-URANIUM (235-URANIUM)	0.26	.	5.5	3.9	1.4	0.51	0	0.058
COUNTING ERROR	4.7	4.7	310	350	48	26	1.7	0.22

APPENDIX F
FIELD DUPLICATE DATA



EXPLANATION

SAMPLING POINT:

BCK	-	Bear Creek Kilometer
CWESTTOE	-	Burial Ground C-West Toe Seep
GCS-01	-	Grassy Creek Spring 01
GW	-	Monitoring Well
MS-1	-	Bear Creek Main Stem Headwaters (Station 1)
NT	-	Northern Tributary
SEEP 1	-	Burial Ground A-North Seep
SEEP 2	-	Burial Ground C-East Seep
SS	-	(Bear Creek) Spring Station
TS	-	Tankfarm Spring (Bear Creek Headwaters)

LOCATION:

AGLLSF	-	Above Grade Low-Level Storage Facility
B9714	-	Y-12 TSD Garage Facility (Building 9714)
BG	-	Bear Creek Burial Grounds WMA
EXP	-	Exit Pathway Monitoring Location
OLF	-	Oil Landfarm WMA
RS	-	Rust Spoil Area
S3	-	S-3 Site
SPI	-	Spoil Area I

ALL DATA:

. - Not analyzed or not reported.

ORGANIC COMPOUNDS:

All results in micrograms per liter (ug/L).

METALS, ANIONS, MISCELLANEOUS, AND RADIOCHEMICAL PARAMETERS:

General:

Bicarbonate and carbonate alkalinity reported as CaCO_3 .

<	-	Compound analyzed but not detected at the reported minimum attainable detection limit
DIS	-	Dissolved Concentration (Filtered Sample)
TOT	-	Total Concentration (Unfiltered Sample)
TDS	-	Total Dissolved Solids
TSS	-	Total Suspended Solids
Sp. Cond.	-	Specific Conductance

EXPLANATION (cont'd)

Method:

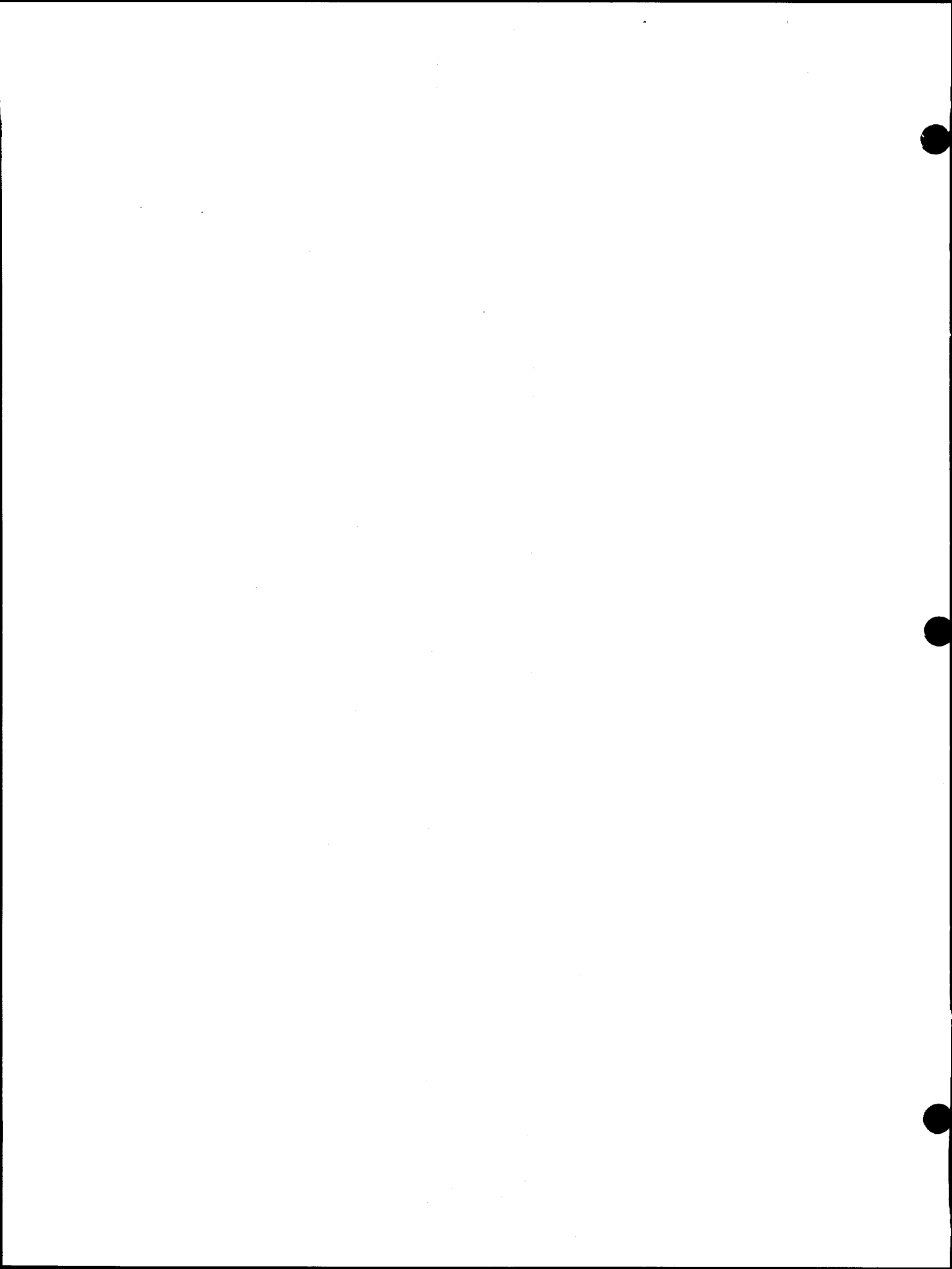
ICAP	-	Inductively Coupled Arc Plasma Spectroscopy
AAS	-	Atomic Absorption Spectroscopy
CVAA	-	Cold Vapor Atomic Absorption
PMS	-	Plasma Mass Spectroscopy

Units:

mg/L	-	milligrams per liter
ppm	-	parts per million
μmhos/cm	-	micromhos per centimeter
NTU	-	Nephelometric Turbidity Unit
mV	-	millivolts
pCi/L	-	picocuries per liter
Bq/L	-	Becquerels per liter
CE+/-	-	counting error (two standard deviations)
FT.-TOC	-	feet below top of casing
DEG. CENT.	-	degrees centigrade
FT. ABOVE MSL	-	feet above mean sea level

EXPLANATION (cont'd)

Analyte Class	Qualifier	Explanation
Radionuclides	J	Estimated value.
	A	Possible detector contamination.
	E	Result of analysis is less than MDA, confidence level is less than 95%.
	F	Result less than background.
	i	Tentatively identified isotope.
	*	Duplicate analysis outside control limits.
	C	Control analysis outside of control limits.
	D	Spike control limits do not apply, sample activity exceeds spike activity.
	N	Spike recovery not within limits.
	H	Daughter of uranium isotopes, reported for comparison purposes only.
	G	Gamma photopeak near MDA, poor curve fit.
Organics	J	Estimated value less than laboratory reporting limit.
	B	Compound also detected in the associated laboratory blank.
	U	Compound not detected.
	D	Compound identified at a secondary dilution factor.
	E	Concentration exceeds calibration range of instrument.
	s	Spike recovery not within limits.
ICP and ICP/MS Metals	d	Dilution required, reporting limits raised accordingly.
AAS Metals	s	Spike recovery not within limits.
	D	Sample contained matrix interferences, reporting limit adjusted.
Conductivity	L	Sample received with expired holding time.
	h	Analysis exceeded holding time.
Alkalinities	h	Analysis exceeded holding time.
Nitrate	h	Analysis exceeded holding time.
Sulfate	d	Dilution required, reporting limits raised accordingly.



APPENDIX F.1
TRACE METALS AND ANIONS



APPENDIX F.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-044 OLF 03/16/95 DIS	GW-044 OLF 03/16/95 TOT	GW-061 BG 03/28/95 DIS	GW-061 BG 03/28/95 TOT	GW-348 S3 03/15/95 DIS	GW-348 S3 03/15/95 TOT	GW-373 BG 01/31/95 DIS	GW-373 BG 01/31/95 TOT	GW-614 S3 01/11/95 DIS	GW-614 S3 01/11/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	<0.02	0.033	17	<0.02	<0.02	<0.02	0.44	<0.02	0.15
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.25	0.054	0.2	0.098	0.098	0.028	0.045	0.15	0.15
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	0.00099	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.025	0.056	0.071	0.015	0.015	0.19	0.21	0.021	0.032
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	<0.002	84	95	87	88	1.3	1.4	<0.002	<0.002
CALCIUM	ICAP (MG/L)	45	<0.01	0.021	<0.01	<0.01	<0.01	0.01	<0.01	0.01
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	AAS (MG/L)	<0.01	<0.005	0.017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COBALT	ICAP (MG/L)	<0.004	<0.004	0.017	<0.004	<0.004	<0.004	0.004	0.0061	0.013
COPPER	ICAP (MG/L)	<0.004	0.04	16	<0.005	<0.005	0.079	2.4	0.065	0.16
IRON	ICAP (MG/L)	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	ICAP (MG/L)	<0.004	11	15	19	19	<0.004	<0.004	<0.004	<0.004
MAGNESIUM	ICAP (MG/L)	3.1	0.01	3.3	<0.001	<0.001	0.11	0.21	0.14	0.14
MANGANESE	ICAP (MG/L)	<0.002	<0.002	<0.002	<0.002	<0.002	0.0018	0.013	0.014	0.014
MERCURY	CVAA (MG/L)	<0.001	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002	<0.002
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	0.031	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	1.8	6.3	1.3	1.4	<0.01	<0.01	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	0.98	<0.05	<0.05	<0.05	<0.05	1.7	1.9	2	2.4
SELENIUM	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SILVER	ICAP (MG/L)	<0.006	7.6	7.3	3.5	3.5	<0.006	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)	5.3	0.14	0.15	0.11	0.11	110	120	9.6	9.6
STRONTIUM	ICAP (MG/L)	0.077	<0.2	<0.2	<0.2	<0.2	0.055	0.06	0.56	0.55
THORIUM	ICAP (MG/L)	<0.2	<0.005 d	0.042	0.00071	0.00071	<0.005 d	<0.005 d	<0.005 d	<0.005 d
URANIUM	ICAP (MG/L)	<0.005	0.039	0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	ICAP (MG/L)	0.0024	0.0072	0.033	0.0038	0.0072	0.0029	0.0084	<0.002	0.004
ZINC	ICAP (MG/L)	0.064	0.064	0.033	0.0038	0.0072	0.0029	0.0084	<0.002	0.004
ANIONS										
ALKALINITY-HCO3	(MG/L)	137	190	190	244	244	191	191	172	172
ALKALINITY-CO3	(MG/L)	<1	<1	<1	<1	<1	24	24	<1	<1
CHLORIDE	(MG/L)	2.1	12	12	8.4	8.4	2.3	2.3	1.7	1.7
FLUORIDE	(MG/L)	<0.1	0.12	0.12	0.11	0.11	1.7	1.7	0.1	0.1
NITRATE	(MG/L)	<0.2	12	12	7.8	7.8	0.54	0.54	<0.2	<0.2
SULFATE	(MG/L)	7.2	22	22	6.8	6.8	30	30	11	11
TOTAL SUSPENDED SOLIDS	(MG/L)	<1	277	277	<1	<1	6	6	10	10
TURBIDITY	(NTU)	0.3	260	260	0.7	0.7	11	11	2.7	2.7

APPENDIX F.1
TRACE METALS AND ANIONS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-621 EXP 03/29/95 DIS	GW-621 EXP 03/29/95 TOT	GW-683 EXP 03/09/95 DIS	GW-683 EXP 03/09/95 TOT	GW-738 EXP 02/18/95 DIS	GW-738 EXP 02/18/95 TOT	GW-793 AGLISF 01/23/95 DIS	GW-793 AGLISF 01/23/95 TOT
METALS								
ALUMINUM	0.035	1.3	0.021	0.056	0.026	0.75	<0.02	0.17
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.019	0.028	0.042	0.043	0.047	0.051	0.14	0.14
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0018	<0.0003	<0.0003
BORON	0.023	0.03	0.024	0.027	0.041	0.041	0.041	0.018
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	52	54	24	23	110	110	51	52
CHROMIUM	<0.01	0.037	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.01	0.041	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COBALT	<0.004	0.0047	<0.004	<0.004	0.0058	<0.004	<0.004	0.0084
COPPER	<0.005	1.4	<0.005	0.073	<0.005	0.58	<0.005	0.22
IRON	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
LEAD	9.3	9.6	11	11	23	24	4.5	4.6
MAGNESIUM	<0.001	0.1	<0.001	0.0019	<0.001	0.011	0.033	0.042
MANGANESE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MOLYBDENUM	<0.01	0.034	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	2.3	2.4	1.6	2.1	2.3	2.4	0.99	1.2
POTASSIUM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SELENIUM	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SILVER	2.6	2.5	1.8	1.9	7.4	7.2	3.6	3.6
SODIUM	0.065	0.067	0.028	0.029	0.11	0.11	0.091	0.091
STRONTIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
THORIUM	0.0022	0.0024	0.0062	0.0062	0.0023	0.0023	<0.0005 d	<0.0005 d
URANIUM	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
VANADIUM	0.0046	0.0089	0.0062	0.0098	<0.002	0.0085	0.0054	0.01
ZINC								
ANIONS								
ALKALINITY-HCO3		159		106		302		154
ALKALINITY-CO3		<1		<1		<1		<1
CHLORIDE		3.9		3.5		15		30
FLUORIDE		<0.1		<0.1		<0.1		<0.1
NITRATE		3.7		1.3		17		2449
NITROGEN		3.6		5		28		19
SULFATE								
TOTAL SUSPENDED SOLIDS		15		<1		3		3
TURBIDITY		27		2.9		11		2.6

APPENDIX F.1
TRACE METALS AND ANIONS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-095 BG 06/20/95 DIS	GW-095 BG 06/20/95 TOT	GW-317 SPI 06/21/95 DIS	GW-317 SPI 06/21/95 TOT	GW-370 BG 06/05/95 DIS	GW-370 BG 06/05/95 TOT	GW-537 OLF 06/08/95 DIS	GW-537 OLF 06/08/95 TOT	GW-793 AGLLSF 06/17/95 DIS	GW-793 AGLLSF 06/17/95 TOT
METALS										
ALUMINUM	ICAP (MG/L)	<0.02	0.03	0.032	<0.02	0.83	<0.04 d	0.043	0.054	0.094
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.05	<0.05
BERYLLIUM	ICAP (MG/L)	0.026	0.019	0.019	0.055	0.079	2.4	2.5	0.15	0.15
BARIUM	ICAP (MG/L)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0006 d	<0.0006 d	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.96	0.03	0.044	0.021	0.044	<0.008 d	0.022	0.022	0.084
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.006 d	<0.006 d	<0.003	<0.003
CALCIUM	AAS (MG/L)	1.3	50	49	2.8	6.8	1000	1100	53	52
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	0.046	0.043	<0.01	<0.01
CHROMIUM	AAS (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01 d	<0.01 d	<0.005	<0.005
COBALT	ICAP (MG/L)	<0.004	0.0043	0.004	<0.004	0.0053	<0.008 d	<0.008 d	<0.004	<0.004
COPPER	ICAP (MG/L)	<0.005	<0.005	0.14	0.011	0.91	0.21	0.26	0.0072	0.067
IRON	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.05	<0.05
LEAD	ICAP (MG/L)	0.47	24	23	0.69	1.7	70	74	4.9	4.8
MAGNESIUM	ICAP (MG/L)	<0.001	0.0026	0.0049	0.02	0.047	0.011	0.014	0.072	0.075
MANGANESE	ICAP (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MERCURY	CVAA (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	0.028	0.023	<0.01	<0.01
NICKEL	ICAP (MG/L)	2.3	1.5	1.4	0.69	1.7	2.7	3.1	1.1	1.1
POTASSIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.05	<0.05
SELENIUM	ICAP (MG/L)	<0.006	0.0073	<0.006	<0.006	<0.006	<0.012 d	<0.012 d	<0.006	<0.006
SILVER	ICAP (MG/L)	120	3.7	3.6	6.7	8.9	32	34	3.8	3.8
SODIUM	ICAP (MG/L)	0.097	0.045	0.048	0.016	0.028	2.6	2.8	0.1	0.1
STRONTIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4 d	<0.4 d	<0.2	<0.2
THORIUM	ICP/MS (MG/L)	<0.0005 d	0.00066	0.0064	<0.0005 d	<0.0005 d	0.0015	0.0014	<0.0005 d	<0.0005 d
URANIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01 d	<0.01 d	<0.005	<0.005
VANADIUM	ICAP (MG/L)	0.0057	<0.002	0.0022	0.014	0.026	0.008	<0.004 d	<0.002	0.002
ZINC	ICAP (MG/L)									
ANIONS										
ALKALINITY-HCO3	(MG/L)	222	212	18	280	151				
ALKALINITY-CO3	(MG/L)	32	<1	<1	<1	<1				
CHLORIDE	(MG/L)	2.2	1.8	2	35	1.8				
FLUORIDE	(MG/L)	0.6	0.11	0.1	<0.1	0.1				
NITRATE	(MG/L)	<0.2	0.52	<0.2	690	<0.2				
NITROGEN	(MG/L)	8.5	6.2	16	3.3	4.3				
SULFATE	(MG/L)									
TOTAL SUSPENDED SOLIDS	(MG/L)	<1	<1	10	<1	<1				
TURBIDITY	(NTU)	0.2	0.2	7.9	2.5	0.9				

APPENDIX F.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

SAMPLING POINT LOCATION	GW-084 OLF	GW-084 OLF	GW-290 BG	GW-346 S3	GW-346 S3	GW-614 S3	GW-614 S3	GW-642 BG	GW-642 BG
DATE SAMPLED	08/05/95	08/05/95	08/07/95	08/31/95	08/31/95	07/24/95	07/24/95	08/07/95	08/07/95
TYPE	DIS	TOT	DIS	DIS	TOT	DIS	TOT	DIS	TOT
METALS									
ALUMINUM	0.021	0.49	0.095	<0.04 d	0.06	0.022	0.41	<0.02	0.038
ANTIMONY	<0.05	0.053	<0.05	<0.1 d	<0.1 d	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.05	<0.05	<0.05	<0.05
BARIUM	0.16	0.16	0.23	<0.0006 d	<0.0006 d	0.15	0.17	0.12	0.13
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0006 d	<0.0006 d	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.07	0.0095	0.69	0.14	0.12	0.061	0.027	0.018	0.015
CADMIUM	<0.003	<0.003	<0.003	<0.006 d	<0.006 d	<0.003	<0.003	<0.003	<0.003
CADMIUM	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	52	55	55	760	760	47	48	7.8	9
CHROMIUM	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01	<0.01	<0.01
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	<0.005	<0.005	<0.005	<0.01 d	<0.01 d	<0.005	<0.005	<0.005	<0.005
COPPER	<0.004	0.051	<0.004	<0.008 d	<0.008 d	0.0077	0.0049	<0.004	<0.004
IRON	<0.005	0.58	0.42	<0.01 d	0.077	0.026	1	2.8	3.1
LEAD	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.05	<0.05	<0.05	<0.05
LEAD	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
MAGNESIUM	3.9	4	9.3	190	190	9.9	11	7.9	8.5
MANGANESE	0.014	0.049	0.092	0.26	0.26	0.015	0.018	1.4	1.8
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	<0.01	<0.01	<0.02 d	<0.02 d	<0.01	<0.01	<0.01	<0.01
POTASSIUM	<0.6	1.1	3.2	15	16	1.7	2.1	1.8	1.9
SELENIUM	<0.05	<0.05	<0.05	<0.1 d	<0.1 d	<0.05	<0.05	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.012 d	<0.012 d	<0.006	<0.006	<0.006	<0.006
SODIUM	5.4	5.3	9.1	95	94	9.6	11	7.5	8
STRONTIUM	0.075	0.076	0.25	16	16	0.62	0.64	0.024	0.026
THORIUM	<0.2	<0.2	<0.2	<0.4 d	<0.4 d	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	<0.0005 d	0.0033	0.0032	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	<0.005	<0.005	<0.005	<0.01 d	<0.01 d	<0.005	<0.005	<0.005	<0.005
ZINC	0.0055	0.014	0.0077	<0.004 d	<0.004 d	<0.002	0.0091	0.016	0.017
ANIONS									
ALKALINITY-HCO3	.	155	153	.	131	.	170 h	.	67
ALKALINITY-CO3	.	<1	<1	.	<1	.	<1 h	.	<1
CHLORIDE	.	1.8	3.4	.	38	.	1.6	.	2
FLUORIDE	.	0.1	0.14	.	<0.1	.	<0.1	.	0.42
NITRATE NITROGEN	.	<0.2	<0.2	.	840	.	0.52	.	0.31
SULFATE	.	8	13	.	28	.	11	.	8.7
TOTAL SUSPENDED SOLIDS	.	18	<1	.	9	.	18	.	9
TURBIDITY	.	4	7.6	.	1.3	.	5.4	.	4

APPENDIX F.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

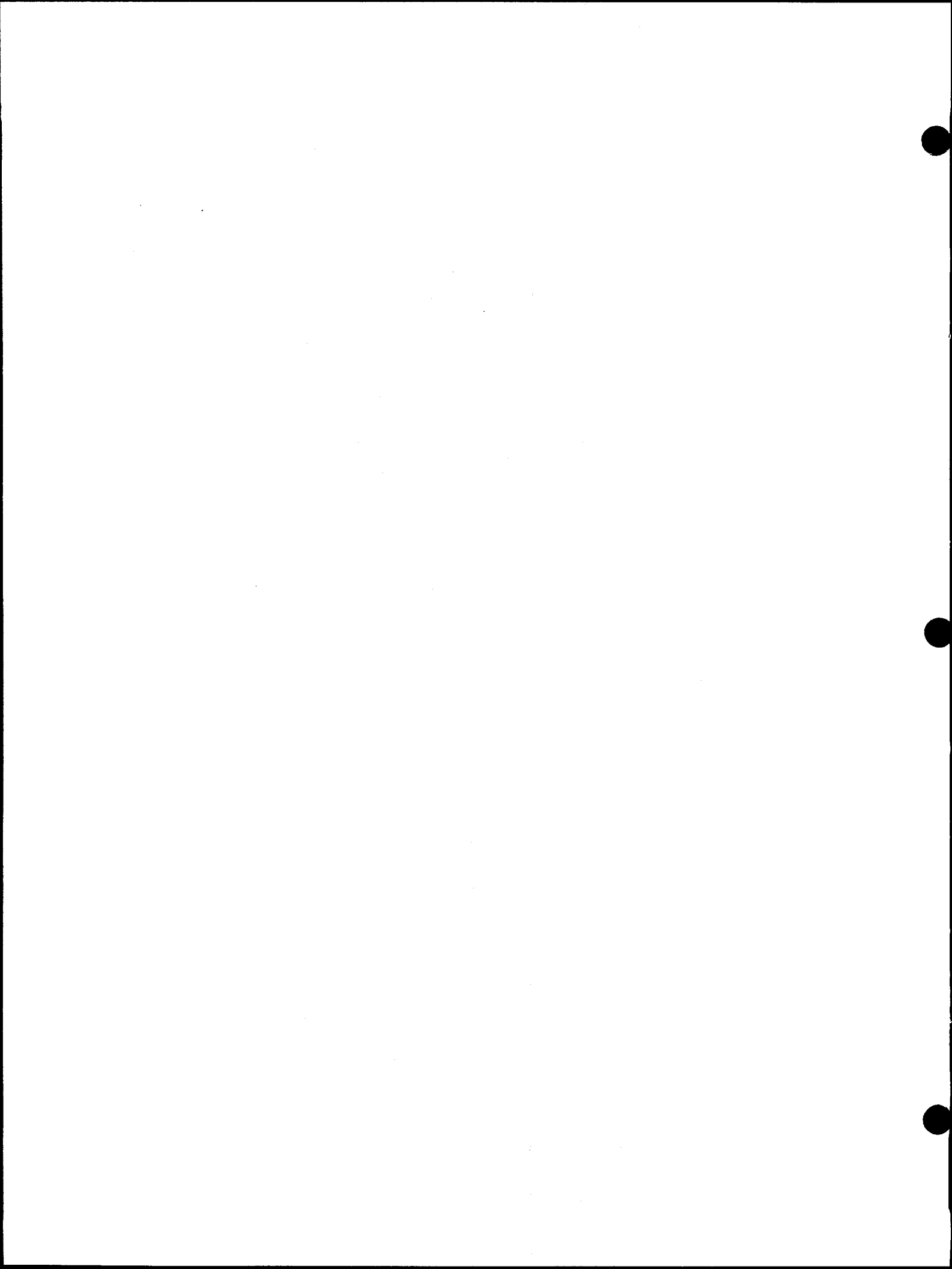
SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-652 BG 09/19/95 DIS	GW-652 BG 09/19/95 TOT	GW-685 EXP 08/06/95 DIS	GW-685 EXP 08/06/95 TOT	GW-694 EXP 08/31/95 DIS	GW-694 EXP 08/31/95 TOT	GW-739 EXP 09/16/95 DIS	GW-739 EXP 09/16/95 TOT	GW-793 AGLLSF 07/19/95 DIS	GW-793 AGLLSF 07/19/95 TOT
METALS										
ALUMINUM	0.12	4.3	<0.02	0.034	<0.02	<0.02	<0.02	<0.02	<0.02	0.25
ANTIMONY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	0.15	0.19	0.076	0.085	0.2	0.043	0.043	0.042	0.14	0.14
BERYLLIUM	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	0.039	0.037	0.057	0.046	0.27	0.29	0.015	0.041	0.031	0.03
CADMIUM	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CALCIUM	66	69	82	83	130	130	61	61	52	53
CHROMIUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM										
COBALT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
IRON	0.018	4.8	0.44	1.5	0.7	0.77	0.12	0.7	<0.005	0.3
LEAD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD										
MAGNESIUM	9.1	11	24	25	30	30	29	28	4.7	4.7
MANGANESE	0.0062	0.058	0.072	0.076	0.18	0.18	0.025	0.027	0.06	0.075
MERCURY	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	<0.01	<0.01	<0.01	<0.01	0.018	0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	3.4	4.3	2.2	2.2	6.3	6.1	1.8	2	0.66	0.92
SELENIUM	<0.05	0.054	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	1.6	1.5	22	22	23	24	2.6	2.5	3.8	3.8
STRONTIUM	0.23	0.29	0.12	0.12	0.36	0.36	0.11	0.1	0.093	0.093
THORIUM	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	<0.0005 d	<0.0005 d	0.0063	0.0064	0.12	0.12	0.0066	0.0007	<0.0005 d	<0.0005 d
VANADIUM	<0.005	0.0064	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	<0.002	0.013	0.0083	0.0087	0.0038	0.0024	0.0028	<0.002	0.0058	0.0067
ANIONS										
ALKALINITY-HCO3		207		263		304		244		149
ALKALINITY-CO3		<1		<1		<1		<1		<1
CHLORIDE		3.5		45		41		6		1.9
FLUORIDE		<0.1		0.12		0.3		0.16		<0.1
NITRATE NITROGEN		0.5		2.9		17		5.9		<0.2
SULFATE		7.7		19		25		14		5
TOTAL SUSPENDED SOLIDS		32		2.5		<1		<1		7.5
TURBIDITY		100		13		3.1		6.6		4.7

APPENDIX F.1
TRACE METALS AND ANIONS, 3RD QUARTER 1995

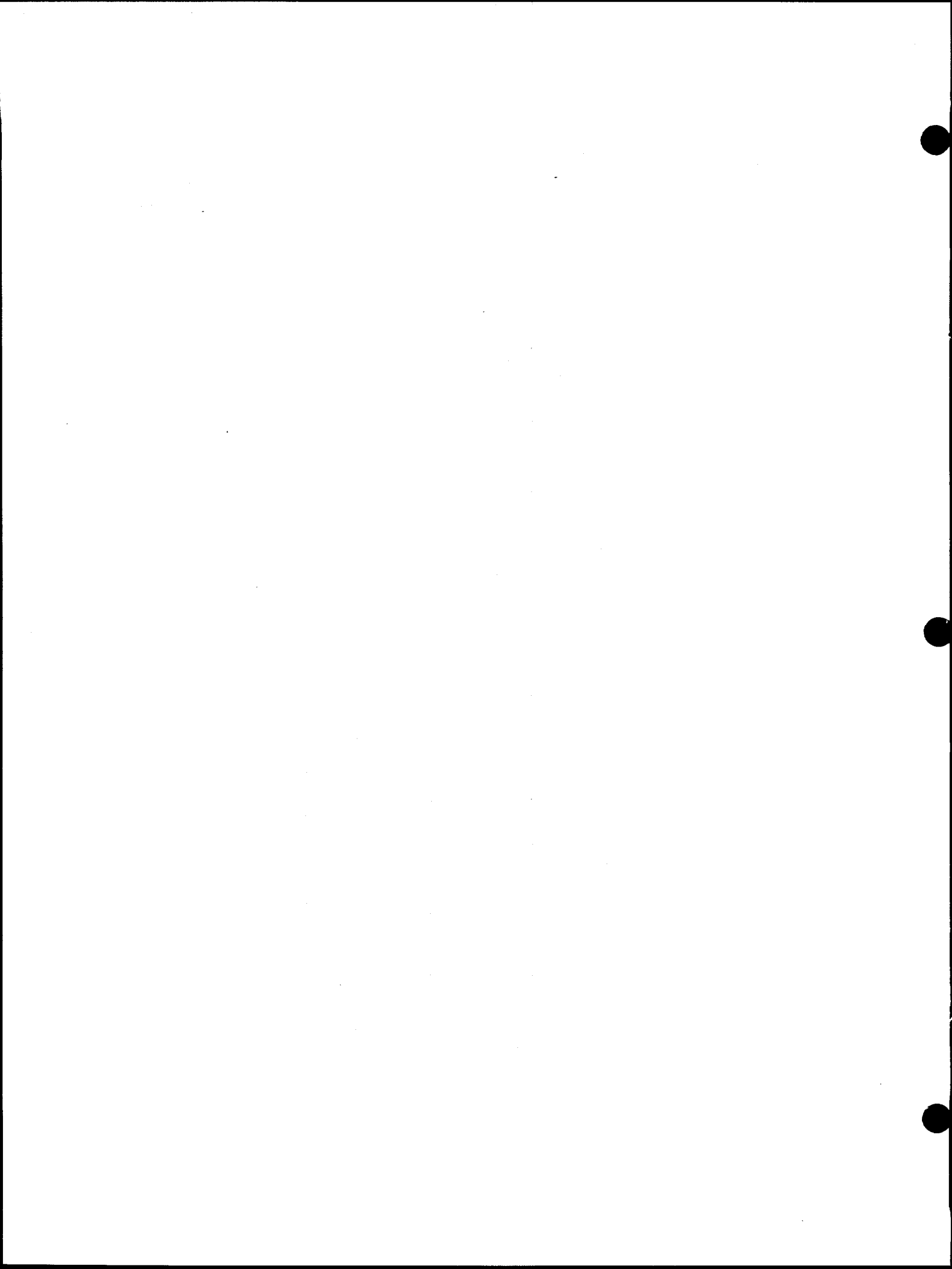
SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-828 OLF 08/24/95 DIS	GW-828 OLF 08/24/95 TOT
METALS		
ALUMINUM	19	46
ANTIMONY	<0.05	<0.05
ARSENIC	<0.05	<0.05
BARIUM	0.38	1.1
BERYLLIUM	0.0018	0.0058
BORON	0.33	0.3
CADMIUM	<0.003	<0.003
CADMIUM	<0.002	<0.002
CALCIUM	16	42
CHROMIUM	0.031	0.05
CHROMIUM	0.028	0.14
COBALT	0.0082	0.027
COPPER	0.039	0.041
IRON	14	37
LEAD	<0.05	<0.05
LEAD	0.0095	0.07
MAGNESIUM	6.6	18
MANGANESE	0.2	0.64
MERCURY	<0.0002	<0.0002
MOLYBDENUM	0.012	<0.01
NICKEL	0.025	0.061
POTASSIUM	6.6	11
SELENIUM	<0.05	<0.05
SILVER	<0.006	<0.006
SODIUM	190	180
STRONTIUM	0.42	1.2
THORIUM	<0.2	<0.2
URANIUM	0.0054	0.014
VANADIUM	0.018	0.033
ZINC	0.051	0.14
ICP/MS (MG/L)		
ANIONS		
ALKALINITY-HCO3		270
ALKALINITY-CO3		76
CHLORIDE		11
FLUORIDE		1.8
NITRATE NITROGEN		11
SULFATE		27
TOTAL SUSPENDED SOLIDS		1480
TURBIDITY		4500

APPENDIX F.1
TRACE METALS AND ANIONS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED TYPE	GW-044 OLF DIS 10/18/95	GW-044 OLF TOT 10/18/95	GW-315 SPI DIS 12/07/95	GW-315 SPI TOT 12/07/95	GW-363 OLF DIS 10/19/95	GW-363 OLF TOT 10/19/95	GW-372 BG DIS 10/12/95	GW-372 BG TOT 10/12/95	GW-653 BG DIS 12/08/95	GW-653 BG TOT 12/08/95
METALS										
ALUMINUM	ICAP (MG/L)	0.029	0.027	<0.02	0.12	0.043	<0.02	<0.02	<0.02	0.49
ANTIMONY	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
ARSENIC	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BARIUM	ICAP (MG/L)	0.24	0.056	0.057	0.054	0.063	0.074	0.072	0.03	0.04
BERYLLIUM	ICAP (MG/L)	<0.0003	<0.0003	0.00054	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
BORON	ICAP (MG/L)	0.018	0.012	0.012	0.29	0.32	0.019	0.018	0.032	0.055
CADMIUM	ICAP (MG/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
CADMIUM	AAS (MG/L)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
CALCIUM	ICAP (MG/L)	47	120	110	1.7	2.2	64	62	1.9	2
CHROMIUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM	AAS (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COBALT	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
COPPER	ICAP (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
IRON	ICAP (MG/L)	<0.005	<0.005	<0.005	0.17	0.058	0.032	0.047	0.029	0.33
LEAD	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
LEAD	AAS (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
LITHIUM	ICAP (MG/L)	0.0061	0.008	<0.004	0.037	0.039	0.015	0.015	<0.004	<0.004
MANGANESE	ICAP (MG/L)	3.3	12	12	0.72	0.92	12	12	1	1.1
MANGANESE	ICAP (MG/L)	<0.001	0.0017	0.002	0.0018	0.0018	0.023	0.024	0.0022	0.014
MERCURY	CVAA (MG/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
MOLYBDENUM	ICAP (MG/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NICKEL	ICAP (MG/L)	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
POTASSIUM	ICAP (MG/L)	1.6	3.1	3.6	1.3	1.5	1.9	1.9	<0.6	0.69
SELENIUM	ICAP (MG/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SILVER	ICAP (MG/L)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
SODIUM	ICAP (MG/L)	5	8.6	8.6	110	120	9.6	9.4	2.5	2.6
STRONTIUM	ICAP (MG/L)	0.075	0.19	0.19	0.082	0.097	0.18	0.18	0.016	0.018
THORIUM	ICAP (MG/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
URANIUM	ICP/MS (MG/L)	<0.0005 d	0.0022	0.0021	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d	<0.0005 d
VANADIUM	ICAP (MG/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC	ICAP (MG/L)	0.019	0.0036	0.0048	0.16	0.0045	0.0055	0.0053	0.01	0.0039
ANIONS										
ALKALINITY-HCO3	(MG/L)	.	.	241	.	186	.	186	.	13
ALKALINITY-CO3	(MG/L)	.	.	<1	.	30	.	<1	.	<1
CHLORIDE	(MG/L)	.	.	15.9	.	1.36	.	2.28	.	1.7
FLUORIDE	(MG/L)	.	.	<0.1	.	0.19	.	0.2	.	<0.1
NITRATE NITROGEN	(MG/L)	.	.	16.4	.	<0.2	.	<0.2	.	<0.2
SULFATE	(MG/L)	.	.	65.7	.	7.04	.	28	.	1.76
TOTAL SUSPENDED SOLIDS	(MG/L)	.	.	<1	.	<1	.	<1	.	14
TURBIDITY	(NTU)	.	.	0.05	.	2.7	.	1.3	.	5.6



APPENDIX F.2
VOLATILE ORGANIC COMPOUNDS



APPENDIX F.2
SUMMARY OF VOCs DETECTED IN GROUNDWATER AND SURFACE WATER SAMPLES

Total Samples 9
Samples without VOCs 8
Samples with VOCs 1

COMPOUND	FIRST QUARTER
ACETONE (UG/L)	1
BENZENE (UG/L)	0
BROMODICHLOROMETHANE (UG/L)	0
BROMOFORM (UG/L)	0
BROMOMETHANE (UG/L)	0
2-BUTANONE (UG/L)	1
CARBON DISULFIDE (UG/L)	0
CARBON TETRACHLORIDE (UG/L)	1
CHLOROBENZENE (UG/L)	0
CHLORODIBROMOMETHANE (UG/L)	0
CHLOROETHANE (UG/L)	0
CHLOROFORM (UG/L)	1
CHLOROMETHANE (UG/L)	0
1,1-DICHLOROETHANE (UG/L)	0
1,2-DICHLOROETHANE (UG/L)	0
1,1-DICHLOROETHENE (UG/L)	0
1,2-DICHLOROETHENE (UG/L)	1
TRANS-1,2-DICHLOROETHENE (UG/L)	0
1,2-DICHLOROPROPANE (UG/L)	0
CIS-1,3-DICHLOROPROPENE (UG/L)	0
TRANS-1,3-DICHLOROPROPENE (UG/L)	0
ETHYLBENZENE (UG/L)	0
2-HEXANONE (UG/L)	0
4-METHYL-2-PENTANONE (UG/L)	0
METHYLENE CHLORIDE (UG/L)	0
STYRENE (UG/L)	0
1,1,2,2-TETRACHLOROETHANE (UG/L)	0
TETRACHLOROETHENE (UG/L)	1
TOLUENE (UG/L)	1
1,1,1-TRICHLOROETHANE (UG/L)	0
1,1,2-TRICHLOROETHANE (UG/L)	0
TRICHLOROETHENE (UG/L)	1
VINYL ACETATE (UG/L)	0
VINYL CHLORIDE (UG/L)	0
XYLENES (UG/L)	1

APPENDIX F.2
VOLATILE ORGANIC COMPOUNDS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GM-044 OLF 03/16/95	GM-061 BG 03/28/95	GM-348 S3 03/15/95	GM-373 BG 01/31/95	GM-614 S3 01/11/95	GM-621 EXP 03/29/95	GM-683 EXP 03/09/95	GM-738 EXP 02/18/95	GM-793 AGLLSF 01/23/95
ACETONE	10U	10U	10U	10U	10U	10U	10U	10 B	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	10U	10U	10U	10U	14 B	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	1 J	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	1 J	10U
CHLOROFORM	10U	10U	10U	10U	10U	10U	10U	1 J	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	3 J	10U
TRANS-1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	1 J	10U
TETRACHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	1 JB	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	46	10U
VINYL ACETATE	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U	10U	10U	1 J	10U

APPENDIX F.2
SUMMARY OF VOCs DETECTED IN GROUNDWATER AND SURFACE WATER SAMPLES

Total Samples	5
Samples without VOCs	4
Samples with VOCs	1

COMPOUND	SECOND QUARTER
ACETONE	0
BENZENE	0
BROMODICHLOROMETHANE	0
BROMOFORM	0
BROMOMETHANE	0
2-BUTANONE	0
CARBON DISULFIDE	0
CARBON TETRACHLORIDE	0
CHLOROBENZENE	0
CHLORODIBROMOMETHANE	0
CHLOROETHANE	0
CHLOROFORM	1
CHLOROMETHANE	0
1,1-DICHLOROETHANE	0
1,2-DICHLOROETHANE	0
1,1-DICHLOROETHENE	0
1,2-DICHLOROETHENE	0
TRANS-1,2-DICHLOROETHENE	0
1,2-DICHLOROPROPANE	0
CIS-1,3-DICHLOROPROPENE	0
TRANS-1,3-DICHLOROPROPENE	0
ETHYLBENZENE	0
2-HEXANONE	0
4-METHYL-2-PENTANONE	0
METHYLENE CHLORIDE	0
STYRENE	0
1,1,2,2-TETRACHLOROETHANE	0
TETRACHLOROETHENE	0
TOLUENE	0
1,1,1-TRICHLOROETHANE	0
1,1,2-TRICHLOROETHANE	0
TRICHLOROETHENE	0
VINYL ACETATE	0
VINYL CHLORIDE	0
XYLENES	0

APPENDIX F.2
VOLATILE ORGANIC COMPOUNDS, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-095 BG 06/20/95	GW-317 SPI 06/21/95	GW-370 BG 06/05/95	GW-537 OLF 06/08/95	GW-793 AGLSF 06/17/95
ACETONE	10U	10U	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	(UG/L)				
BROMOFORM	(UG/L)	10U	10U	10U	10U
BROMOMETHANE	(UG/L)	10U	10U	10U	10U
2-BUTANONE	(UG/L)	10U	10U	10U	10U
CARBON DISULFIDE	(UG/L)	10U	10U	10U	10U
CARBON TETRACHLORIDE	(UG/L)	10U	10U	10U	10U
CHLOROBENZENE	(UG/L)	10U	10U	10U	10U
CHLORODIBROMOMETHANE	(UG/L)	10U	10U	10U	10U
CHLOROETHANE	(UG/L)	10U	10U	10U	10U
CHLOROFORM	(UG/L)	10U	10U	10U	10U
CHLOROMETHANE	(UG/L)	10U	10U	10U	10U
1,1-DICHLOROETHANE	(UG/L)	10U	10U	10U	10U
1,2-DICHLOROETHANE	(UG/L)	10U	10U	10U	10U
1,1-DICHLOROETHENE	(UG/L)	10U	10U	10U	10U
1,2-DICHLOROETHENE	(UG/L)	10U	10U	10U	10U
1,2-DICHLOROPROPANE	(UG/L)	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	(UG/L)	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	(UG/L)	10U	10U	10U	10U
ETHYLBENZENE	(UG/L)	10U	10U	10U	10U
2-HEXANONE	(UG/L)	10U	10U	10U	10U
4-METHYL-2-PENTANONE	(UG/L)	10U	10U	10U	10U
METHYLENE CHLORIDE	(UG/L)	10U	10U	10U	10U
STYRENE	(UG/L)	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	(UG/L)	10U	10U	10U	10U
TETRACHLOROETHENE	(UG/L)	10U	10U	10U	10U
TOLUENE	(UG/L)	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE	(UG/L)	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	(UG/L)	10U	10U	10U	10U
TRICHLOROETHENE	(UG/L)	10U	10U	10U	10U
VINYL ACETATE	(UG/L)	10U	10U	10U	10U
VINYL CHLORIDE	(UG/L)	10U	10U	10U	10U
XYLENES	(UG/L)	10U	10U	10U	10U

APPENDIX F.2
SUMMARY OF VOCs DETECTED IN GROUNDWATER AND SURFACE WATER SAMPLES

Total Samples 11
Samples without VOCs 8
Samples with VOCs 3

COMPOUND	THIRD QUARTER
ACETONE	0
BENZENE	0
BROMODICHLOROMETHANE	0
BROMOFORM	0
BROMOMETHANE	0
2-BUTANONE	1
CARBON DISULFIDE	0
CARBON TETRACHLORIDE	0
CHLOROBENZENE	0
CHLORODIBROMOMETHANE	0
CHLOROETHANE	0
CHLOROFORM	0
CHLOROMETHANE	0
1,1-DICHLOROETHANE	0
1,2-DICHLOROETHANE	0
1,1-DICHLOROETHENE	0
1,2-DICHLOROETHENE	2
CIS-1,2-DICHLOROETHENE	0
TRANS-1,2-DICHLOROETHENE	0
1,2-DICHLOROPROPANE	0
CIS-1,3-DICHLOROPROPENE	0
TRANS-1,3-DICHLOROPROPENE	0
ETHYLBENZENE	0
2-HEXANONE	0
4-METHYL-2-PENTANONE	0
METHYLENE CHLORIDE	0
STYRENE	0
1,1,2,2-TETRACHLOROETHANE	0
TETRACHLOROETHENE	0
TOLUENE	0
1,1,1-TRICHLOROETHANE	0
1,1,2-TRICHLOROETHANE	0
TRICHLOROETHENE	2
VINYL ACETATE	0
VINYL CHLORIDE	0
XYLENES	0

APPENDIX F.2
VOLATILE ORGANIC COMPOUNDS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-084 OLF 08/05/95	GW-290 BG 08/07/95	GW-346 S3 08/31/95	GW-614 S3 07/24/95	GW-642 BG 08/07/95	GW-652 BG 09/19/95	GW-685 EXP 08/06/95	GW-694 EXP 08/31/95	GW-739 EXP 09/16/95	GW-793 AGL SF 07/19/95
ACETONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOFORM (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
BROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-BUTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON DISULFIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROFORM (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CHLOROMETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,2-DICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-DICHLOROPROPANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
ETHYLBENZENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-HEXANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHYLENE CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
STYRENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TETRACHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TOLUENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
TRICHLOROETHENE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL ACETATE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
VINYL CHLORIDE (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
XYLENES (UG/L)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U

APPENDIX F.2
VOLATILE ORGANIC COMPOUNDS, 3RD QUARTER 1995

SAMPLING POINT		GW-828
LOCATION		OLF
DATE SAMPLED		08/24/95
ACETONE	(UG/L)	100
BENZENE	(UG/L)	100
BROMODICHLOROMETHANE	(UG/L)	100
BROMOFORM	(UG/L)	100
BROMOMETHANE	(UG/L)	100
2-BUTANONE	(UG/L)	100
CARBON DISULFIDE	(UG/L)	100
CARBON TETRACHLORIDE	(UG/L)	100
CHLOROBENZENE	(UG/L)	100
CHLORODIBROMOMETHANE	(UG/L)	100
CHLOROETHANE	(UG/L)	100
CHLOROFORM	(UG/L)	100
CHLOROMETHANE	(UG/L)	100
1,1-DICHLOROETHANE	(UG/L)	100
1,2-DICHLOROETHANE	(UG/L)	100
1,1-DICHLOROETHENE	(UG/L)	100
1,2-DICHLOROETHENE	(UG/L)	100
CIS-1,2-DICHLOROETHENE	(UG/L)	100
TRANS-1,2-DICHLOROETHENE	(UG/L)	100
1,2-DICHLOROPROPANE	(UG/L)	100
CIS-1,3-DICHLOROPROPENE	(UG/L)	100
TRANS-1,3-DICHLOROPROPENE	(UG/L)	100
ETHYLBENZENE	(UG/L)	100
2-HEXANONE	(UG/L)	100
4-METHYL-2-PENTANONE	(UG/L)	100
METHYLENE CHLORIDE	(UG/L)	100
STYRENE	(UG/L)	100
1,1,2,2-TETRACHLOROETHANE	(UG/L)	100
TETRACHLOROETHENE	(UG/L)	100
TOLUENE	(UG/L)	100
1,1,1-TRICHLOROETHANE	(UG/L)	100
1,1,2-TRICHLOROETHANE	(UG/L)	100
TRICHLOROETHENE	(UG/L)	100
VINYL ACETATE	(UG/L)	100
VINYL CHLORIDE	(UG/L)	100
XYLENES	(UG/L)	100

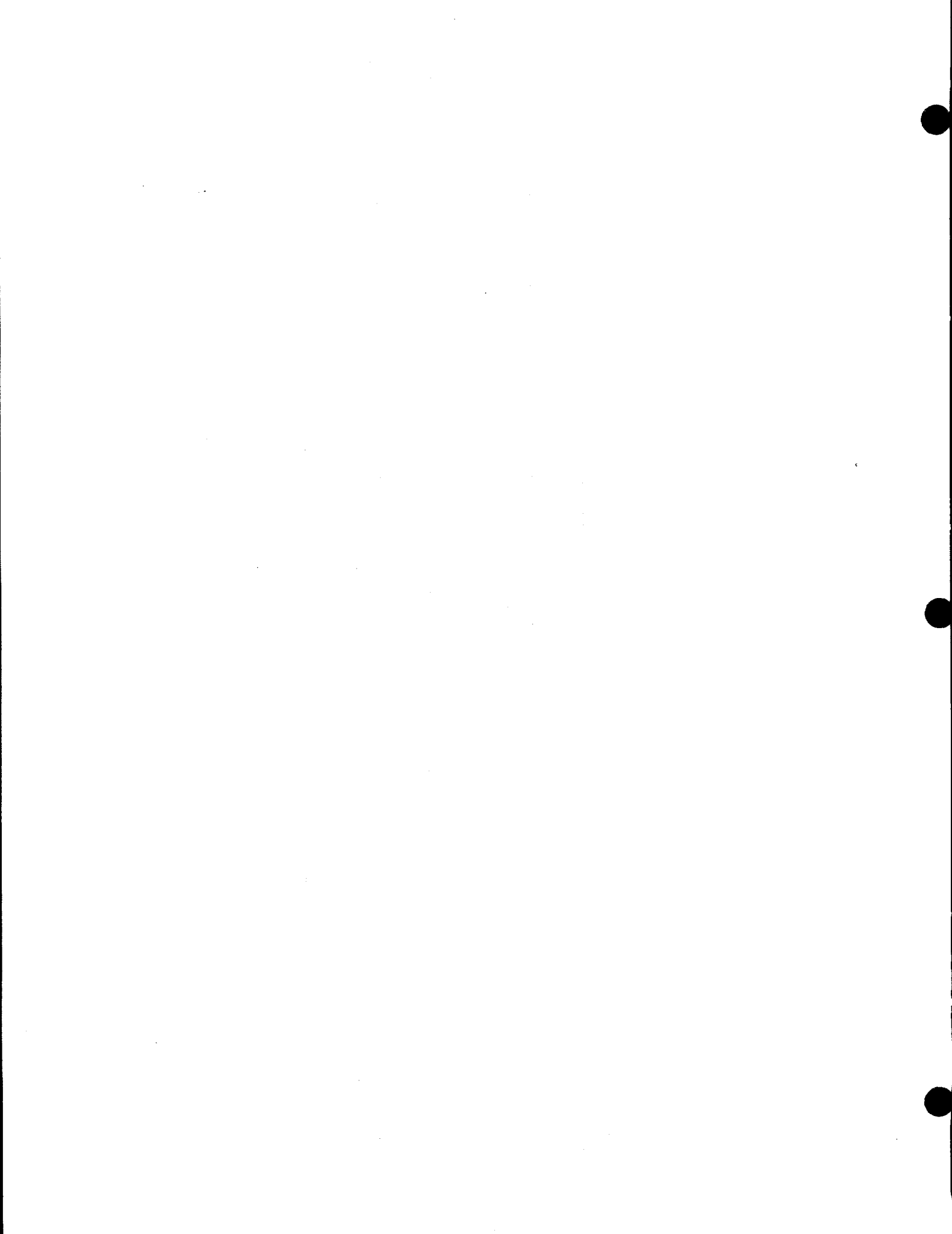
APPENDIX F.2
SUMMARY OF VOCs DETECTED IN GROUNDWATER AND SURFACE WATER SAMPLES

Total Samples 5
Samples without VOCs 3
Samples with VOCs 2

COMPOUND	FOURTH QUARTER
ACETONE (UG/L)	1
BENZENE (UG/L)	0
BROMODICHLOROMETHANE (UG/L)	0
BROMOFORM (UG/L)	0
BROMOMETHANE (UG/L)	0
2-BUTANONE (UG/L)	1
CARBON DISULFIDE (UG/L)	0
CARBON TETRACHLORIDE (UG/L)	0
CHLOROBENZENE (UG/L)	0
CHLORODIBROMOMETHANE (UG/L)	0
CHLOROETHANE (UG/L)	0
CHLOROFORM (UG/L)	1
CHLOROMETHANE (UG/L)	0
1,1-DICHLOROETHANE (UG/L)	1
1,2-DICHLOROETHANE (UG/L)	0
1,1-DICHLOROETHENE (UG/L)	1
1,2-DICHLOROETHENE (UG/L)	2
CIS-1,2-DICHLOROETHENE (UG/L)	0
TRANS-1,2-DICHLOROETHENE (UG/L)	0
1,2-DICHLOROPROPANE (UG/L)	0
CIS-1,3-DICHLOROPROPENE (UG/L)	0
TRANS-1,3-DICHLOROPROPENE (UG/L)	0
ETHYLBENZENE (UG/L)	0
2-HEXANONE (UG/L)	0
4-METHYL-2-PENTANONE (UG/L)	0
METHYLENE CHLORIDE (UG/L)	0
STYRENE (UG/L)	0
1,1,2,2-TETRACHLOROETHANE (UG/L)	0
TETRACHLOROETHENE (UG/L)	2
TOLUENE (UG/L)	0
1,1,1-TRICHLOROETHANE (UG/L)	1
1,1,2-TRICHLOROETHANE (UG/L)	0
TRICHLOROETHENE (UG/L)	2
VINYL ACETATE (UG/L)	0
VINYL CHLORIDE (UG/L)	0
XYLENES (UG/L)	0

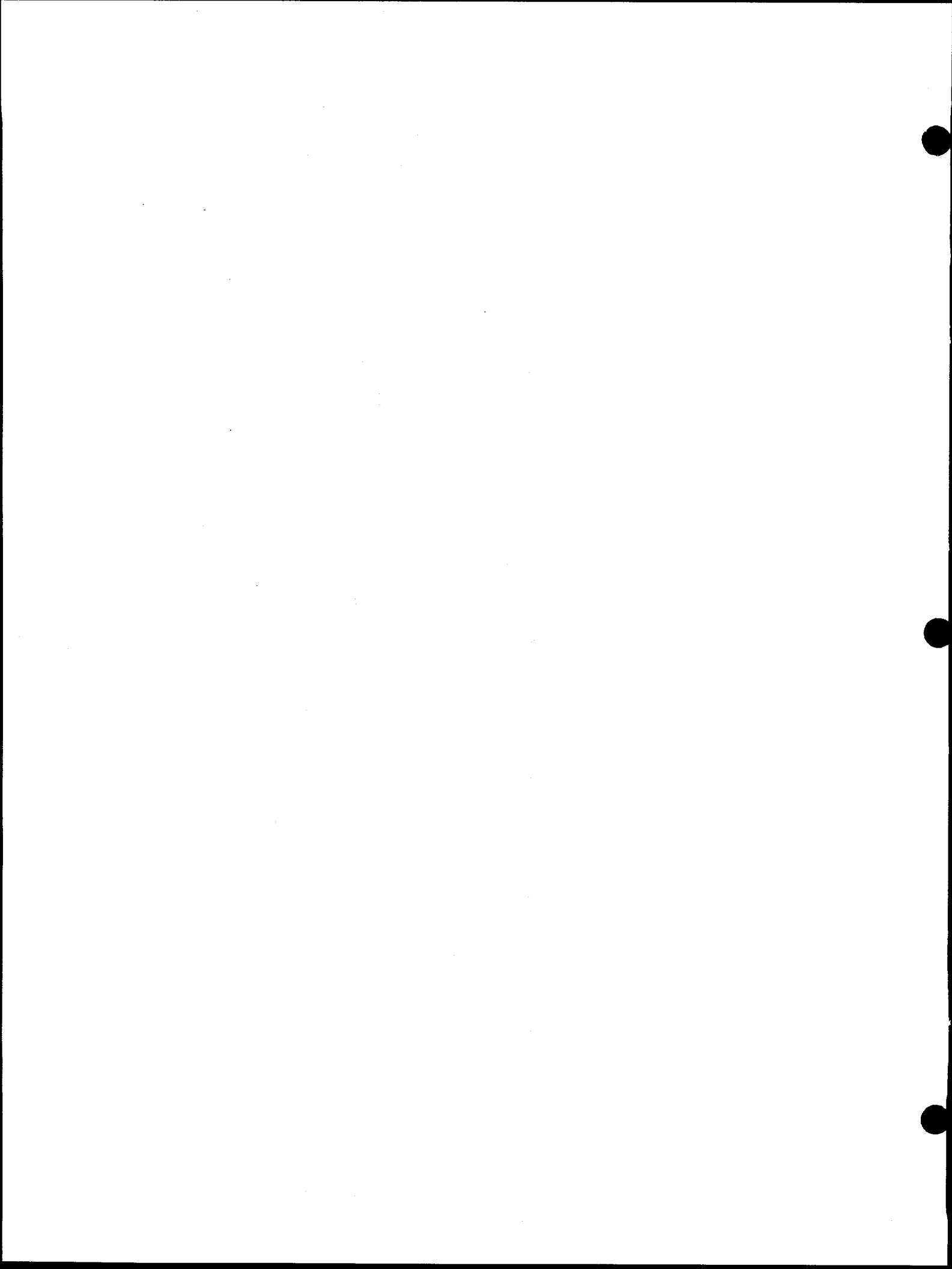
APPENDIX F.2
VOLATILE ORGANIC COMPOUNDS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-044 OLF 10/18/95	GW-315 SPI 12/07/95	GW-363 OLF 10/19/95	GW-372 BG 10/12/95	GW-653 BG 12/08/95
ACETONE	10U	5 JB	10U	10U	10U
BENZENE	10U	10U	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U
2-BUTANONE	10U	10U	10U	10U	9 J
CARBON DISULFIDE	10U	10U	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U
CHLORODIBROMOMETHANE	10U	10U	10U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U
CHLOROFORM	10U	2 J	10U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U
1,1-DICHLOROETHANE	10U	10U	10U	10U	2 J
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U
1,1-DICHLOROETHENE	10U	10U	10U	10U	1 J
1,2-DICHLOROETHENE	10U	7 J	10U	10U	27
CIS-1,2-DICHLOROETHENE	10U	.	10U	10U	.
TRANS-1,2-DICHLOROETHENE	10U	.	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U
4-METHYL-2-PENTANONE	10U	10U	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U	10U	10U
STYRENE	10U	10U	10U	10U	10U
1,1,2,2-TETRACHLOROETHANE	10U	14	10U	10U	4 J
TETRACHLOROETHENE	10U	10U	10U	10U	10U
TOLUENE	10U	10U	10U	10U	1 J
1,1,1-TRICHLOROETHANE	10U	10U	10U	10U	10U
1,1,2-TRICHLOROETHANE	10U	10U	10U	10U	2 J
TRICHLOROETHENE	10U	6 J	10U	10U	10U
VINYL ACETATE	10U	10U	10U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U
XYLENES	10U	10U	10U	10U	10U



APPENDIX F.3

**FIELD MEASUREMENTS
AND MISCELLANEOUS PARAMETERS**



APPENDIX F.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-044 OLF 03/16/95	GW-061 BG 03/28/95	GW-348 S3 03/15/95	GW-373 BG 01/31/95	GW-614 S3 01/11/95	GW-621 EXP 03/29/95	GW-683 EXP 03/09/95	GW-738 EXP 02/18/95	GW-793 AGLLSF 01/23/95
FIELD MEASUREMENTS									
STATIC WATER LEVEL (FT. BELOW TOC)	.	.	.	.	.	.	.	.	.
WATER LEVEL ELEV. (FT. ABOVE MSL)	14.7	11.9	14.8	13.3	13.3	14	11.7	13.7	13.4
WATER TEMP, FIELD MMT (DEG. CENT.)	7.1	7.5	7.5	9.3	7.3	7.8	7.5	7.1	7.2
PH, FIELD MMT. (PH UNITS)	284	512	568	405	263	352	200	815	283
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	3	4	5	9	0.6	4.7	8.1	1.5	1.4
DISSOLVED OXYGEN, FIELD MMT. (PPM)	192	143	182	34	150	181	151	209	195
REDOX, FIELD MMT. (MV)									
MISCELLANEOUS PARAMETERS									
PH (PH UNITS)	7.5	7.4	7.6	8.9	8.1	7.8	7.4	7.4	7.5
CONDUCTIVITY (UMHOS/CM)	274	513	554	494	349	340	226	772	306
DISSOLVED SOLIDS (MG/L)	224	350	320	256	172	210	128	432	140
TOTAL SUSPENDED SOLIDS (MG/L)	<1	277	<1	6	10	15	<1	3	3
TURBIDITY (NTU)	0.3	260	0.7	11	2.7	27	2.9	11	2.6

APPENDIX F.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 2ND QUARTER 1995

SAMPLING POINT LOCATION	GW-095 BG	GW-317 SPI	GW-370 BG	GW-537 OLF	GW-793 AGLISF
DATE SAMPLED	06/20/95	06/21/95	06/05/95	06/08/95	06/17/95

FIELD MEASUREMENTS

STATIC WATER LEVEL (FT. BELOW TOC)	-5.12	-76.41	-18.6	-6.84	-9.25
WATER LEVEL ELEV. (FT. ABOVE MSL)	905.75	986.59	942.02	969.4	958.93
WATER TEMP, FIELD MMT (DEG. CENT.)	14.9	16.1	16.5	17.3	16
PH, FIELD MMT. (PH UNITS)	9.1	7.8	5.8	6.8	7.3
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	474	385	99	5530	274
DISSOLVED OXYGEN, FIELD MMT. (PPM)	0.9	8	4.2	1.2	0.5
REDOX, FIELD MMT. (MV)	70	172	182	172	192

MISCELLANEOUS PARAMETERS

PH	9.2	8	6.3	6.9	7.5
CONDUCTIVITY (UMHOS/CM)	502 L	385	85	5760	288
DISSOLVED SOLIDS (MG/L)	302	228	90	5914	194
TOTAL SUSPENDED SOLIDS (MG/L)	<1	<1	10	<1	<1
TURBIDITY (NTU)	0.2	0.2	7.9	2.5	0.9

APPENDIX F.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-084 OLF 08/05/95	GW-290 BG 08/07/95	GW-346 S3 08/31/95	GW-614 S3 07/24/95	GW-642 BG 08/07/95	GW-652 BG 09/19/95	GW-685 EXP 08/06/95	GW-694 EXP 08/31/95	GW-739 EXP 09/16/95	GW-793 AGLLSF 07/19/95
FIELD MEASUREMENTS										
STATIC WATER LEVEL (FT. BELOW TOC)	-16.45	-9.78	-18.76	-8.65	-22.95	-11.35	-8.81	-31.72	-79.12	-10.37
WATER LEVEL ELEV. (FT. ABOVE MSL)	980.15	938.68	976.89	1003.55	991.75	889.48	882.7	909.66	944.58	957.81
WATER TEMP, FIELD MMT (DEG. CENT.)	16.1	19.1	17.2	16.1	16.8	13.7	17.2	15.6	14.7	16.1
PH, FIELD MMT. (PH UNITS)	7.6	8.2	7.2	7.6	6.6	7.6	7.2	6.7	7.4	7.1
CONDUCTIVITY, FIELD MMT (UMHOS/CN)	296	509	5540	431	357	436	660	785	540	264
DISSOLVED OXYGEN, FIELD MMT. (PPM)	3.5	2.1	1.1	2.7	1.4	2.8	0.3	0.3	1.7	0.8
REDOX, FIELD MMT. (MV)	92	38	190	140	-48	149	-70	14	112	168
MISCELLANEOUS PARAMETERS										
PH	8	7.9	7.4	7.7	6.6	7.7	7.5	7	7.7	7.3
PH, REP. 2 (PH UNITS)										
CONDUCTIVITY (UMHOS/CN)	303	318	5780	331	165	404	662 L	831	523	292
CONDUCTIVITY, REP. 2 (UMHOS/CN)				331						
TPH DIESEL RANGE X-10 LAB (MG/L)										
TPH GASOLINE RANGE X-10 LAB (MG/L)										
DISSOLVED SOLIDS (MG/L)	232	220	5146	224	138	278	462	568	364	210
TOTAL SUSPENDED SOLIDS (MG/L)	18	<1	9	18	9	32	2.5	<1	<1	7.5
TURBIDITY (NTU)	4	7.6	1.3	5.4	4	100	13	3.1	6.6	4.7

APPENDIX F.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 3RD QUARTER 1995

SAMPLING POINT
LOCATION GW-828
DATE SAMPLED OLF
08/24/95

FIELD MEASUREMENTS

STATIC WATER LEVEL (FT. BELOW TOC) -5.9
WATER LEVEL ELEV. (FT. ABOVE MSL) 977.02
WATER TEMP, FIELD MMT (DEG. CENT.) 20.3
PH, FIELD MMT. (PH UNITS) 9.3
CONDUCTIVITY, FIELD MMT (UMHOS/CM) 700
DISSOLVED OXYGEN, FIELD MMT. (PPM) 6.6
REDOX, FIELD MMT. (MV) 143

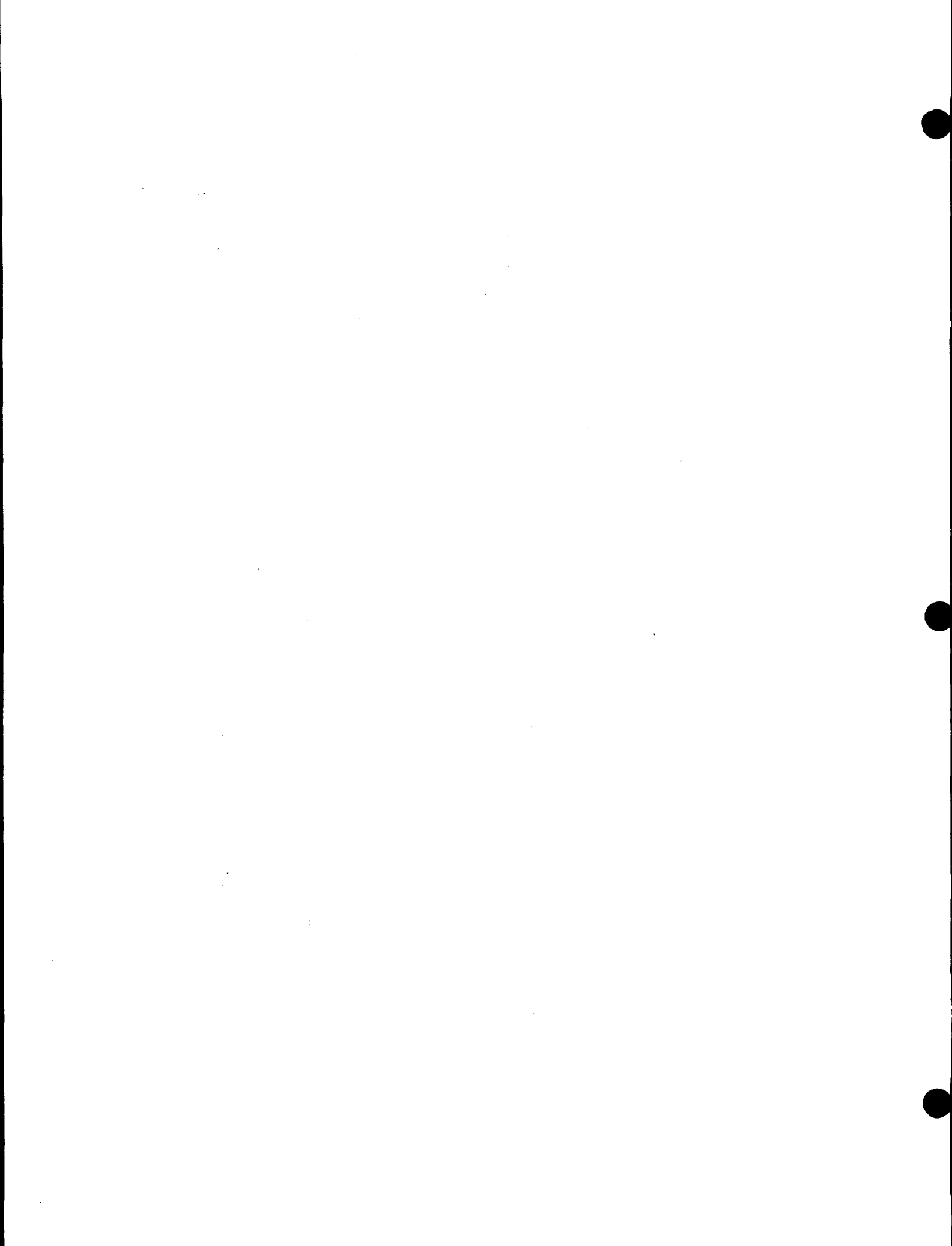
MISCELLANEOUS PARAMETERS

PH (PH UNITS) 9.3
PH, REP. 2 (PH UNITS) 9.3
CONDUCTIVITY (UMHOS/CM) .
CONDUCTIVITY, REP. 2 (UMHOS/CM) .
TPH DIESEL RANGE X-10 LAB (MG/L) .
TPH GASOLINE RANGE X-10 LAB (MG/L) .
DISSOLVED SOLIDS (MG/L) 970
TOTAL SUSPENDED SOLIDS (MG/L) 1480
TURBIDITY (NTU) 4500

APPENDIX F.3
FIELD MEASUREMENTS AND MISCELLANEOUS PARAMETERS, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-044 OLF 10/18/95	GW-315 SPI 12/07/95	GW-363 OLF 10/19/95	GW-372 BG 10/12/95	GW-653 BG 12/08/95
FIELD MEASUREMENTS					
STATIC WATER LEVEL (FT. BELOW TOC)	-33.81	-57.32	-6	-27.85	-23.8
WATER LEVEL ELEV. (FT. ABOVE MSL)	979.69	989.98	951.91	955.68	907.8
WATER TEMP, FIELD MMT (DEG. CENT.)	15	13.6	15.2	16.1	12.3
PH, FIELD MMT. (PH UNITS)	7	7.1	9.2	7.7	5.2
CONDUCTIVITY, FIELD MMT (UMHOS/CM)	259	803	396	363	31
DISSOLVED OXYGEN, FIELD MMT. (PPM)	2.9	2.4	1.9	1.6	11.6
REDOX, FIELD MMT. (MV)	274	192	110	20	279
MISCELLANEOUS PARAMETERS					
PH (PH UNITS)	7.5	6.91	9.2	7.74	5.6
CONDUCTIVITY (UMHOS/CM)	276 h	746	430	401	33.7
DISSOLVED SOLIDS (MG/L)	190	420	274	282	<1
TOTAL SUSPENDED SOLIDS (MG/L)	<1	<1	<1	<1	14
TURBIDITY (NTU)	0.65	0.05	2.7	1.3	5.6

APPENDIX F.4
RADIONUCLIDES



APPENDIX F.4
RADIONUCLIDES, 1ST QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-044 OLF 03/16/95	GW-061 BG 03/28/95	GW-348 S3 03/15/95	GW-373 BG 01/31/95	GW-614 S3 01/11/95	GW-621 EXP 03/29/95	GW-683 EXP 03/09/95	GW-738 EXP 02/18/95	GW-793 AGLISF 01/23/95
GROSS ALPHA (GROSS ALPHA)	0.152	21.1	-0.195	-0.38	1.19	1.19	3.43	4.55	0.497
GROSS BETA (GROSS BETA)	1.7	4.5	1	1.2	1.1	1.6	1.8	3.2	1
COUNTING ERROR	0.661	52.2	22	0.716	0.0679	8.36	3.82	40.8	2.92
COUNTING ERROR	2.6	5.1	4.1	2.3	2.5	3	2.6	4.7	2.4
RADIONUCLIDES									
241-AMERICIUM (241-AMERICIUM)	0			-0.511	1.58				
COUNTING ERROR	1.3			2	1.4				
137-CESIUM (137-CESIUM)	22.6								
COUNTING ERROR	14								
129-IODINE (129-IODINE)	-0.4			0.1	0.1				
COUNTING ERROR	2.2			2	1				
237-NEPTUNIUM (237-NEPTUNIUM)	0			-0.145	0				
COUNTING ERROR	0.26			0.58	0.49				
238-PLUTONIUM (238-PLUTONIUM)	0			0	0				
COUNTING ERROR	0.29			0.48	0.47				
239-PLUTONIUM (239-PLUTONIUM)	0.0828			-0.138	0.135				
COUNTING ERROR	0.17			0.55	0.27				
RADIUM (RADIUM)	0.003			-0.001	0.014				
COUNTING ERROR	0.013			0.014	0.026				
STRONTIUM (STRONTIUM)	-0.954			-21.5	-1.89				
COUNTING ERROR	5.3	-3.69		25	24				
99-TECHNETIUM (99-TECHNETIUM)	23.5	6.6		10.4	-1.87				
COUNTING ERROR	16	9.1		37	21				
TRITIUM (TRITIUM)	-8	-10		-1	0				
COUNTING ERROR	28	27		22	23				
234-URANIUM (234-URANIUM)	0			0.203	0				
COUNTING ERROR	0.32			0.41	0.7				
235-URANIUM (235-URANIUM)	-1.12 F			-0.63 F	-0.69 F				
COUNTING ERROR	20			7.1	7.2				
238-URANIUM (238-URANIUM)	0			0.102	0				
COUNTING ERROR	0.4			0.35	0.85				

APPENDIX F.4
RADIONUCLIDES, 2ND QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-095 BG 06/20/95	GW-317 SPI 06/21/95	GW-370 BG 06/05/95	GW-537 OLF 06/08/95	GW-793 AGLLSF 06/17/95
GROSS ALPHA (GROSS ALPHA)	1.01	2.74	0.309	8.8	-1.01
COUNTING ERROR	2.3	2.2	1.5	22	1.1
GROSS BETA (GROSS BETA)	3.74	2.21	2.9	391	1.52
COUNTING ERROR	3.3	2.9	2.7	50	2.3
RADIONUCLIDES					
241-AMERICIUM COUNTING ERROR	(PCI/L)	(PCI/L)	(PCI/L)	(PCI/L)	(PCI/L)
137-CESIUM COUNTING ERROR	(241-AMERICIUM)	(241-AMERICIUM)	(241-AMERICIUM)	(241-AMERICIUM)	(241-AMERICIUM)
129-IODINE COUNTING ERROR	(137-CESIUM)	(137-CESIUM)	(137-CESIUM)	(137-CESIUM)	(137-CESIUM)
237-NEPTUNIUM COUNTING ERROR	X10-LAB (Bq/L)	X10-LAB (Bq/L)	X10-LAB (Bq/L)	X10-LAB (Bq/L)	X10-LAB (Bq/L)
238-PLUTONIUM COUNTING ERROR	(129-IODINE)	(129-IODINE)	(129-IODINE)	(129-IODINE)	(129-IODINE)
239-PLUTONIUM COUNTING ERROR	(237-NEPTUNIUM)	(237-NEPTUNIUM)	(237-NEPTUNIUM)	(237-NEPTUNIUM)	(237-NEPTUNIUM)
40-POTASSIUM COUNTING ERROR	(238-PLUTONIUM)	(238-PLUTONIUM)	(238-PLUTONIUM)	(238-PLUTONIUM)	(238-PLUTONIUM)
RADIUM COUNTING ERROR	(239-PLUTONIUM)	(239-PLUTONIUM)	(239-PLUTONIUM)	(239-PLUTONIUM)	(239-PLUTONIUM)
STRONTIUM COUNTING ERROR	(40-POTASSIUM)	(40-POTASSIUM)	(40-POTASSIUM)	(40-POTASSIUM)	(40-POTASSIUM)
99-TECHNETIUM COUNTING ERROR	X10-LAB (Bq/L)	X10-LAB (Bq/L)	X10-LAB (Bq/L)	X10-LAB (Bq/L)	X10-LAB (Bq/L)
231+234-THORIUM COUNTING ERROR	(RADIUM)	(RADIUM)	(RADIUM)	(RADIUM)	(RADIUM)
TRITIUM COUNTING ERROR	(STRONTIUM)	(STRONTIUM)	(STRONTIUM)	(STRONTIUM)	(STRONTIUM)
234-URANIUM COUNTING ERROR	(99-TECHNETIUM)	(99-TECHNETIUM)	(99-TECHNETIUM)	(99-TECHNETIUM)	(99-TECHNETIUM)
235-URANIUM COUNTING ERROR	(231+234-THORIUM)	(231+234-THORIUM)	(231+234-THORIUM)	(231+234-THORIUM)	(231+234-THORIUM)
238-URANIUM COUNTING ERROR	X10-LAB (Bq/L)	X10-LAB (Bq/L)	X10-LAB (Bq/L)	X10-LAB (Bq/L)	X10-LAB (Bq/L)
	(TRITIUM)	(TRITIUM)	(TRITIUM)	(TRITIUM)	(TRITIUM)
	(PCI/L)	(PCI/L)	(PCI/L)	(PCI/L)	(PCI/L)
	(234-URANIUM)	(234-URANIUM)	(234-URANIUM)	(234-URANIUM)	(234-URANIUM)
	(235-URANIUM)	(235-URANIUM)	(235-URANIUM)	(235-URANIUM)	(235-URANIUM)
	(PCI/L)	(PCI/L)	(PCI/L)	(PCI/L)	(PCI/L)
	(238-URANIUM)	(238-URANIUM)	(238-URANIUM)	(238-URANIUM)	(238-URANIUM)

APPENDIX F.4
RADIONUCLIDES, 3RD QUARTER 1995

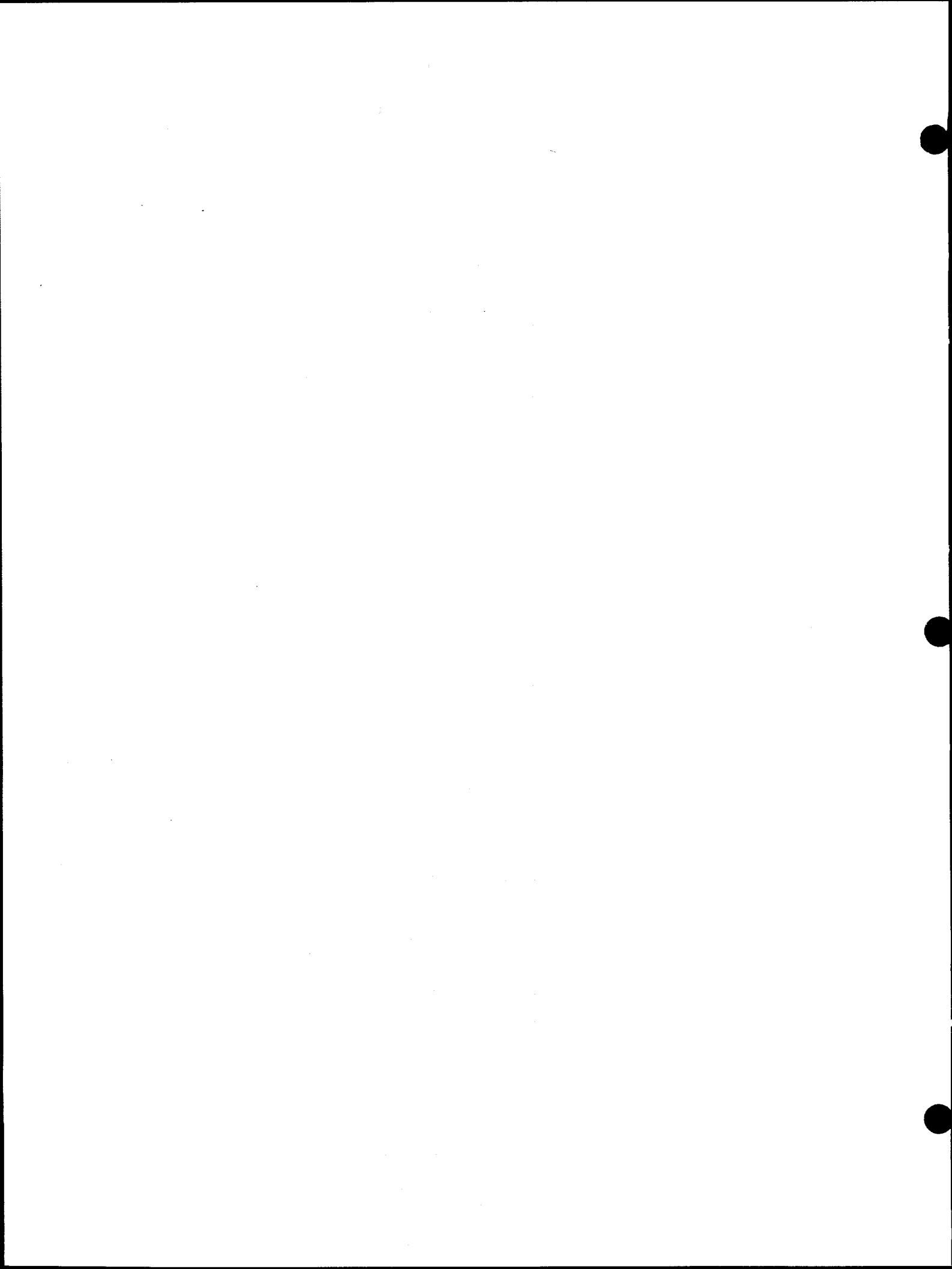
SAMPLING POINT LOCATION DATE SAMPLED	GW-084 OLF 08/05/95	GW-290 BG 08/07/95	GW-346 S3 08/31/95	GW-614 S3 07/24/95	GW-642 BG 08/07/95	GW-652 BG 09/19/95	GW-685 EXP 08/06/95	GW-694 EXP 08/31/95	GW-739 EXP 09/16/95	GW-793 AGLLSF 07/19/95
GROSS ALPHA COUNTING ERROR	-0.348 1.1	0.667 1.1	3.58 12	0.666 1.2	-0.164 1.1	1.44 9.8	2.01 1.8	35.8 6.8	1.07 1.7	1.01 1.3
GROSS BETA COUNTING ERROR	-0.499 2.7	1.89 2.4	26.8 25	2.13 2.5	3.68 2.3	11.3 26	7.91 3.1	63.8 8.2	12.5 3.4	1.83 2.6
RADIONUCLIDES										
241-AMERICIUM (PCI/L)	0			0 J	0.211					
COUNTING ERROR	0.21			0.5	0.21					
129-IODINE (129-IODINE)	0.01			0.1	0.01					
COUNTING ERROR	1.9			1.4	0.96					
237-NEPTUNIUM (PCI/L)	0.579			0.0302	0.114					
COUNTING ERROR	0.44			0.085	0.23					
238-PLUTONIUM (PCI/L)	0.863			0 J	0.245					
COUNTING ERROR	0.46			0.43	0.35					
239-PLUTONIUM (PCI/L)	2.87			0 J	0.245					
COUNTING ERROR	0.84			0.43	0.35					
40-POTASSIUM (PCI/L)										
COUNTING ERROR										
RADIUM (40-POTASSIUM)										
COUNTING ERROR	0.008			-0.006	0.049					
STRONTIUM (PCI/L)	0.032			0.035	0.044					
COUNTING ERROR	4.18			4.76	-0.118			3.82		
99-TECHNETIUM (PCI/L)	5.4			6.7	20			7.6		
COUNTING ERROR	0.047			1.3	3.86			32.8		
231+234-THORIUM (PCI/L)	8.3			8.3	8.4			8.9		
COUNTING ERROR										
TRITIUM (231+234-THORIUM)										
COUNTING ERROR	17			8	-12			-12		
234-URANIUM (TRITIUM)	24			23	22			23		
COUNTING ERROR	0.117			0	0.0583					
235-URANIUM (PCI/L)	0.17			0.22	0.12					
COUNTING ERROR	2.7 E			0.555 E	1.99 E					
238-URANIUM (PCI/L)	7.2			7.2	7.5					
COUNTING ERROR	0.0587			0.194	0					
COUNTING ERROR	0.12			0.22	0.2					

APPENDIX F.4
RADIONUCLIDES, 3RD QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-828 OLF 08/24/95
GROSS ALPHA	(PCI/L) 43.3
COUNTING ERROR	(GROSS ALPHA) 23
GROSS BETA	(PCI/L) 74.2
COUNTING ERROR	(GROSS BETA) 29
RADIONUCLIDES	
241-AMERICIUM	(PCI/L)
COUNTING ERROR	(241-AMERICIUM)
129-IODINE	X10-LAB (BQ/L)
COUNTING ERROR	(129-IODINE)
237-NEPTUNIUM	(PCI/L)
COUNTING ERROR	(237-NEPTUNIUM)
238-PLUTONIUM	(PCI/L)
COUNTING ERROR	(238-PLUTONIUM)
239-PLUTONIUM	(PCI/L)
COUNTING ERROR	(239-PLUTONIUM)
40-POTASSIUM	(PCI/L)
COUNTING ERROR	(40-POTASSIUM)
RADIUM	X10-LAB (BQ/L)
COUNTING ERROR	X10-LAB (RADIUM)
STRONTIUM	(PCI/L)
COUNTING ERROR	(STRONTIUM)
99-TECHNETIUM	(PCI/L)
COUNTING ERROR	(99-TECHNETIUM)
231+234-THORIUM	(PCI/L)
COUNTING ERROR	(231+234-THORIUM)
TRITIUM	X10-LAB (BQ/L)
COUNTING ERROR	(TRITIUM)
234-URANIUM	(PCI/L)
COUNTING ERROR	(234-URANIUM)
235-URANIUM	(PCI/L)
COUNTING ERROR	(235-URANIUM)
238-URANIUM	(PCI/L)
COUNTING ERROR	(238-URANIUM)

APPENDIX F.4
RADIONUCLIDES, 4TH QUARTER 1995

SAMPLING POINT LOCATION DATE SAMPLED	GW-044 OLF 10/18/95	GW-315 SPI 12/07/95	GW-363 OLF 10/19/95	GW-372 BG 10/12/95	GW-653 BG 12/08/95
GROSS ALPHA (GROSS ALPHA) (PCI/L)	-0.455	0.698	0.544	0.183	-0.00067
COUNTING ERROR	1	0.93	1.5	0.82	1.1
GROSS BETA (GROSS BETA) (PCI/L)	0.158	65.6	1.79	-0.492	1.97
COUNTING ERROR	2.5	8.3	2.5	2.6	2.7
RADIONUCLIDES					
241-AMERICIUM (241-AMERICIUM) (PCI/L)	0.207	.	0	0.187 J	.
COUNTING ERROR	0.22	.	0.24	0.26	.
129-IODINE X10-LAB (BQ/L)	-0.1	.	0.1	-0.2	.
COUNTING ERROR	1.1	.	2.1	2.3	.
237-NEPTUNIUM (237-NEPTUNIUM) (PCI/L)	0	0 N	0.0541	0	.
COUNTING ERROR	0.19	.	0.068	0.36	.
238-PLUTONIUM (238-PLUTONIUM) (PCI/L)	0.177	.	0	0.16	.
COUNTING ERROR	0.22	.	0.27	0.32	.
239-PLUTONIUM (239-PLUTONIUM) (PCI/L)	0.106	.	0	0.642	.
COUNTING ERROR	0.17	.	0.27	0.64	.
RADIUM X10-LAB (BQ/L)	0.012	.	-0.018	0.031	.
COUNTING ERROR	0.018	.	0.019	0.045	.
STRONTIUM X10-LAB (BQ/L)	12.2	.	15.4	-5.41	.
COUNTING ERROR	6.5	.	6.8	6.2	.
99-TECHNETIUM (99-TECHNETIUM) (PCI/L)	1.76	.	-1.55	1.01	.
COUNTING ERROR	8.5	.	8.4	8.4	.
231+234-THORIUM (231+234-THORIUM) (PCI/L)	.	.	.	.	.
TRITIUM X10-LAB (BQ/L)	2	.	5	6	.
COUNTING ERROR	24	.	23	22	.
234-URANIUM (234-URANIUM) (PCI/L)	0.442	.	0.482	0.332	.
COUNTING ERROR	0.31	.	0.32	0.27	.
235-URANIUM (235-URANIUM) (PCI/L)	-5.89 F	.	-4.18 F	4.86 E	.
COUNTING ERROR	9.5	.	9.5	8	.
238-URANIUM (238-URANIUM) (PCI/L)	0.11	.	0.0536	0.166	.
COUNTING ERROR	0.16	.	0.11	0.19	.



APPENDIX F.5

**BEAR CREEK VALLEY OPERABLE UNIT
RADIONUCLIDE DATA
THIRD QUARTER 1995**

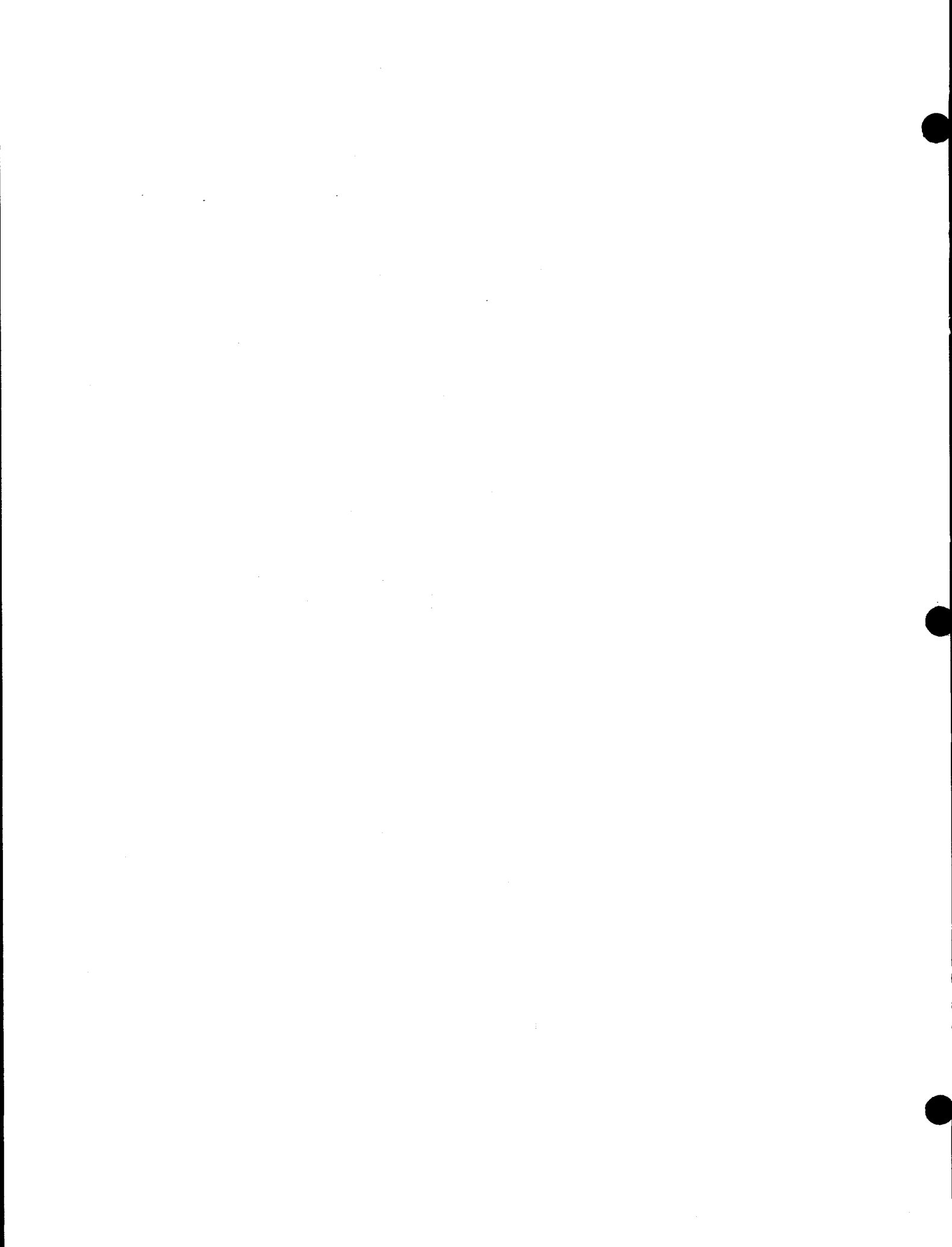


APPENDIX F.5
BEAR CREEK VALLEY OPERABLE UNIT RADIONUCLIDE DATA, 3RD QUARTER 1995

SAMPLING POINT DATE SAMPLED TYPE	GH-258 08/04/95 TOT	GH-712 07/25/95 TOT	SS-6 WEST 08/02/95 TOT
GROSS ALPHA COUNTING ERROR	(PCI/L) -0.8	(PCI/L) -1.8	(PCI/L) 1.6
GROSS BETA COUNTING ERROR	(GROSS ALPHA) 0.18	(GROSS ALPHA) 0.22	(GROSS ALPHA) 5.1
	(GROSS BETA) 1.6	(GROSS BETA) 2.1	(GROSS BETA) 1.2
	(GROSS BETA) 5.1	(GROSS BETA) 5.2	(GROSS BETA) 4.9
RADIONUCLIDES			
241-AMERICIUM COUNTING ERROR	(PCI/L) 0.043	(PCI/L) 0.13	(PCI/L) 0.13
137-CESIUM COUNTING ERROR	(241-AMERICIUM) 0.24	(241-AMERICIUM) 0.15	(241-AMERICIUM) 0.22
237-NEPTUNIUM COUNTING ERROR	(137-CESIUM) 4.6	(137-CESIUM) 4.4	(137-CESIUM) 5.6
238-PLUTONIUM COUNTING ERROR	(237-NEPTUNIUM) 0.075	(237-NEPTUNIUM) 0.026	(237-NEPTUNIUM) 0.036
239-PLUTONIUM COUNTING ERROR	(238-PLUTONIUM) 0.12	(238-PLUTONIUM) 0.053	(238-PLUTONIUM) 0.071
223+224+226-RADIUM COUNTING ERROR	(239-PLUTONIUM) -0.003	(239-PLUTONIUM) .	(239-PLUTONIUM) 0.025
228-RADIUM COUNTING ERROR	(223+224+226-RADIUM) 0.15	(223+224+226-RADIUM) .	(223+224+226-RADIUM) 0.14
STRONTIUM COUNTING ERROR	(228-RADIUM) 0.04	(228-RADIUM) 0	(228-RADIUM) -0.028
99-TECHNETIUM COUNTING ERROR	(STRONTIUM) 0.000074	(STRONTIUM) -0.01406	(STRONTIUM) 0.00851
232-THORIUM COUNTING ERROR	(99-TECHNETIUM) 0.004	(99-TECHNETIUM) 0.85	(99-TECHNETIUM) 0.32
230-THORIUM COUNTING ERROR	(232-THORIUM) -0.14	(232-THORIUM) 1.2	(232-THORIUM) 0.45
228-THORIUM COUNTING ERROR	(230-THORIUM) 0.67	(230-THORIUM) 5.3	(230-THORIUM) 2.8
TRITIUM COUNTING ERROR	(228-THORIUM) -1.8	(228-THORIUM) .	(228-THORIUM) -0.76
234-URANIUM COUNTING ERROR	(TRITIUM) 0.73	(TRITIUM) .	(TRITIUM) 0.5
235-URANIUM COUNTING ERROR	(234-URANIUM) -1	(234-URANIUM) -1	(234-URANIUM) 4
238-URANIUM COUNTING ERROR	(235-URANIUM) 3.2	(235-URANIUM) 3.2	(235-URANIUM) 3.9
	(238-URANIUM) 0	(238-URANIUM) 0	(238-URANIUM) -0.036
	(238-URANIUM) 0.16	(238-URANIUM) 0.22	(238-URANIUM) 0.072
	(238-URANIUM) 0.15	(238-URANIUM) 0.25	(238-URANIUM) 0.6
	(238-URANIUM) 0.059	(238-URANIUM) 0.24	(238-URANIUM) 0.4
	(238-URANIUM) 0.14	(238-URANIUM) 0.31	(238-URANIUM) 0.028
	(238-URANIUM) 3.256	(238-URANIUM) -1.813	(238-URANIUM) 0.26
	(238-URANIUM) 130	(238-URANIUM) 110	(238-URANIUM) 2.664
	(238-URANIUM) 0.18	(238-URANIUM) 0.83	(238-URANIUM) 150
	(238-URANIUM) 0.069	(238-URANIUM) 0.061	(238-URANIUM) 0.8
	(238-URANIUM) 0.12	(238-URANIUM) 0.064	(238-URANIUM) 0.054
			(238-URANIUM) 1.8



APPENDIX G
RADIOCHEMICAL DATA SUMMARY



EXPLANATION

SAMPLING POINT:

BCK	-	Bear Creek Kilometer
CWESTTOE	-	Burial Ground C-West Toe Seep
GCS-01	-	Grassy Creek Spring 01
GW	-	Monitoring Well
MS-1	-	Bear Creek Main Stem Headwaters (Station 1)
NT	-	Northern Tributary
SEEP 1	-	Burial Ground A-North Seep
SEEP 2	-	Burial Ground C-East Seep
SS	-	(Bear Creek) Spring Station
TS	-	Tankfarm Spring (Bear Creek Headwaters)

LOCATION:

AGLLSF	-	Above Grade Low-Level Storage Facility
B9714	-	Y-12 TSD Garage Facility (Building 9714)
BG	-	Bear Creek Burial Grounds WMA
EXP	-	Exit Pathway Monitoring Location
OLF	-	Oil Landfarm WMA
RS	-	Rust Spoil Area
S3	-	S-3 Site
SPI	-	Spoil Area I

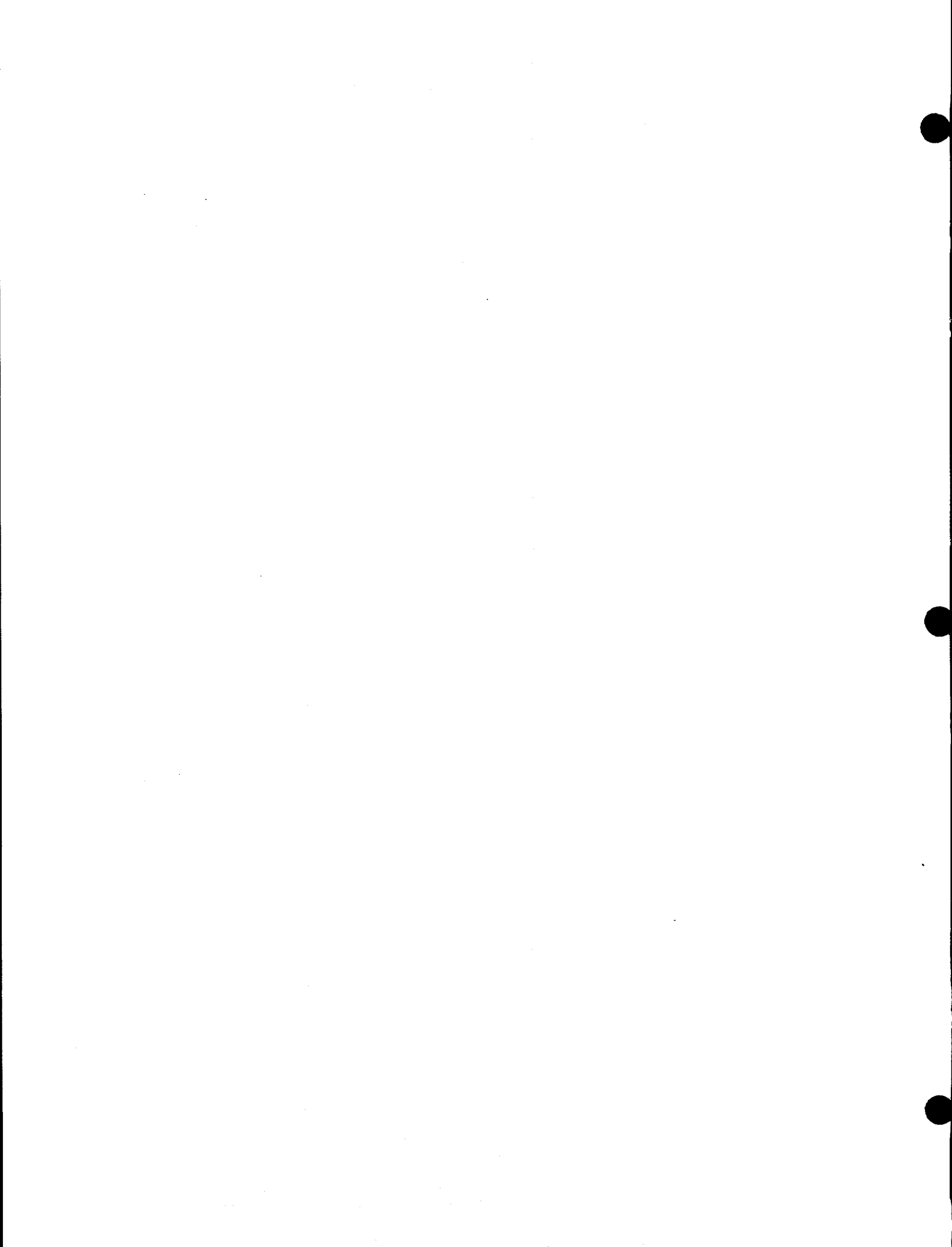
NOTES:

pCi/L	-	picoCuries per liter
CE+/-	-	Counting Error (two standard deviations)
.	-	Not sampled

Mean counting error (e) calculated using the following formula from Evans (1955):

$$e = \sqrt{\frac{E_1^2}{n^2} + \frac{E_2^2}{n^2} + \frac{E_3^2}{n^2} + \dots}$$

where $E_1, E_2, \dots E_x$ are the individual errors, and n is the number of observations.



APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	BCK-00.63 PCI/L	CE +/-	BCK-04.55 PCI/L	CE +/-	BCK-09.40 PCI/L	CE +/-	BCK-11.97 PCI/L	CE +/-	GCS1 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	8.41	1.89	7.48	1.77	30.40	3.98	33.50	4.72	-0.15	0.80
First Quarter	6.71	2.3	7.06	2.4	27.6	5.1	28.4	5.6	.	.
Second Quarter	10.1	3	7.9	2.6	33.2	6.1	38.6	7.6	0.989	0.94
Third Quarter	.	.	.	.	.	.	.	.	-1.29	1.3
Fourth Quarter	.	.	.	.	.	.	.	.	.	.
GROSS BETA MEAN ACTIVITY	7.35	2.19	8.18	2.23	34.90	3.96	342.70	31.40	0.06	1.77
First Quarter	7.93	3.2	9.99	3.3	37.2	5.7	85.4	10	-1.38	.
Second Quarter	6.77	3	6.36	3	32.6	5.5	600	62	.	2.6
Third Quarter	.	.	.	.	.	.	.	.	1.51	.
Fourth Quarter	.	.	.	.	.	.	.	.	.	2.4

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-014 PCI/L	CE +/-	GW-040 PCI/L	CE +/-	GW-042 PCI/L	CE +/-	GW-043 PCI/L	CE +/-	GW-044 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	0.77	1.60	2.06	0.83	0.87	0.65	0.37	0.76	0.31	0.78
First Quarter	.	.	0.632	0.78	0.775	0.83	0.887	1.8	1.37	1.9
Second Quarter	.	.	2.74	2.2	1.04	1.8	0.305	1.8	-0.467	1.7
Third Quarter	0.77	1.6	2.09	1.7	0.904	1.4	-0.33	1	0.169	1.2
Fourth Quarter	.	.	2.76	1.6	0.774	0.93	0.616	1.3	0.157	1.3
GROSS BETA MEAN ACTIVITY	2.25	2.50	2.73	1.38	1.87	1.29	0.98	1.40	-1.29	1.33
First Quarter	.	.	3.91	2.4	2.64	2.3	3.13	2.8	2.31	2.7
Second Quarter	.	.	2.29	3	2.27	3	-2.02	3	-3.78	2.9
Third Quarter	2.25	2.5	1.81	2.8	2.41	2.2	0.333	2.8	-2.33	2.6
Fourth Quarter	.	.	2.89	2.8	0.166	2.7	2.48	2.6	-1.36	2.4

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-046 PCI/L	CE +/-	GW-047 PCI/L	CE +/-	GW-053 PCI/L	CE +/-	GW-056 PCI/L	CE +/-	GW-057 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	0.15	0.84	0.83	0.67	0.49	2.08	3.07	1.53	0.51	1.06
First Quarter	.	.	-0.00512	0.73	1.34	1.6	1.77	1.9	0.409	1.4
Second Quarter	.	.	1.72	1.6	3.03	1.9	.	.	.	.
Third Quarter	0.153	0.84	0.773	1	-4.46	7.8	4.36	2.4	0.613	1.6
Fourth Quarter	.	.	.	.	2.06	1.5	.	.	.	.
GROSS BETA MEAN ACTIVITY	0.48	2.30	1.42	1.43	2.36	6.34	3.35	1.84	2.49	1.77
First Quarter	.	.	1.38	2.3	2.27	2.3	3.68	2.6	1.32	2.4
Second Quarter	.	.	3.15	2.5	3.44	2.6	.	.	.	.
Third Quarter	0.476	2.3	-0.264	2.6	-0.905	25	3.01	2.6	3.66	2.6
Fourth Quarter	.	.	.	.	4.63	2.6	.	.	.	.

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-061 PCI/L	CE +/-	GW-064 PCI/L	CE +/-	GW-066 PCI/L	CE +/-	GW-069 PCI/L	CE +/-	GW-079 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	18.33	2.41	6.78	7.14	5.22	2.50	-0.19	0.55	-0.29	1.08
First Quarter	15.9	3.9	14.9	21	.	.	-0.00584	1.1	-0.00518	1.2
Second Quarter	18.5	4	3.18	3.8	.	.	-0.561	0.83	-1.17	4
Third Quarter	20.6	4.6	2.25	1.9	5.22	2.5	-0.559	1.1	0.331	0.67
Fourth Quarter	.	.	.	.	.	.	0.358	1.3	-0.326	0.91
GROSS BETA MEAN ACTIVITY	45.40	3.57	25.73	9.63	13.60	3.30	3.68	1.28	-1.10	2.61
First Quarter	38.2	4.5	43.7	28	.	.	3.47	2.4	0.152	2.3
Second Quarter	41.8	6.3	17.4	6.1	.	.	0.551	2.4	-8.87	9.5
Third Quarter	56.2	7.4	16.1	3.7	13.6	3.3	2.36	2.5	2.93	2.7
Fourth Quarter	.	.	.	.	.	.	8.35	2.9	1.39	2.5

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-080 PCI/L	CE +/-	GW-084 PCI/L	CE +/-	GW-085 PCI/L	CE +/-	GW-087 PCI/L	CE +/-	GW-095 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	1.15	1.44	0.43	0.73	3.08	6.48	188.00	23.00	-0.37	2.24
First Quarter	4.64	3.4	-0.339	1.2	1.57	1.5	.	.	-0.575	1
Second Quarter	-0.0217	4.5	1.74	2	1.48	18	.	.	0.981	2.3
Third Quarter	-0.000841	0.46	-0.000813	1.2	3.47	4.6	188	23	-3.05	8.5
Fourth Quarter	-0.00431	0.98	0.306	1.3	5.78	18	.	.	1.15	1.2
GROSS BETA MEAN ACTIVITY	1.71	2.92	1.19	1.33	107.90	13.83	221.00	24.00	-0.51	6.12
First Quarter	2.68	4.8	1.02	2.3	119	14	.	.	1.57	2.3
Second Quarter	-0.357	10	1.5	3	37.6	34	.	.	3.64	3.3
Third Quarter	3.61	2.7	0.327	2.7	141	22	221	24	-10.4	24
Fourth Quarter	0.921	2.5	1.92	2.6	134	35	.	.	3.14	2.5

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-100 PCI/L	CE +/-	GW-115 PCI/L	CE +/-	GW-124 PCI/L	CE +/-	GW-162 PCI/L	CE +/-	GM-228 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	0.50	1.60	0.12	2.12	0.65	1.50	0.00	1.13	7.11	2.90
First Quarter	.	.	0.883	1.1	.	.	0.968	1.3	.	.
Second Quarter	.	.	.	.	.	.	-0.946	1.7	.	.
Third Quarter	0.498	1.6	-0.639	4.1	0.654	1.5	-1.23	3.8	7.11	2.9
Fourth Quarter	.	.	.	.	.	.	1.21	1.2	.	.
GROSS BETA MEAN ACTIVITY	4.88	2.80	-0.95	5.64	177.00	19.00	-0.03	3.24	33.60	5.20
First Quarter	.	.	1.18	2.5	.	.	3.58	2.7	.	.
Second Quarter	.	.	.	.	.	.	-1.85	3.1	.	.
Third Quarter	4.88	2.8	-3.07	11	177	19	-3.48	12	33.6	5.2
Fourth Quarter	.	.	.	.	.	.	1.65	2.7	.	.

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GM-229 PCI/L	CE +/-	GM-236 PCI/L	CE +/-	GM-248 PCI/L	CE +/-	GM-257 PCI/L	CE +/-	GM-276 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	6.13	2.80	3.26	2.10	0.35	1.00	1.62	1.30	660.50	56.82
First Quarter	.	.	.	.	.	.	.	.	469	54
Second Quarter	6.13	2.8	3.26	2.1	0.353	1	1.62	1.3	852	100
Third Quarter	.	.	.	.	.	.	.	.	.	.
Fourth Quarter	.	.	.	.	.	.	.	.	.	.
GROSS BETA MEAN ACTIVITY	11.00	3.10	97.50	11.00	2.97	2.50	6.51	2.80	1054.00	78.10
First Quarter	.	.	.	.	.	.	.	.	978	100
Second Quarter	11	3.1	97.5	11	2.97	2.5	6.51	2.8	1130	120
Third Quarter	.	.	.	.	.	.	.	.	.	.
Fourth Quarter	.	.	.	.	.	.	.	.	.	.

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-287 PCI/L	CE +/-	GW-288 PCI/L	CE +/-	GW-289 PCI/L	CE +/-	GW-290 PCI/L	CE +/-	GW-291 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	1.84	2.31	-0.17	0.72	1.42	1.20	0.51	1.00	-0.01	1.40
First Quarter	2.07	1.6	.	.	.	.	.	.	.	.
Second Quarter	7.12	3.3	.	.	.	.	.	.	.	.
Third Quarter	-2.99	8.4	-0.166	0.72	1.42	1.2	0.506	1	-0.00643	1.4
Fourth Quarter	1.15	1.1	.	.	.	.	.	.	.	.
GROSS BETA MEAN ACTIVITY	4.82	6.38	-0.32	2.30	1.67	2.40	1.49	2.40	0.94	2.50
First Quarter	3.48	2.4	.	.	.	.	.	.	.	.
Second Quarter	9.51	3.6	.	.	.	.	.	.	.	.
Third Quarter	2.58	25	-0.321	2.3	1.67	2.4	1.49	2.4	0.942	2.5
Fourth Quarter	3.71	2.6	.	.	.	.	.	.	.	.

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-311 PCI/L	CE +/-	GW-312 PCI/L	CE +/-	GW-315 PCI/L	CE +/-	GW-317 PCI/L	CE +/-	GW-346 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	1.08	1.08	0.19	0.98	1.72	0.75	0.67	0.87	-0.07	10.00
First Quarter	1.68	2.1	2.05	2.2	1.23	1.5	0.672	1.3	.	.
Second Quarter	1.23	1.8	-0.824	1.6	2.16	1.5	0.478	1.8	.	.
Third Quarter	.	.	-0.652	1.1	1.62	1.7	0.851	1.4	-0.0652	10
Fourth Quarter	0.332	1.7	.	.	1.85	1.3	.	.	.	.
GROSS BETA MEAN ACTIVITY	3.27	1.53	7.80	1.75	34.90	2.90	1.86	1.53	34.70	26.00
First Quarter	2.81	2.7	6.73	3	10.4	3.1	0.464	2.3	.	.
Second Quarter	6.63	2.9	7.84	3	22.9	4.2	2.73	3	.	.
Third Quarter	.	.	8.82	3.1	36.3	5.5	2.38	2.6	34.7	26
Fourth Quarter	0.379	2.3	.	.	70	8.8	.	.	.	.

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-347 PCI/L	CE +/-	GW-348 PCI/L	CE +/-	GW-363 PCI/L	CE +/-	GW-370 PCI/L	CE +/-	GW-372 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	0.50	0.78	0.80	0.75	0.24	0.66	1.48	0.96	0.45	0.74
First Quarter	0.771	1.2	0.667	1.3	0.572	1.2	2.62	2	1.04	1.5
Second Quarter	0.589	1.7	1.21	1.2	-0.38	1.4	0.464	1.5	0	1.9
Third Quarter	0.15	1.1	0.521	1.4	0.761	1.3	1.35	1.4	-0.352	1.2
Fourth Quarter	.	.	.	.	-0.00799	1.4	.	.	1.11	1.2
GROSS BETA MEAN ACTIVITY	4.04	1.62	18.93	2.23	1.29	1.19	1.79	1.52	1.38	1.32
First Quarter	5.61	2.7	21.8	4.1	1.87	2.3	1.63	2.5	5.63	2.7
Second Quarter	3.4	3	17.2	3.7	1.96	2.3	2.08	2.7	-1.33	3.1
Third Quarter	3.1	2.7	17.8	3.8	-0.247	2.4	1.66	2.7	2.36	2.2
Fourth Quarter	.	.	.	.	1.56	2.5	.	.	-1.15	2.5

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-373 PCI/L	CE +/-	GM-537 PCI/L	CE +/-	GM-613 PCI/L	CE +/-	GM-614 PCI/L	CE +/-	GM-621 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	0.12	0.72	15.32	9.88	0.93	0.76	0.33	0.67	1.53	1.10
First Quarter	-0.971	1	4.7	3.8	0.315	0.78	0.167	0.77	1.19	1.6
Second Quarter	1.06	2.1	28.4	24	.	.	.	.	.	.
Third Quarter	-0.00707	1.4	-3.51	21	1.55	1.3	0.498	1.1	1.86	1.5
Fourth Quarter	0.397	0.97	31.7	23	.	.	.	.	.	.
GROSS BETA MEAN ACTIVITY	0.89	1.24	528.75	25.71	1.37	1.80	0.07	1.70	8.41	2.12
First Quarter	1.51	2.3	365	40	0.901	2.6	-0.482	2.4	7.48	2.9
Second Quarter	-0.267	2.9	619	57	.	.	.	.	.	.
Third Quarter	3.35	2.2	575	55	1.83	2.5	0.625	2.4	9.34	3.1
Fourth Quarter	-1.05	2.5	556	52	.	.	.	.	.	.

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-627 PCI/L	CE +/-	GW-637 PCI/L	CE +/-	GW-642 PCI/L	CE +/-	GW-652 PCI/L	CE +/-	GW-653 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	2.22	2.92	0.88	0.79	-0.26	0.59	0.23	3.09	1.24	2.29
First Quarter	0.489	1.7	1.74	1.4	0.324	1.2	0.706	1.3	4.29	2.1
Second Quarter	4.26	3.2	-0.00581	1.4	-1.07	1.6	1.5	2.2	2.3	2.1
Third Quarter	3.13	11	0.891	1.3	-0.64	1	-1.52	8.9	-1.47	8.6
Fourth Quarter	1.01	1.4	.	.	0.331	0.81	.	.	-0.148	1.1
GROSS BETA MEAN ACTIVITY	1.56	6.12	2.12	1.37	1.40	1.33	4.14	8.45	3.38	6.37
First Quarter	1.8	2.4	1.09	2.2	4.22	2.6	6.79	2.7	7.69	2.8
Second Quarter	2.49	3.3	3.31	2.4	-0.965	3.1	5.69	3.3	4.82	3.3
Third Quarter	-0.0968	24	1.96	2.5	2.16	2.2	-0.0582	25	2.57	25
Fourth Quarter	2.06	2.5	.	.	0.165	2.7	.	.	-1.55	2.4

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-654 PCI/L	CE +/-	GW-683 PCI/L	CE +/-	GW-684 PCI/L	CE +/-	GW-685 PCI/L	CE +/-	GW-694 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	1.40	2.82	13.51	2.71	12.26	2.41	2.47	1.35	47.15	4.94
First Quarter	0.69	1.3	2.02	1.5	8.41	2.7	2.1	1.8	51.2	6.2
Second Quarter	-0.747	1.8	.	.	16.1	.	2.83	.	43.1	7.7
Third Quarter	5.84	11	25	5.2	.	.	.	.	.	.
Fourth Quarter	-0.176	1.3	.	.	.	.	.	.	.	.
GROSS BETA MEAN ACTIVITY	4.17	6.37	24.40	3.40	32.55	3.83	7.52	2.09	68.95	5.01
First Quarter	4.84	2.5	6	2.8	17.4	3.7	6	2.7	75.8	5.9
Second Quarter	6	3.4	.	.	.	.	.	.	.	.
Third Quarter	3.38	25	42.8	6.2	47.7	6.7	9.04	3.2	62.1	8.1
Fourth Quarter	2.47	2.6	.	.	.	.	.	.	.	.

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-695 PCI/L	CE +/-	GW-703 PCI/L	CE +/-	GW-704 PCI/L	CE +/-	GW-706 PCI/L	CE +/-	GW-710 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	3.32	1.45	2.26	1.27	2.95	1.42	33.75	4.04	6.90	12.42
First Quarter	1.88	1.9	1.49	1.8	4.29	2.4	37.6	5.3	13.8	16
Second Quarter	4.76	2.2	3.02	1.8	1.6	1.5	29.9	6.1	-0.00971	19
Third Quarter	.	.	.	.	.	.	.	.	.	.
Fourth Quarter	.	.	.	.	.	.	.	.	.	.
GROSS BETA MEAN ACTIVITY	17.30	2.62	18.70	2.69	9.43	2.20	52.35	4.51	9.65	15.44
First Quarter	17.2	3.7	18.7	3.8	11.2	3.3	48.6	5	4.79	15
Second Quarter	17.4	3.7	18.7	3.8	7.65	2.9	56.1	7.5	14.5	27
Third Quarter	.	.	.	.	.	.	.	.	.	.
Fourth Quarter	.	.	.	.	.	.	.	.	.	.

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GM-711 PCI/L	CE +/-	GM-712 PCI/L	CE +/-	GM-713 PCI/L	CE +/-	GM-714 PCI/L	CE +/-	GM-715 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY										
First Quarter	11.2	20	0.392	0.98	2.41	1.6	3.66	2.4	1.26	1.2
Second Quarter	-24.4	18	0.191	1.2	1.76	2.2	1.81	4.7	-0.642	4.1
Third Quarter	.	.	.	.	.	.	.	.	.	.
Fourth Quarter	.	.	.	.	.	.	.	.	.	.
GROSS BETA MEAN ACTIVITY										
First Quarter	9.45	28.22	1.53	1.73	2.24	1.88	5.07	6.22	2.11	6.14
Second Quarter	-1.71	49	1.42	2.5	1.24	2.5	8.82	3.3	1.88	2.6
Third Quarter	20.6	28	1.63	2.4	3.23	2.8	1.32	12	2.34	12
Fourth Quarter	.	.	.	.	.	.	.	.	.	.

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-723 PCI/L	CE +/-	GW-724 PCI/L	CE +/-	GW-725 PCI/L	CE +/-	GW-736 PCI/L	CE +/-	GW-737 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	3.16	1.78	2.11	1.79	2.28	1.45	2.86	1.52	2.65	1.52
First Quarter	4.14	3	4.25	3.2	2.68	2	3.41	2.1	3.84	2.2
Second Quarter	2.18	1.9	-0.0325	1.6	1.88	2.1	2.31	2.2	1.46	2.1
Third Quarter	.	.	.	.	.	.	.	.	.	.
Fourth Quarter	.	.	.	.	.	.	.	.	.	.
GROSS BETA MEAN ACTIVITY	18.93	2.64	41.90	3.93	35.85	3.86	41.20	4.24	45.10	4.49
First Quarter	28.1	4.2	39.8	4.7	34	5.2	43.7	6.2	42.8	6.1
Second Quarter	.	.	.	.	.	.	.	.	.	.
Third Quarter	9.76	3.2	44	6.3	37.7	5.7	38.7	5.8	47.4	6.6
Fourth Quarter	.	.	.	.	.	.	.	.	.	.

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-738 PCI/L	CE +/-	GW-739 PCI/L	CE +/-	GW-740 PCI/L	CE +/-	GW-793 PCI/L	CE +/-	GW-794 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	3.81	1.90	0.80	1.50	-0.10	1.41	-0.49	0.66	0.74	0.68
First Quarter	6.07	3.3	1.25	2.6	0.156	2.5	-0.335	0.66	1.46	1.4
Second Quarter	1.54	1.9	0.347	1.5	-0.363	1.3	0.169	1.1	-1.07	1.1
Third Quarter	.	.	.	.	.	.	-0.943	1	1.09	1.3
Fourth Quarter	.	.	.	.	.	.	.	2.1	1.47	1.6
GROSS BETA MEAN ACTIVITY	43.40	3.93	10.37	2.37	6.90	2.20	1.94	1.67	3.97	1.33
First Quarter	42.3	4.7	11.5	3.5	7.55	3.3	0.793	2.2	4.45	2.5
Second Quarter	44.5	6.3	9.24	3.2	6.25	2.9	-0.564	2.4	3.72	2.5
Third Quarter	.	.	.	.	.	.	5.3	2.4	3.06	2.7
Fourth Quarter	.	.	.	.	.	.	.	5.3	4.65	2.9

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	GW-795 PCI/L	CE +/-	GW-800 PCI/L	CE +/-	GW-828 PCI/L	CE +/-	GW-829 PCI/L	CE +/-	GW-830 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	0.31	0.61	2.13	1.05	16.30	6.82	27.92	6.44	4.26	4.40
First Quarter	0.689	1.1	4.18	2.4	.	.	.	.	.	.
Second Quarter	-0.884	1.2	1.84	1.5	13.6	3.8	80.9	15	.	.
Third Quarter	0.347	1	0.361	1.4	33	20	-0.0667	12	4.26	4.4
Fourth Quarter	1.09	1.5	.	.	2.29	1.9	2.94	2.1	.	.
GROSS BETA MEAN ACTIVITY	4.33	1.36	1.93	1.47	13.95	8.45	33.71	9.76	13.60	11.00
First Quarter	2.51	2.3	3.13	2.7	.	.	.	.	.	.
Second Quarter	1.9	2.3	2.91	2.6	9.17	3.5	71.2	15	.	.
Third Quarter	-0.403	2.5	-0.244	2.3	30.6	25	24	25	13.6	11
Fourth Quarter	13.3	3.6	.	.	2.09	2.4	5.92	2.7	.	.

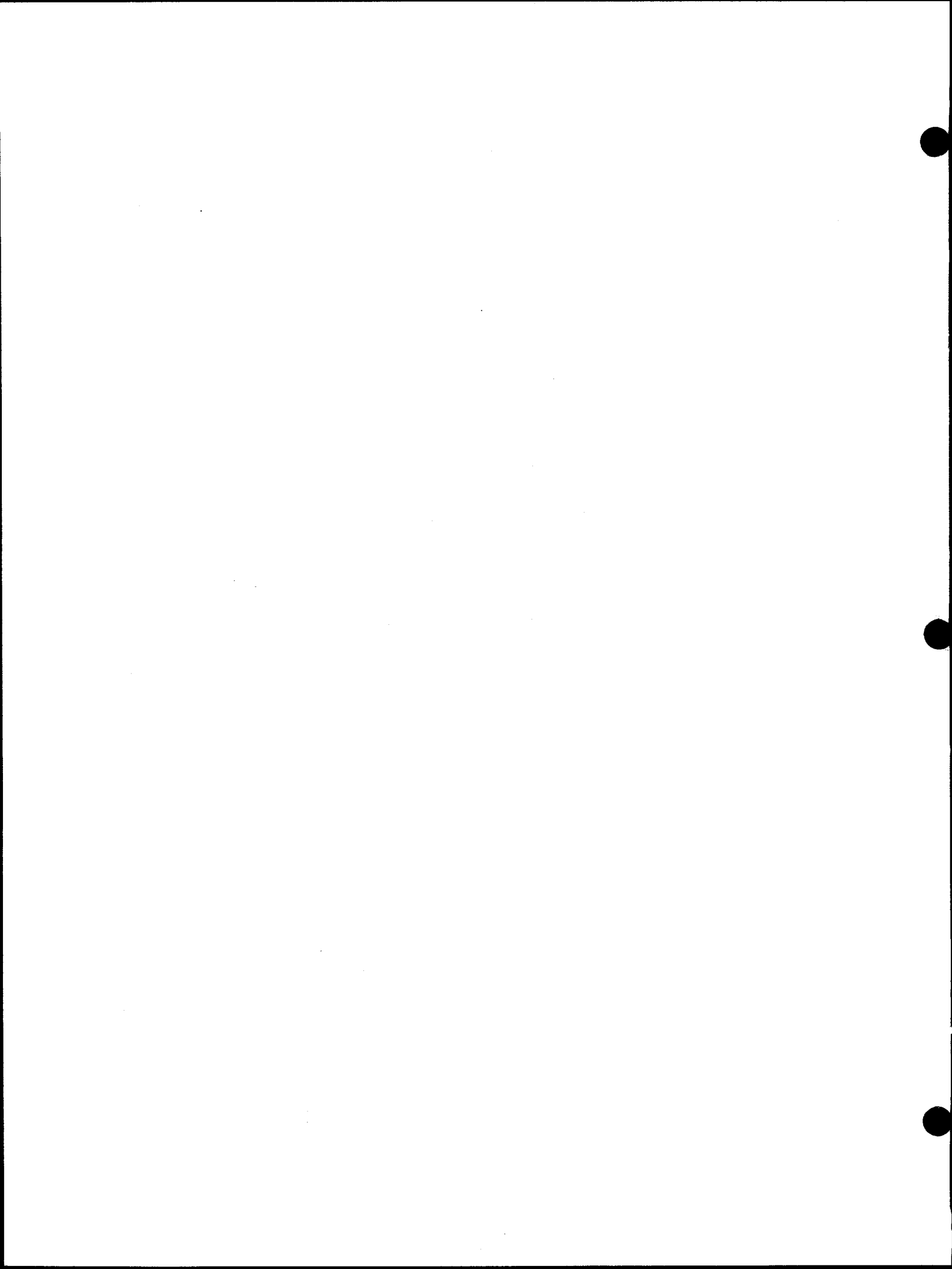
APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	NT-01 PCI/L	CE +/-	NT-02 PCI/L	CE +/-	SS-1 PCI/L	CE +/-	SS-4 PCI/L	CE +/-	SS-5 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	12.19	3.05	2.57	1.20	14.30	2.83	33.90	4.54	15.80	2.80
First Quarter	0.873	1.1	3.36	1.8	13.5	3.8	19.8	4.3	5.19	2.1
Second Quarter	23.5	6	1.77	1.6	15.1	4.2	48	8	26.4	5.2
Third Quarter	.	.	.	.	.	.	.	.	.	.
Fourth Quarter	.	.	.	.	.	.	.	.	.	.
GROSS BETA MEAN ACTIVITY	356.05	35.55	17.13	2.71	54.80	5.15	56.30	5.55	17.00	2.92
First Quarter	18.1	3.9	9.55	3.3	46.8	6.5	28.1	4.8	4.1	3
Second Quarter	.	71	24.7	4.3	62.8	8	84.5	10	29.9	5
Third Quarter	694	.	.	.	.	.	.	.	.	.
Fourth Quarter	.	.	.	.	.	.	.	.	.	.

APPENDIX G
Gross Alpha & Gross Beta Activity Data Summary, 1995

Sampling Point Type	SS-5.95K PCI/L	CE +/-	SS-6 PCI/L	CE +/-	SS-6.6K PCI/L	CE +/-	SS-6W PCI/L	CE +/-	SS-7 PCI/L	CE +/-
GROSS ALPHA MEAN ACTIVITY	0.58	0.75	1.67	1.00	0.84	0.90	2.70	1.22	8.44	1.98
First Quarter	.	.	2.17	1.6	.	.	.	.	.	.
Second Quarter	0.499	0.75	1.17	1.2	0.844	0.9	1.94	1.4	0.483	0.73
Third Quarter	.	.	.	.	.	.	.	.	.	.
Fourth Quarter	0.667	1.3	.	.	.	.	3.45	2	16.4	3.9
GROSS BETA MEAN ACTIVITY	-0.29	1.84	1.14	1.91	0.95	2.70	4.19	2.06	10.67	2.57
First Quarter	.	.	2.38	2.9	.	.	.	.	.	.
Second Quarter	-0.407	2.6	-0.0939	2.5	0.952	2.7	1.43	2.7	-2.37	2.5
Third Quarter	.	.	.	.	.	.	.	.	.	.
Fourth Quarter	-0.173	2.6	.	.	.	.	6.94	3.1	23.7	4.5

APPENDIX H
GROUNDWATER ELEVATIONS, 1995



EXPLANATION

LOCATION:

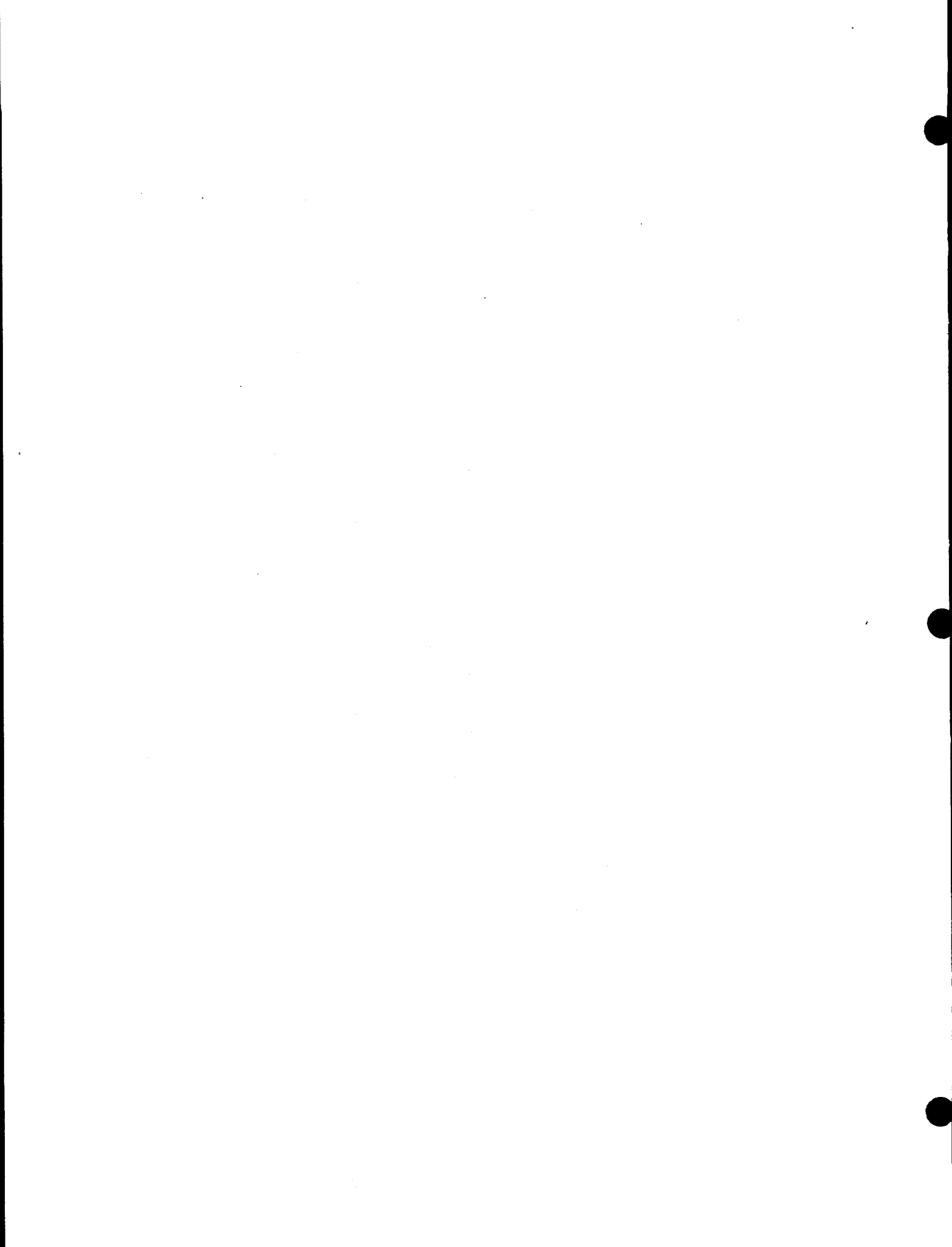
AGLLSF	-	Above Grade Low-Level Storage Facility
BG	-	Bear Creek Burial Grounds WMA
EXP	-	Exit Pathway Monitoring Location: Maynardville Limestone Picket (-A, -B, -C, -W)
LD	-	Lysimeter Demonstration Site
OLF	-	Oil Landfarm WMA
RS	-	Rust Spoil Area
S3	-	S-3 Site
SPI	-	Spoil Area I

SAMPLED IN 95:

Y	-	Well included in the 1995 groundwater monitoring program.
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NOTES:

CTP Elev.	-	The elevation of the centerpoint of the monitored interval.
April	-	Measuring event from April 3 to 7, 1995.
October	-	Measuring event from October 16 to 23, 1995.
Depth	-	The distance in ft from the top-of-casing measuring point to the static water level.
Elev.	-	The groundwater elevation in ft above mean sea level.
+/- Ft	-	The calculated drop in water-level from the April to the October measuring events. Negative results show a rise in water level.
.	-	No information available.



APPENDIX H
Groundwater Elevations, 1995

Sampling	Sampled	CTP	April		October		+/-	
Pt.	Location	in 95	Elev.	Depth	Elev.	Depth	Elev.	Ft.
Water Table Interval								
1034	BG		933.93	12.8	924.55	.	.	.
GW-001	OLF		958.44	15.8	965.06	17.9	962.96	2.1
GW-005	OLF	Y	954.62	4.2	960.93	4.8	960.33	0.6
GW-008	OLF		942.86	13.5	951.29	14.5	950.29	1.0
GW-010	OLF		940.63	3.3	949.46	4.2	948.56	0.9
GW-011	OLF		911.90	3.1	949.98	4.8	948.28	1.7
GW-012	OLF		937.40	4.6	948.97	6.4	947.17	1.8
GW-014	BG	Y	922.29	6.7	927.06	7.7	926.06	1.0
GW-016	BG		914.67	9.7	918.36	9.4	918.66	-0.3
GW-018	BG		906.14	8.2	916.29	10.7	913.79	2.5
GW-041	BG		981.52	18.4	989.15	24.8	982.75	6.4
GW-043	OLF	Y	984.78	22.4	989.11	32.2	979.31	9.8
GW-045	BG		898.65	11.6	898.19	.	.	.
GW-047	BG		906.79	6.9	921.35	8.8	919.45	1.9
GW-052	BG		891.96	11.2	894.84	17.8	888.24	6.6
GW-053	BG	Y	878.23	7.4	895.27	9.2	893.47	1.8
GW-065	OLF		948.07	27.6	954.65	28.5	953.75	0.9
GW-067	OLF		945.13	10.2	951.30	12.0	949.50	1.8
GW-080	BG	Y	951.78	22.8	957.51	25.0	955.31	2.2
GW-084	OLF	Y	971.22	14.5	982.10	15.5	981.10	1.0
GW-086	OLF		954.20	13.9	968.86	15.2	967.56	1.3
GW-087	OLF	Y	943.72	5.9	954.60	8.1	952.40	2.2
GW-090	BG		946.52	6.6	955.28	6.3	955.58	-0.3
GW-091	BG		928.17	8.8	944.68	9.9	943.58	1.1
GW-096A	BG		860.92	11.6	909.81	.	.	.
GW-097	OLF		927.20	10.9	933.72	.	.	.
GW-101	S3		992.20	9.8	997.53	10.2	997.13	0.4
GW-115	S3	Y	1006.62	10.7	1043.71	13.4	1041.01	2.7
GW-245	S3		955.41	14.0	995.08	14.4	994.68	0.4
GW-249	BG		956.82	34.5	956.65	37.9	953.25	3.4
GW-257	BG	Y	932.86	29.3	932.38	30.3	931.38	1.0
GW-276	S3	Y	983.90	7.1	994.17	6.9	994.37	-0.2
GW-277	S3		929.25	6.7	995.06	6.6	995.16	-0.1
GW-287	BG	Y	915.55	9.8	917.07	9.6	917.27	-0.2
GW-289	BG	Y	911.47	17.9	930.57	18.6	929.87	0.7
GW-291	BG	Y	931.89	11.8	936.56	12.2	936.16	0.4
GW-307	RS		955.86	28.3	964.84	33.1	960.04	4.8
GW-309	RS		954.27	21.6	966.57	22.1	966.07	0.5

APPENDIX H
Groundwater Elevations, 1995

Sampling Pt.	Location	Sampled in 95	CTP Elev.	April		October		+/- Ft.
				Depth	Elev.	Depth	Elev.	
GW-310	RS		969.10	21.8	973.55	21.8	973.55	0.0
GW-311	RS	Y	963.48	38.0	961.35	38.9	960.45	0.9
GW-323	SPI		1026.41	85.9	1044.21	86.1	1044.01	0.2
GW-325	S3		989.03	15.5	987.50	17.4	985.60	1.9
GW-345	S3		974.18	18.2	981.26	19.8	979.66	1.6
GW-347	S3	Y	979.11	19.6	981.96	18.5	983.06	-1.1
GW-370	BG	Y	930.84	14.5	946.12	16.6	944.02	2.1
GW-372	BG	Y	934.17	19.9	963.63	27.8	955.73	7.9
GW-531	LD		971.94	16.9	987.71	18.8	985.81	1.9
GW-537	OLF	Y	960.14	6.7	969.54	7.9	968.34	1.2
GW-613	S3	Y	974.17	13.4	999.97	16.2	997.17	2.8
GW-621	EXP-B	Y	891.17	13.3	911.94	20.1	905.14	6.8
GW-622	BG		907.89	10.9	913.26	11.9	912.26	1.0
GW-624	BG	Y	898.72	10.4	911.56	12.0	909.96	1.6
GW-626	BG		869.45	23.7	918.91	28.6	914.01	4.9
GW-630	LD		962.83	9.3	977.35	9.9	976.75	0.6
GW-637	OLF	Y	917.26	8.8	933.03	13.3	928.53	4.5
GW-638	OLF		931.14	7.8	933.97	11.1	930.67	3.3
GW-641	BG		926.36	17.4	929.26	21.8	924.86	4.4
GW-642	BG	Y	984.23	19.4	995.27	22.8	991.87	3.4
GW-644	OLF		939.93	9.7	950.05	10.4	949.35	0.7
GW-648	RS		953.93	66.8	962.37	70.1	959.07	3.3
GW-651	BG		854.15	7.2	895.92	10.2	892.92	3.0
GW-652	BG	Y	875.68	10.5	890.33	10.9	889.93	0.4
GW-653	BG	Y	896.20	21.9	909.70	24.8	906.80	2.9
GW-654	BG	Y	928.51	6.9	933.89	8.3	932.49	1.4
GW-715	EXP-W	Y	834.17	29.0	845.72	29.6	845.12	0.6

Bedrock Interval

GW-002	OLF		928.91	14.8	967.62	.	.	.
GW-044	OLF	Y	954.05	22.7	990.79	33.4	980.09	10.7
GW-054	BG		855.66	10.5	882.83	10.9	882.43	0.4
GW-055	BG		871.71	9.1	884.43	9.4	883.13	0.3
GW-056	EXP-A	Y	834.50	7.5	883.21	7.7	883.01	0.2
GW-057	EXP-A	Y	866.68	5.9	883.46	5.9	883.46	0.0
GW-058	BG		867.77	21.8	891.16	24.7	888.26	2.9
GW-059	BG		887.72	21.2	891.28	23.9	888.58	2.7
GW-060	BG		856.61	14.2	890.20	.	.	.
GW-061	BG	Y	879.73	14.5	889.94	16.4	888.04	1.9

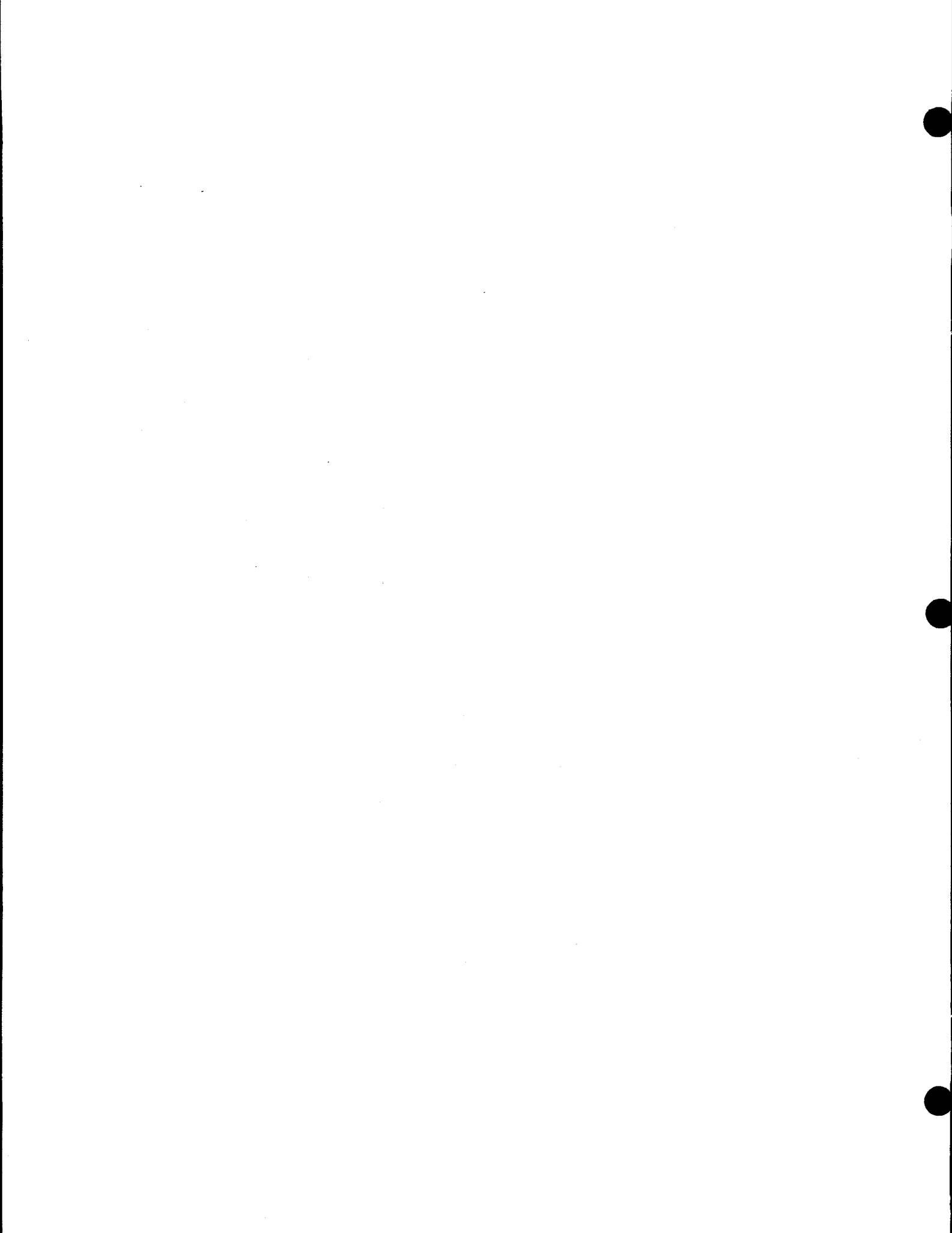
APPENDIX H
Groundwater Elevations, 1995

Sampling Pt.	Location	Sampled in 95	CTP Elev.	April Depth	Elev.	October Depth	Elev.	+/- Ft.
GW-062	OLF		911.23	29.4	932.76	32.6	929.56	3.2
GW-064	OLF	Y	929.42	25.9	955.66	27.2	954.36	1.3
GW-066	OLF	Y	904.87	9.3	952.42	12.1	949.62	2.8
GW-069	BG	Y	835.15	8.9	918.11	10.9	916.11	2.0
GW-070	BG		793.36	7.1	919.29	9.7	916.69	2.6
GW-071	BG		718.42	6.9	921.52	8.5	919.92	1.6
GW-072	BG		834.97	9.9	920.01	11.7	918.21	1.8
GW-075	OLF		774.05	2.8	961.51	3.7	960.61	0.9
GW-076	OLF		888.53	4.1	961.91	4.9	961.11	0.8
GW-077	BG		820.57	9.5	908.89	10.4	907.99	0.9
GW-078	BG		897.98	8.3	909.03	9.3	908.03	1.0
GW-079	BG	Y	919.74	19.6	960.90	25.7	954.80	6.1
GW-082	BG		927.59	19.4	943.09	20.5	941.99	1.1
GW-083	BG		909.49	13.7	924.13	13.8	924.03	0.1
GW-085	OLF	Y	926.22	13.7	969.17	15.1	967.77	1.4
GW-094	BG		808.51	7.7	905.42	10.7	902.42	3.0
GW-095	BG	Y	764.88	4.2	906.67	7.4	903.47	3.2
GW-098	OLF		851.54	15.4	929.70	19.1	926.00	3.7
GW-122	S3		887.15	17.6	989.60	17.6	989.60	0.0
GW-123	S3		457.43	4.4	1003.05	4.5	1002.95	0.1
GW-124	S3	Y	878.51	18.1	988.68	19.3	987.48	1.2
GW-162	BG	Y	929.56	18.4	1022.04	.	.	.
GW-225	OLF		765.21	16.4	926.71	19.3	923.81	2.9
GW-226	OLF		890.56	17.3	926.10	20.9	922.50	3.6
GW-227	OLF		908.91	16.1	930.36	19.1	927.36	3.0
GW-228	OLF	Y	853.85	14.6	931.87	18.5	927.97	3.9
GW-229	OLF	Y	898.21	27.1	921.90	32.6	916.40	5.5
GW-248	BG	Y	903.27	28.9	932.35	29.9	931.35	1.0
GW-250	BG		932.80	34.6	956.65	37.8	953.45	3.2
GW-286	BG		898.62	9.8	917.03	10.2	916.63	0.4
GW-288	BG	Y	893.07	17.3	931.06	18.2	930.16	0.9
GW-290	BG	Y	916.46	9.0	939.46	9.6	938.86	0.6
GW-313	SPI		944.77	71.8	980.72	73.8	978.72	2.0
GW-315	SPI	Y	947.84	58.9	988.40	61.0	986.30	2.1
GW-317	SPI	Y	936.30	74.1	988.88	77.7	985.28	3.6
GW-324	S3		928.19	14.4	989.43	17.8	986.03	3.4
GW-346	S3	Y	936.88	16.8	978.85	18.9	976.75	2.1
GW-348	S3	Y	923.50	23.9	976.22	24.2	975.92	0.3
GW-363	OLF	Y	892.91	5.7	952.21	5.9	952.01	0.2
GW-364	OLF		879.74	18.5	917.45	23.3	912.65	4.8

APPENDIX H
Groundwater Elevations, 1995

Sampling Pt.	Location	Sampled in 95	CTP Elev.	April Depth	April Elev.	October Depth	October Elev.	+/- Ft.
GW-365	OLF		794.68	11.4	924.18	15.2	920.38	3.8
GW-366	OLF		891.16	67.3	920.86	71.8	916.36	4.5
GW-369	OLF		864.86	76.7	923.02	79.4	920.32	2.7
GW-371	BG		840.63	16.9	943.32	18.6	941.62	1.7
GW-373	BG	Y	840.25	18.0	964.80	.	.	.
GW-374	BG		787.94	Flowing	.	.	.	.
GW-375	BG		776.23	7.0	913.83	9.7	911.13	2.7
GW-520	OLF		911.03	62.4	924.98	66.9	920.48	4.5
GW-602	OLF		870.76	77.3	1000.47	80.5	997.27	3.2
GW-614	S3	Y	928.49	5.3	1006.92	10.1	1002.12	4.8
GW-615	S3	Y	780.42	12.8	1003.95	13.2	1003.55	0.4
GW-616	S3		765.81	9.8	1002.01	10.9	1000.91	1.1
GW-623	BG	Y	665.86	4.0	921.21	5.9	919.31	1.9
GW-627	BG	Y	678.39	25.3	917.55	25.7	917.15	0.4
GW-629	BG		637.27	5.6	921.56	6.6	920.56	1.0
GW-640	BG		901.39	16.5	928.88	20.6	924.78	4.1
GW-646	OLF		932.41	39.9	964.56	40.6	963.86	0.7
GW-683	EXP-A	Y	804.10	88.5	883.56	88.7	883.36	0.2
GW-684	EXP-A	Y	778.13	15.3	883.36	15.5	883.16	0.2
GW-685	EXP-A	Y	775.88	7.8	883.71	8.0	883.51	0.2
GW-694	EXP-B	Y	759.33	29.2	912.18	28.9	912.48	-0.3
GW-695	EXP-B	Y	880.62	28.6	910.77	28.8	910.57	0.2
GW-703	EXP-B	Y	793.30	44.4	910.29	44.5	910.19	0.1
GW-704	EXP-B	Y	690.99	33.5	911.23	34.2	910.53	0.7
GW-705	EXP-B		652.96	18.2	910.27	21.2	907.27	3.0
GW-706	EXP-B	Y	756.03	16.5	912.17	18.1	910.57	1.6
GW-710	EXP-W	Y	265.93	67.6	843.66	68.7	842.56	1.1
GW-711	EXP-W	Y	260.86	62.6	842.60	67.2	838.00	4.6
GW-712	EXP-W	Y	424.11	34.2	842.89	35.3	841.79	1.1
GW-713	EXP-W	Y	567.73	37.3	843.33	38.5	842.13	1.2
GW-714	EXP-W	Y	742.25	29.9	845.18	31.1	843.98	1.2
GW-736	EXP-C	Y	859.05	11.3	948.82	13.5	946.62	2.2
GW-737	EXP-C	Y	873.25	11.1	948.81	13.4	946.51	2.3
GW-739	EXP-C	Y	716.06	75.2	948.54	77.8	945.94	2.6
GW-740	EXP-C	Y	839.15	71.0	948.63	73.4	946.23	2.4
GW-793	AGLLSF	Y	942.10	8.8	959.38	9.1	959.08	0.3
GW-795	AGLLSF	Y	909.12	5.9	920.08	9.6	916.38	3.7
GW-800	OLF	Y	936.00	19.3	945.06	19.4	944.96	0.1
GW-828	OLF	Y	818.40	Flowing	.	6.2	976.72	.
GW-829	OLF	Y	872.30	15.2	970.58	16.2	969.58	1.0

APPENDIX I
ION-CHARGE BALANCE CALCULATIONS



EXPLANATION

SAMPLING POINT:

BCK	-	Bear Creek Kilometer
CWESTTOE	-	Burial Ground C-West Southeast Toe French Drain
GCS-01	-	Grassy Creek Spring 01
GW	-	Monitoring Well
MS-1	-	Bear Creek Main Stem Headwaters (Station 1)
NT	-	Northern Tributary to Bear Creek
SEEP 1	-	Burial Ground A-North Seep Area
SEEP 2	-	Burial Ground C-East Seep Area
SS	-	Spring Station
TS	-	Tankfarm Spring (Bear Creek Headwaters)

LOCATION:

AGLLSF	-	Above Grade Low-Level Storage Facility
B9714	-	Y-12 TSD Garage Facility (Building 9714)
BG	-	Bear Creek Burial Grounds WMA
EXP	-	Exit Pathway Monitoring Transect or Station
OLF	-	Oil Landfarm WMA
RS	-	Rust Spoil Area
S3	-	S-3 Site
SPI	-	Spoil Area I

CHARGE BALANCE:

Charge balances for each sample were evaluated by computing a relative percent difference (RPD) between the summed milliequivalent concentrations of the principal cations and anions using the following formula:

$$RPD = \left(\frac{\sum cations - \sum anions}{\sum cations + \sum anions} \right) \times 100$$

EXPLANATION (cont'd)

Absolute Value of the RPD calculated for the following samples exceeded 10%

Sampling Point	Location	Date Sampled	RPD (%)
GW-047	BG	01/25/95	-72
GW-085	OLF	06/08/95	52
GW-085	OLF	08/06/95	-16
GW-087	OLF	09/27/95	-14
GW-276	S3	01/24/95	-13
GW-290	BG	08/07/95	12
GW-312	RS	03/25/95	-20
GW-312	RS	06/06/95	-30
GW-312	RS	08/06/95	-23
GW-315	SPI	12/07/95	-23
GW-370	BG	06/05/95	-19
GW-370	BG	08/08/95	11
GW-537	OLF	06/08/95	-15
GW-613	S3	07/24/95	-12
GW-795	BG	01/25/95	62
GW-829	OLF	06/27/95	-13

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	BCK-00.63 EXP 03/09/95	BCK-00.63 EXP 07/25/95	BCK-04.55 EXP 03/09/95	BCK-04.55 EXP 07/25/95	BCK-09.40 EXP 03/09/95	BCK-09.40 EXP 07/25/95	BCK-11.97 EXP 03/09/95	BCK-11.97 EXP 07/25/95	GCS1 EXP 05/23/95	GCS1 EXP 10/26/95
CATIONS (MEQ/L)										
Calcium	1.05	2.30	1.10	2.15	1.65	3.39	4.19	13.47	1.75	1.75
Magnesium	0.44	1.40	0.53	1.40	0.55	1.48	0.90	2.96	1.81	1.81
Potassium	0.03	0.03	0.04	0.00	0.04	0.06	0.06	0.20	0.02	0.02
Sodium	0.10	0.14	0.12	0.12	0.23	0.34	1.22	1.87	0.03	0.02
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	-	-	-	-	-	-	-	-	-	-
Total Cations	1.63	3.86	1.78	3.66	2.47	5.28	6.38	18.51	3.43	3.60
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	1.20	3.38	1.42	3.34	1.64	4.10	2.60	2.84	3.24	3.68
Chloride	0.10	0.14	0.12	0.13	0.22	0.39	1.27	1.13	0.00	0.05
Fluoride	0.00	0.01	0.00	0.01	0.01	0.01	0.02	0.06	0.00	0.00
Nitrate Nitrogen	0.09	0.09	0.11	0.09	0.28	0.43	1.93	13.57	0.00	0.02
Sulfate	0.19	0.15	0.18	0.12	0.31	0.29	0.60	1.04	0.04	0.06
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	1.58	3.77	1.82	3.68	2.46	5.22	6.42	18.64	3.28	3.80
CHARGE BALANCE (%)	2	1	-1	-0	0	1	-0	-0	2	-3
TDS (mg/L)	90	222	106	214	192	338	394	2034	172	170
TSS (mg/L)	5	1.5	5	3	4	2.5	5	<1	4	4
Turbidity (NTU)	15	2.3	13	3.7	17	3.4	7.3	0.5	0.9	0.55

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location	GW-014 BG	GW-040 BG	GW-040 BG	GW-040 BG	GW-040 BG	GW-042 BG	GW-042 BG	GW-042 BG	GW-042 BG
Date Sampled	08/04/95	02/01/95	06/06/95	08/10/95	10/11/95	02/01/95	06/06/95	08/09/95	10/11/95
CATIONS (MEQ/L)									
Calcium	5.99	0.33	0.35	0.36	0.30	0.20	0.19	0.20	0.19
Magnesium	1.56	0.53	0.56	0.63	0.59	0.34	0.38	0.35	0.38
Potassium	0.07	0.05	0.04	0.04	0.05	0.05	0.04	0.03	0.04
Sodium	0.52	0.52	0.52	0.57	0.48	0.15	0.16	0.13	0.14
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.
Total Cations	8.15	1.44	1.47	1.61	1.42	0.74	0.77	0.71	0.74
ANIONS (MEQ/L)									
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	6.95	0.74	0.76	0.78	0.78	0.48	0.52	0.60	0.62
Chloride	1.52	0.07	0.08	0.08	0.07	0.06	0.06	0.07	0.06
Fluoride	0.00	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Nitrate Nitrogen	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.03
Sulfate	0.07	0.65	0.60	0.65	0.59	0.14	0.12	0.13	0.12
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	8.55	1.50	1.46	1.52	1.45	0.71	0.72	0.81	0.84
CHARGE BALANCE (%)	-2	-2	1	3	-1	2	3	-6	-6
TDS (mg/L)	524	106	162	190	136	86	60	96	38
TSS (mg/L)	<1	11	37	637	489	<1	<1	<1	<1
Turbidity (NTU)	0.7	9	72	850	590	2.2	3.7	2.7	5

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-043 OLF 03/16/95	GW-043 OLF 06/01/95	GW-043 OLF 08/04/95	GW-043 OLF 10/18/95	GW-044 OLF 03/16/95	GW-044 OLF 06/01/95	GW-044 OLF 08/04/95	GW-044 OLF 10/18/95	GW-046 BG 08/09/95
CATIONS (MEQ/L)									
Calcium	1.05	1.05	0.85	1.25	2.25	2.40	2.59	2.45	1.05
Magnesium	0.28	0.29	0.26	0.39	0.26	0.28	0.29	0.28	0.39
Potassium	0.02	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.07
Sodium	0.30	0.30	0.30	0.32	0.24	0.23	0.20	0.22	0.32
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.
Total Cations	1.65	1.66	1.43	1.98	2.76	2.94	3.12	2.97	1.84
ANIONS (MEQ/L)									
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	1.34	1.30	1.08	1.62	2.74	2.80	2.84	2.78	1.00
Chloride	0.06	0.05	0.05	0.07	0.06	0.06	0.06	0.05	0.82
Fluoride	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Nitrate Nitrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.11
Sulfate	0.19	0.16	0.15	0.24	0.15	0.14	0.15	0.14	0.06
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	1.59	1.51	1.28	1.93	2.95	3.00	3.04	3.00	1.99
CHARGE BALANCE (%)	2	5	6	1	-3	-1	1	-0	-4
TDS (mg/L)	164	134	132	162	224	196	198	194	164
TSS (mg/L)	<1	6	21	46	<1	2.5	<1	2	<1
Turbidity (NTU)	16	12	70	97	0.3	1.5	1.5	0.7	0.2

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-047 BG 01/25/95	GW-047 BG 06/18/95	GW-047 BG 07/24/95	GW-053 BG 03/28/95	GW-053 BG 06/28/95	GW-053 BG 09/25/95	GW-053 BG 12/10/95	GW-056 EXP 03/05/95	GW-056 EXP 08/04/95
CATIONS (MEQ/L)									
Calcium	0.36	0.43	0.48	5.99	5.99	5.99	5.99	4.79	4.94
Magnesium	0.08	0.09	0.10	1.15	1.23	1.32	1.32	1.56	1.65
Potassium	0.03	0.02	0.02	0.06	0.06	0.05	0.07	0.03	0.04
Sodium	0.14	0.15	0.16	0.34	0.42	0.43	0.43	3.35	2.48
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.
Total Cations	0.62	0.69	0.76	7.54	7.70	7.78	7.81	9.73	9.10
ANIONS (MEQ/L)									
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	3.76	0.58	0.66	6.27	6.47	6.37	6.45	5.46	5.72
Chloride	0.05	0.05	0.06	0.93	0.90	0.93	1.03	3.81	1.52
Fluoride	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00
Nitrate Nitrogen	0.04	0.04	0.04	0.05	0.00	0.00	0.00	0.04	0.02
Sulfate	0.03	0.02	0.03	0.52	0.48	0.46	0.50	0.60	0.67
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	3.88	0.69	0.79	7.78	7.86	7.76	7.99	9.92	7.92
CHARGE BALANCE (%)	-72	-0	-2	-2	-1	0	-1	-1	7
TDS (mg/L)	20	90	88	406	494	438	416	544	554
TSS (mg/L)	7	12	6.5	9.5	8.5	1	7	2	3
Turbidity (NTU)	9	35	14	6.1	4.5	1.5	7.4	4.3	6.1

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-057 EXP 03/05/95	GW-057 EXP 08/05/95	GW-061 BG 03/28/95	GW-061 BG 06/28/95	GW-061 BG 09/21/95	GW-064 OLF 03/26/95	GW-064 OLF 06/07/95	GW-064 OLF 08/06/95	GW-066 OLF 09/27/95
CATIONS (MEQ/L)									
Calcium	4.69	4.99	4.24	4.44	4.59	4.99	4.99	4.99	6.99
Magnesium	1.48	1.97	0.90	1.07	1.32	1.32	1.40	1.40	2.14
Potassium	0.03	0.04	0.05	0.06	0.09	0.06	0.06	0.03	0.08
Sodium	2.96	3.39	0.33	0.37	0.48	0.20	0.20	0.18	0.37
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.
Total Cations	9.16	10.40	5.52	5.93	6.48	6.57	6.65	6.60	9.58
ANIONS (MEQ/L)									
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	5.24	5.88	3.74	4.06	4.10	6.02	6.00	6.02	5.94
Chloride	3.19	3.95	0.34	0.42	0.56	0.28	0.31	0.31	0.23
Fluoride	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.00	0.00
Nitrate Nitrogen	0.03	0.00	0.79	1.07	1.29	0.36	0.35	0.39	0.53
Sulfate	0.60	0.75	0.44	0.56	0.62	0.42	0.40	0.46	2.50
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	9.07	10.57	5.30	6.12	6.58	7.07	7.06	7.17	9.20
CHARGE BALANCE (%)	1	-1	2	-2	-1	-4	-3	-4	2
TDS (mg/L)	510	638	370	436	476	176	380	777	582
TSS (mg/L)	<1	<1	228	2150	34	770	441	654	5
Turbidity (NTU)	1.2	2	240	1440	100	1350	440	480	1.6

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location	GW-069 BG	GW-069 BG	GW-069 BG	GW-069 BG	GW-079 BG	GW-079 BG	GW-079 BG
Date Sampled	03/25/95	06/27/95	08/15/95	12/07/95	03/26/95	06/19/95	09/18/95
CATIONS (NEQ/L)							
Calcium	0.39	0.55	0.70	0.65	1.80	1.80	1.75
Magnesium	0.48	0.44	0.49	0.50	0.29	0.31	0.31
Potassium	0.11	0.15	0.12	0.12	0.03	0.05	0.03
Sodium	3.00	2.78	2.87	3.09	0.20	0.20	0.21
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	-	-	-	-	-	-	-
Total Cations	3.98	3.91	4.19	4.36	2.31	2.35	2.30
ANIONS (NEQ/L)							
Alkalinity- CO3	0.36	0.08	0.00	0.08	0.00	0.00	0.00
Alkalinity-HCO3	2.34	2.64	2.84	2.70	2.18	2.18	2.12
Chloride	1.27	1.18	1.30	1.25	0.05	0.05	0.05
Fluoride	0.00	0.01	0.01	0.01	0.00	0.01	0.01
Nitrate Nitrogen	0.00	0.03	0.00	0.10	0.00	0.03	0.02
Sulfate	0.03	0.05	0.05	0.05	0.15	0.15	0.15
Hydroxyl Ion	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	4.01	3.99	4.20	4.18	2.37	2.42	2.35
CHARGE BALANCE (%)	-0	-1	-0	2	-1	-1	1
TDS (mg/L)	240	234	252	190	152	146	140
TSS (mg/L)	<1	<1	<1	<1	<1	<1	1
Turbidity (NTU)	0.7	1.1	0.45	0.15	0.3	1	1.1
							1.3

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-080 BG 03/25/95	GW-080 BG 06/19/95	GW-080 BG 09/21/95	GW-080 BG 12/09/95	GW-084 OLF 03/23/95	GW-084 OLF 06/07/95	GW-084 OLF 08/05/95	GW-084 OLF 10/19/95
CATIONS (MEQ/L)								
Calcium	0.16	0.21	0.17	0.18	2.54	2.69	2.50	2.84
Magnesium	0.28	0.37	0.33	0.33	0.31	0.33	0.30	0.34
Potassium	0.04	0.04	0.04	0.03	0.02	0.00	0.02	0.02
Sodium	0.30	0.37	0.48	0.48	0.25	0.24	0.22	0.25
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	-	-	-	-	-	-	-	-
Total Cations	0.77	1.00	1.02	1.03	3.13	3.27	3.04	3.45
ANIONS (MEQ/L)								
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	0.54	0.68	0.68	0.66	3.16	3.20	3.08	3.12
Chloride	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.03
Fluoride	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01
Nitrate Nitrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sulfate	0.23	0.29	0.31	0.31	0.17	0.15	0.16	0.16
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	0.82	1.03	1.04	1.02	3.39	3.41	3.30	3.31
CHARGE BALANCE (%)	-3	-1	-1	0	-4	-2	-4	2
TDS (mg/L)	92	108	182	70	210	192	226	180
TSS (mg/L)	268	16	51	47	18	14	12	18
Turbidity (NTU)	400	33	50	78	4.9	6.6	5.6	16

APPENDIX 1
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-085 OLF 03/26/95	GW-085 OLF 06/08/95	GW-085 OLF 08/06/95	GW-085 OLF 10/25/95	GW-087 OLF 09/27/95	GW-095 BG 03/27/95	GW-095 BG 06/20/95	GW-095 BG 09/20/95	GW-095 BG 12/11/95	GW-100 S3 09/06/95
CATIONS (MEQ/L)										
Calcium	12.97	12.48	11.98	14.97	3.19	0.06	0.06	0.06	0.07	19.46
Magnesium	1.40	1.40	1.32	1.56	0.62	0.04	0.04	0.04	0.04	2.39
Potassium	0.06	0.05	0.05	0.05	0.11	0.05	0.06	0.05	0.05	0.09
Sodium	0.44	0.43	0.41	0.48	0.74	5.66	5.22	5.22	5.22	0.30
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.	.
Total Cations	14.87	14.35	13.75	17.06	4.66	5.81	5.39	5.38	5.38	22.24
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.64	0.72	0.64	0.60	0.00
Alkalinity-HCO3	2.92	3.00	2.88	2.94	5.20	4.52	4.46	4.50	4.46	4.34
Chloride	0.26	0.26	0.25	0.27	0.56	0.07	0.06	0.07	0.06	8.46
Fluoride	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.00
Nitrate Nitrogen	12.85	1.21	15.71	13.64	0.04	0.00	0.00	0.00	0.00	13.57
Sulfate	0.11	0.10	0.11	0.11	0.37	0.18	0.18	0.19	0.18	0.31
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.01	0.00
Total Anions	16.14	4.57	18.94	16.96	6.17	5.44	5.47	5.43	5.34	26.68
CHARGE BALANCE (%)	-4	52	-16	0	-14	3	-1	-0	0	-9
TDS (mg/L)	1204	1540	442	2018	346	482	338	314	270	2388
TSS (mg/L)	<1	280	78	22	66	<1	<1	<1	<1	1
Turbidity (NTU)	42	175	50	18	90	0.2	0.3	0.4	0.3	6.2

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-115 S3 01/14/95	GW-115 S3 07/30/95	GW-124 S3 09/16/95	GW-162 BG 01/26/95	GW-162 BG 05/31/95	GW-162 BG 08/03/95	GW-162 BG 10/11/95	GW-228 OLF 09/17/95	GW-229 OLF 09/17/95	GW-236 S3 09/16/95
CATIONS (MEQ/L)										
Calcium	3.64	3.89	7.49	1.00	1.40	1.60	1.55	5.49	7.98	4.29
Magnesium	0.90	1.07	1.48	0.36	0.37	0.43	0.41	3.29	2.39	1.07
Potassium	0.05	0.02	0.17	0.10	0.07	0.07	0.08	0.09	0.17	0.12
Sodium	0.42	0.48	0.83	0.65	0.61	0.57	0.65	0.83	2.09	1.44
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.	.
Total Cations	5.02	5.46	9.96	2.11	2.45	2.66	2.69	9.70	12.63	6.93
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	4.56	4.80	4.98	1.94	2.40	2.54	2.46	4.60	9.05	0.16
Chloride	0.14	0.19	0.76	0.10	0.10	0.10	0.09	1.21	3.39	1.35
Fluoride	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.02
Nitrate Nitrogen	0.04	0.03	3.64	0.00	0.00	0.00	0.02	2.86	0.04	4.64
Sulfate	0.35	0.35	0.90	0.17	0.17	0.19	0.18	0.77	0.48	0.94
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	5.10	5.37	10.28	2.21	2.67	2.83	2.76	9.44	12.96	7.12
CHARGE BALANCE (%)	-1	1	-2	-2	-4	-3	-1	1	-1	-1
TDS (mg/L)	262	304	908	60	164	182	148	668	786	696
TSS (mg/L)	2	<1	<1	41	5.5	<1	59	502	6	16
Turbidity (NTU)	0.3	4.5	2.3	60	9.5	5.9	120	1100	25	22

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-248 BG 08/08/95	GW-257 BG 08/08/95	GW-276 S3 01/24/95	GW-287 BG 03/26/95	GW-287 BG 06/20/95	GW-287 BG 09/18/95	GW-287 BG 12/10/95	GW-288 BG 08/09/95	GW-289 BG 08/08/95	GW-290 BG 08/07/95
CATIONS (MEQ/L)										
Calcium	3.74	1.55	7.49	1.35	1.35	2.15	2.10	1.80	1.30	3.09
Magnesium	0.82	0.23	2.30	0.39	0.57	0.43	0.52	0.33	0.30	0.78
Potassium	0.05	0.05	0.33	0.04	0.05	0.05	0.03	0.03	0.03	0.08
Sodium	0.48	0.27	4.00	0.25	0.23	0.22	0.19	0.19	0.22	0.39
Hydrogen Ion	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.	.
Total Cations	5.10	2.09	14.17	2.03	2.20	2.84	2.84	2.35	1.85	4.34
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	4.44	1.82	0.00	1.62	2.30	2.54	2.60	2.24	1.74	3.00
Chloride	0.06	0.06	7.00	0.10	0.09	0.10	0.09	0.09	0.09	0.10
Fluoride	0.01	0.01	0.35	0.00	0.01	0.01	0.01	0.00	0.01	0.01
Nitrate Nitrogen	0.00	0.03	10.78	0.03	0.00	0.00	0.00	0.02	0.03	0.00
Sulfate	0.87	0.16	0.46	0.14	0.12	0.13	0.14	0.11	0.12	0.29
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	5.38	2.07	18.59	1.89	2.52	2.77	2.84	2.45	1.99	3.39
CHARGE BALANCE (%)	-3	0	-13	4	-7	1	-0	-2	-4	12
TDS (mg/L)	322	166	1046	404	226	288	122	196	152	208
TSS (mg/L)	1	197	9	49	4	15	2	28	54	22
Turbidity (NTU)	1.2	125	5.5	320	80	84	263	19	34	7

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-291 BG 08/03/95	GW-311 RS 03/25/95	GW-311 RS 06/06/95	GW-311 RS 10/25/95	GW-312 RS 03/25/95	GW-312 RS 06/06/95	GW-312 RS 08/06/95
CATIONS (MEQ/L)							
Calcium	2.25	3.54	4.19	4.24	3.59	5.49	6.49
Magnesium	0.71	0.40	0.49	0.45	0.00	0.00	0.00
Potassium	0.08	0.05	0.04	0.04	0.18	0.19	0.18
Sodium	0.42	0.10	0.10	0.11	0.28	0.38	0.52
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.
Total Cations	3.45	4.09	4.82	4.84	4.06	6.07	7.20
ANIONS (MEQ/L)							
Alkalinity- CO ₃	0.00	0.00	0.00	0.00	0.92	1.08	1.24
Alkalinity-HCO ₃	3.12	4.46	4.60	4.56	0.00	0.00	0.00
Chloride	0.13	0.08	0.09	0.07	0.05	0.06	0.08
Fluoride	0.00	0.00	0.01	0.00	0.01	0.02	0.01
Nitrate Nitrogen	0.02	0.06	0.05	0.04	0.05	0.04	0.04
Sulfate	0.37	0.07	0.08	0.07	0.09	0.09	0.13
Hydroxyl Ion	0.00	0.00	0.00	0.00	5.01	10.00	10.00
Total Anions	3.64	4.67	4.82	4.74	6.14	11.28	11.51
CHARGE BALANCE (%)	-3	-7	-0	1	-20	-30	-23
TDS (mg/L)	222	218	320	244	108	440	332
TSS (mg/L)	2.5	<1	89	<1	<1	2	40
Turbidity (NTU)	2	0.9	1.1	0.45	0.5	13	36

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-315 SPI 03/15/95	GW-315 SPI 06/26/95	GW-315 SPI 08/21/95	GW-315 SPI 12/07/95	GW-317 SPI 03/14/95	GW-317 SPI 06/21/95	GW-317 SPI 08/15/95	GW-346 S3 08/31/95
CATIONS (MEQ/L)								
Calcium	4.64	4.99	4.89	3.94	2.54	2.45	2.40	36.93
Magnesium	1.15	0.99	0.90	0.66	1.89	1.89	1.73	15.63
Potassium	0.05	0.08	0.09	0.06	0.02	0.03	0.03	0.43
Sodium	0.11	0.24	0.28	0.26	0.21	0.16	0.10	4.35
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.
Total Cations	5.95	6.30	6.17	4.91	4.67	4.53	4.25	57.34
ANIONS (MEQ/L)								
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	5.22	4.72	4.78	4.80	4.38	4.06	4.40	2.62
Chloride	0.12	0.25	0.31	0.43	0.06	0.05	0.05	1.07
Fluoride	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Nitrate Nitrogen	0.24	0.86	1.07	1.20	0.05	0.04	0.02	59.27
Sulfate	0.37	0.52	0.46	1.38	0.17	0.10	0.09	0.60
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	5.95	6.35	6.62	7.81	4.66	4.25	4.56	63.56
CHARGE BALANCE (%)	0	-0	-4	-23	0	3	-4	-5
TDS (mg/L)	334	354	396	448	224	204	234	5316
TSS (mg/L)	<1	<1	<1	<1	<1	<1	<1	<1
Turbidity (NTU)	0.4	0.5	0.16	0.05	1	0.2	1.7	1.4

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-347 S3 03/15/95	GW-347 S3 06/21/95	GW-347 S3 08/15/95	GW-348 S3 03/15/95	GW-348 S3 06/26/95	GW-348 S3 08/21/95	GW-363 OLF 01/23/95	GW-363 OLF 06/17/95	GW-363 OLF 07/19/95	GW-363 OLF 10/19/95
CATIONS (MEQ/L)										
Calcium	1.45	1.35	1.05	4.24	4.09	4.09	0.18	0.11	0.08	0.07
Magnesium	0.16	0.17	0.14	1.48	1.48	1.40	0.08	0.07	0.05	0.05
Potassium	0.07	0.11	0.08	0.03	0.05	0.05	0.05	0.04	0.04	0.03
Sodium	0.03	0.04	0.03	0.15	0.14	0.14	4.22	4.79	4.79	5.22
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.	.
Total Cations	1.71	1.67	1.30	5.91	5.76	5.68	4.54	5.02	4.95	5.37
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.80	0.68	0.60
Alkalinity-HCO3	1.40	1.40	1.34	4.84	4.92	5.04	4.08	4.08	4.22	3.72
Chloride	0.04	0.04	0.04	0.25	0.27	0.28	0.05	0.04	0.05	0.04
Fluoride	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.02	0.01	0.01
Nitrate Nitrogen	0.04	0.03	0.02	0.59	0.54	0.54	0.03	0.00	0.00	0.00
Sulfate	0.02	0.02	0.00	0.15	0.15	0.16	0.15	0.15	0.14	0.15
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.02
Total Anions	1.50	1.50	1.40	5.82	5.88	6.02	4.88	5.11	5.12	4.53
CHARGE BALANCE (%)	6	5	-4	1	-1	-3	-4	-1	-2	8
TDS (mg/L)	98	104	84	328	330	350	228	328	312	290
TSS (mg/L)	4.5	13	1	<1	<1	<1	24	10	55	5
Turbidity (NTU)	38	24	5.4	0.6	1	0.41	16	4.3	36	2.8

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-370 BG 02/01/95	GW-370 BG 06/05/95	GW-370 BG 08/08/95	GW-372 BG 01/31/95	GW-372 BG 06/02/95	GW-372 BG 08/07/95	GW-372 BG 10/12/95
CATIONS (MEQ/L)							
Calcium	1.35	0.14	1.85	2.94	2.79	2.79	3.19
Magnesium	0.21	0.08	0.30	0.82	0.82	0.90	0.99
Potassium	0.03	0.03	0.00	0.06	0.04	0.04	0.05
Sodium	0.48	0.31	0.48	0.41	0.37	0.40	0.42
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.
Total Cations	2.07	0.56	2.62	4.24	4.03	4.14	4.65
ANIONS (MEQ/L)							
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	1.62	0.36	1.78	3.58	3.60	3.64	3.70
Chloride	0.06	0.06	0.06	0.07	0.09	0.07	0.07
Fluoride	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Nitrate Nitrogen	0.02	0.00	0.02	0.00	0.02	0.00	0.00
Sulfate	0.23	0.40	0.25	0.65	0.56	0.60	0.58
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	1.93	0.82	2.12	4.31	4.28	4.32	4.35
CHARGE BALANCE (%)	3	-19	11	-1	-3	-2	3
TDS (mg/L)	132	70	220	240	242	258	294
TSS (mg/L)	53	5.5	45	2	5.5	<1	<1
Turbidity (NTU)	21	26	20	4.5	3.6	22	0.85

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location	GW-373 BG	GW-373 BG	GW-373 BG	GW-373 BG	GW-537 OLF	GW-537 OLF	GW-537 OLF	GW-613 S3	GW-613 S3
Date Sampled	01/31/95	06/05/95	08/08/95	10/12/95	03/26/95	06/08/95	08/03/95	01/11/95	07/24/95
CATIONS (MEQ/L)									
Calcium	0.06	0.07	0.06	0.07	49.90	49.90	54.89	49.40	1.30
Magnesium	0.01	0.01	0.01	0.01	5.59	5.76	6.09	5.84	0.23
Potassium	0.04	0.03	0.03	0.03	0.08	0.08	0.06	0.08	0.02
Sodium	4.79	5.22	4.79	5.22	1.44	1.39	1.44	1.44	0.15
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.
Total Cations	4.89	5.33	4.89	5.33	57.01	57.13	62.47	56.75	1.90
ANIONS (MEQ/L)									
Alkalinity- CO ₃	0.44	1.08	0.52	0.64	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO ₃	4.00	3.40	3.74	3.58	5.52	5.60	5.58	5.46	1.96
Chloride	0.06	0.05	0.06	0.05	0.96	1.04	1.07	0.97	0.05
Fluoride	0.08	0.08	0.07	0.07	0.00	0.00	0.00	0.00	0.01
Nitrate Nitrogen	0.04	0.00	0.00	0.00	54.27	69.98	64.26	55.05	0.00
Sulfate	0.62	0.56	0.60	0.56	0.08	0.07	0.07	0.08	0.12
Hydroxyl Ion	0.01	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00
Total Anions	5.26	5.18	5.01	4.91	60.82	76.69	70.99	61.57	2.13
CHARGE BALANCE (%)	-4	1	-1	4	-3	-15	-6	-4	-12
TDS (mg/L)	284	308	320	320	4670	6034	7468	6194	130
TSS (mg/L)	4	4.5	<1	2.5	<1	<1	3	3	<1
Turbidity (NTU)	12	7.9	2.4	7.8	1	2.6	2.1	1.9	0.5

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-613 S3 07/24/95	GW-614 S3 01/11/95	GW-614 S3 07/24/95	GW-621 EXP 03/29/95	GW-621 EXP 08/30/95	GW-627 BG 03/28/95	GW-627 BG 06/22/95	GW-627 BG 09/25/95	GW-627 BG 12/10/95
CATIONS (MEQ/L)									
Calcium	1.30	2.40	2.40	2.59	2.35	0.04	0.05	0.04	0.05
Magnesium	0.22	0.78	0.90	0.76	0.79	0.02	0.02	0.02	0.02
Potassium	0.00	0.05	0.05	0.05	0.05	0.04	0.06	0.03	0.04
Sodium	0.17	0.42	0.48	0.11	0.13	13.49	13.05	11.75	13.49
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.
Total Cations	1.68	3.64	3.83	3.51	3.32	13.59	13.18	11.83	13.59
ANIONS (MEQ/L)									
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	1.44	1.36	1.32
Alkalinity-HCO3	1.96	3.36	3.40	3.30	3.18	9.93	9.83	9.75	9.95
Chloride	0.05	0.05	0.05	0.11	0.14	0.85	0.85	0.87	0.87
Fluoride	0.01	0.01	0.00	0.00	0.00	0.28	0.27	0.27	0.29
Nitrate Nitrogen	0.00	0.00	0.00	0.26	0.40	0.00	0.00	0.00	0.00
Sulfate	0.12	0.23	0.23	0.07	0.10	0.67	0.65	0.65	0.67
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
Total Anions	2.13	3.64	3.67	3.74	3.82	11.74	13.05	12.91	13.10
CHARGE BALANCE (%)	-12	0	2	-3	-7	7	0	-4	2
TDS (mg/L)	130	188	224	206	262	652	728	728	724
TSS (mg/L)	<1	12	16	11	43	<1	<1	<1	<1
Turbidity (NTU)	0.5	2.7	5.5	27	55	0.5	1.2	0.9	1

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-637 OLF 01/24/95	GW-637 OLF 06/17/95	GW-637 OLF 07/19/95	GW-642 BG 01/31/95	GW-642 BG 06/02/95	GW-642 BG 08/07/95	GW-642 BG 10/10/95	GW-652 BG 03/27/95	GW-652 BG 06/20/95	GW-652 BG 09/19/95
CATIONS (MEQ/L)										
Calcium	3.69	4.09	3.99	0.50	0.50	0.42	0.47	3.99	3.69	3.69
Magnesium	0.49	0.42	0.47	0.64	0.77	0.68	0.71	0.51	0.56	0.81
Potassium	0.06	0.04	0.05	0.06	0.05	0.05	0.05	0.06	0.07	0.09
Sodium	0.12	0.15	0.12	0.35	0.31	0.34	0.33	0.04	0.05	0.07
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.	.
Total Cations	4.37	4.70	4.63	1.55	1.62	1.49	1.55	4.61	4.38	4.66
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	4.28	4.58	4.48	1.36	1.36	1.24	1.22	4.12	4.06	4.18
Chloride	0.08	0.09	0.09	0.06	0.06	0.06	0.05	0.12	0.11	0.10
Fluoride	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.00	0.00	0.00
Nitrate Nitrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.04
Sulfate	0.15	0.15	0.16	0.23	0.21	0.21	0.21	0.15	0.15	0.16
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	4.51	4.82	4.72	1.67	1.65	1.53	1.49	4.42	4.35	4.48
CHARGE BALANCE (%)	-2	-1	-1	-4	-1	-1	2	2	0	2
TDS (mg/L)	140	278	264	200	128	134	104	272	238	278
TSS (mg/L)	3	1.5	<1	5	<1	8.5	<1	13	<1	25
Turbidity (NTU)	4.4	5.1	3	6.6	4.2	2.9	1.4	58	3.2	93

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-653 BG 03/27/95	GW-653 BG 06/20/95	GW-653 BG 09/20/95	GW-653 BG 12/08/95	GW-654 BG 03/26/95	GW-654 BG 06/19/95	GW-654 BG 09/18/95	GW-654 BG 12/09/95	GW-683 EXP 03/09/95	GW-683 EXP 08/06/95
CATIONS (MEQ/L)										
Calcium	0.10	0.10	0.09	0.09	0.75	1.55	0.95	0.95	1.20	3.19
Magnesium	0.09	0.09	0.09	0.08	0.32	0.82	0.39	0.36	0.90	1.65
Potassium	0.00	0.02	0.03	0.02	0.03	0.06	0.05	0.03	0.04	0.05
Sodium	0.12	0.12	0.12	0.11	1.26	0.23	1.35	1.83	0.08	0.33
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.	.
Total Cations	0.31	0.33	0.33	0.31	2.36	2.65	2.73	3.17	2.22	5.22
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	0.26	0.24	0.26	0.24	2.34	2.06	2.52	2.48	2.16	4.10
Chloride	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.10	0.37
Fluoride	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.02	0.00	0.01
Nitrate Nitrogen	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.09	0.66
Sulfate	0.04	0.05	0.04	0.03	0.25	0.25	0.33	0.26	0.10	0.31
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	0.35	0.33	0.35	0.32	2.68	2.38	2.92	2.80	2.45	5.45
CHARGE BALANCE (%)	-7	-0	-3	-1	-6	6	-3	6	-5	-2
TDS (mg/L)	84	56	50	<1	206	210	200	152	328	372
TSS (mg/L)	178	22	72	1	14	30	3	23	1	<1
Turbidity (NTU)	39	19	36	2.4	31	34	7.7	36	3	0.4

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-684 EXP 03/10/95	GW-684 EXP 08/06/95	GW-685 EXP 03/08/95	GW-685 EXP 08/06/95	GW-694 EXP 03/30/95	GW-694 EXP 08/31/95	GW-695 EXP 03/29/95	GW-695 EXP 08/30/95	GW-703 EXP 03/29/95	GW-703 EXP 08/30/95
CATIONS (MEQ/L)										
Calcium	1.65	2.64	4.24	4.09	4.49	6.49	1.75	1.55	3.39	2.84
Magnesium	0.99	1.32	2.06	1.97	1.56	2.47	1.40	1.48	2.55	2.30
Potassium	0.24	0.41	0.05	0.06	0.07	0.16	0.12	0.18	0.08	0.06
Sodium	0.19	0.41	1.17	0.91	0.57	1.00	1.48	1.26	0.48	0.40
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.	.
Total Cations	3.06	4.78	7.53	7.04	6.69	10.12	4.74	4.47	6.50	5.60
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	2.60	3.16	5.92	5.22	4.40	6.04	3.92	3.66	4.26	4.04
Chloride	0.28	0.56	1.33	1.27	0.62	1.13	0.24	0.20	0.59	0.51
Fluoride	0.01	0.01	0.00	0.01	0.02	0.01	0.01	0.01	0.01	0.01
Nitrate Nitrogen	0.21	0.63	0.17	0.21	1.43	1.14	0.61	0.49	1.57	1.36
Sulfate	0.15	0.29	0.44	0.40	0.50	0.52	0.20	0.19	0.46	0.46
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	3.24	4.65	7.85	7.10	6.97	8.84	4.96	4.54	6.89	6.37
CHARGE BALANCE (%)	-3	1	-2	-0	-2	7	-2	-1	-3	-6
TDS (mg/L)	184	350	468	412	390	562	270	346	378	382
TSS (mg/L)	<1	16	10	3.5	<1	<1	82	66	<1	3.5
Turbidity (NTU)	7	14	28	13	3.1	2.8	40	32	5.4	14

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APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-713 EXP 01/14/95	GW-713 EXP 07/27/95	GW-714 EXP 01/14/95	GW-714 EXP 07/29/95	GW-715 EXP 01/14/95	GW-715 EXP 07/29/95	GW-723 EXP 02/20/95	GW-723 EXP 09/13/95	GW-724 EXP 02/19/95	GW-724 EXP 09/24/95
CATIONS (MEQ/L)										
Calcium	2.99	3.19	2.79	2.84	4.19	3.84	3.39	2.40	4.44	4.54
Magnesium	2.30	2.55	1.73	1.89	1.32	1.48	2.22	2.39	3.13	3.29
Potassium	0.07	0.06	0.04	0.04	0.06	0.05	0.06	0.09	0.06	0.06
Sodium	0.61	0.65	0.16	0.17	0.44	0.48	0.38	0.39	1.00	1.00
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.	.
Total Cations	5.98	6.46	4.72	4.94	6.00	5.85	6.06	5.25	8.63	8.89
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	3.66	3.76	3.92	3.94	5.36	4.70	4.32	4.08	4.10	4.28
Chloride	0.37	0.37	0.25	0.24	0.56	0.71	0.31	0.27	1.52	1.75
Fluoride	0.03	0.03	0.01	0.01	0.00	0.00	0.02	0.02	0.01	0.01
Nitrate Nitrogen	0.04	0.04	0.31	0.28	0.07	0.09	1.14	0.48	2.93	2.71
Sulfate	2.12	2.29	0.48	0.48	0.09	0.14	0.69	0.85	0.52	0.52
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	6.22	6.48	4.96	4.94	6.08	5.62	6.47	5.70	9.08	9.27
CHARGE BALANCE (%)	-2	-0	-2	-0	-1	2	-3	-4	-3	-2
TDS (mg/L)	372	534	228	276	328	306	358	366	520	658
TSS (mg/L)	2	<1	18	126	2	<1	<1	5	<1	<1
Turbidity (NTU)	2	16	65	4.9	5	3.4	3	20	1.5	1.4

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-725 EXP 02/28/95	GW-725 EXP 09/25/95	GW-736 EXP 02/28/95	GW-736 EXP 09/26/95	GW-737 EXP 03/01/95	GW-737 EXP 09/26/95	GW-738 EXP 02/18/95	GW-738 EXP 09/17/95	GW-739 EXP 02/17/95	GW-739 EXP 09/16/95
CATIONS (MEQ/L)										
Calcium	7.49	7.98	7.49	7.49	7.49	7.49	5.49	5.49	2.79	2.99
Magnesium	2.22	2.39	1.97	1.97	1.73	2.06	1.97	1.97	2.22	2.30
Potassium	0.08	0.08	0.07	0.07	0.07	0.08	0.05	0.06	0.04	0.06
Sodium	0.87	0.87	0.91	0.91	0.83	0.91	0.32	0.33	0.12	0.11
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.	.
Total Cations	10.66	11.32	10.17	10.44	10.11	10.53	7.83	7.86	5.17	5.46
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	6.37	6.17	6.73	6.43	6.63	6.23	6.04	6.04	4.80	4.82
Chloride	1.41	1.10	1.38	1.38	1.35	1.30	0.42	0.42	0.19	0.17
Fluoride	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01
Nitrate Nitrogen	3.50	2.50	2.28	2.21	2.36	2.36	1.29	1.36	0.50	0.42
Sulfate	0.85	0.83	0.92	0.90	0.90	0.87	0.58	0.58	0.31	0.29
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	12.14	10.62	11.33	10.94	11.25	10.77	8.33	8.40	5.81	5.71
CHARGE BALANCE (%)	-7	3	-5	-2	-5	-1	-3	-3	-6	-2
TDS (mg/L)	776	774	664	724	654	756	448	548	260	358
TSS (mg/L)	<1	<1	<1	<1	<1	<1	2	39	6	<1
Turbidity (NTU)	1.3	2.1	0.1	0.25	1	1	12	81	6.2	6.8

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-740 EXP 02/16/95	GW-740 EXP 09/17/95	GW-793 AGLLSF 01/23/95	GW-793 AGLLSF 06/17/95	GW-793 AGLLSF 07/19/95	GW-793 AGLLSF 10/19/95	GW-794 AGLLSF 01/24/95	GW-794 AGLLSF 06/18/95	GW-794 AGLLSF 07/24/95	GW-794 AGLLSF 10/24/95
CATIONS (MEQ/L)										
Calcium	2.94	2.99	2.54	2.59	2.59	2.99	4.19	3.24	3.94	5.49
Magnesium	2.39	2.55	0.37	0.39	0.38	0.41	0.99	0.99	0.99	0.74
Potassium	0.04	0.05	0.03	0.03	0.02	0.02	0.10	0.07	0.07	0.08
Sodium	0.09	0.10	0.16	0.17	0.16	0.17	0.12	0.09	0.12	0.17
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.	.
Total Cations	5.46	5.69	3.10	3.19	3.15	3.60	5.40	4.39	5.11	6.48
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	5.10	5.16	3.12	3.06	3.04	3.04	4.70	4.40	4.74	4.68
Chloride	0.20	0.18	0.05	0.05	0.06	0.04	0.27	0.28	0.28	0.25
Fluoride	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.00
Nitrate Nitrogen	0.29	0.23	0.03	0.00	0.00	0.00	0.02	0.06	0.07	0.05
Sulfate	0.29	0.27	0.10	0.09	0.11	0.09	0.52	0.46	0.42	0.43
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	5.89	5.84	3.30	3.20	3.20	3.17	5.52	5.21	5.51	5.40
CHARGE BALANCE (%)	-4	-1	-3	-0	-1	6	-1	-9	-4	9
TDS (mg/L)	298	346	146	200	206	202	246	348	314	340
TSS (mg/L)	1	2	1	<1	7.5	<1	458	<1	24	<1
Turbidity (NTU)	2.5	7.1	2.4	0.8	6.4	0.6	360	7.1	35	4

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-795 AGLLSF 01/25/95	GW-795 AGLLSF 06/18/95	GW-795 AGLLSF 07/24/95	GW-795 AGLLSF 10/24/95	GW-800 OLF 03/25/95	GW-800 OLF 05/31/95	GW-800 OLF 08/05/95	GW-828 OLF 06/27/95	GW-828 OLF 08/24/95	GW-828 OLF 12/08/95
CATIONS (MEQ/L)										
Calcium	3.94	4.14	4.14	5.49	1.85	2.15	3.09	0.10	0.13	0.09
Magnesium	0.29	0.30	0.29	0.39	1.23	1.48	2.39	0.03	0.04	0.03
Potassium	0.04	0.03	0.04	0.02	0.05	0.05	0.05	0.06	0.08	0.05
Sodium	0.09	0.09	0.09	0.12	0.03	0.04	0.05	7.83	7.83	7.40
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.	.
Total Cations	4.36	4.56	4.56	6.03	3.17	3.72	5.58	8.02	8.08	7.57
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	1.56	1.04
Alkalinity-HCO3	0.50	4.00	4.12	4.42	3.20	4.00	5.20	5.66	5.42	5.64
Chloride	0.11	0.11	0.10	0.13	0.06	0.06	0.06	0.31	0.31	0.29
Fluoride	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.08
Nitrate Nitrogen	0.05	0.00	0.00	0.18	0.03	0.00	0.00	0.20	0.79	0.06
Sulfate	0.37	0.35	0.33	0.51	0.17	0.13	0.23	0.52	0.56	0.49
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.01
Total Anions	1.03	4.46	4.55	5.23	3.46	4.18	5.48	7.75	8.75	7.62
CHARGE BALANCE (%)	62	1	0	7	-4	-6	1	2	-4	-0
TDS (mg/L)	232	260	264	284	114	264	302	594	990	444
TSS (mg/L)	<1	<1	<1	<1	4	266	233	980	5550	20
Turbidity (NTU)	1.1	0.6	0.3	0.25	5	230	240	280	1330	8.4

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location Date Sampled	GW-829 OLF 06/27/95	GW-829 OLF 08/30/95	GW-829 OLF 12/10/95	GW-830 B9714 09/14/95	NT-01 EXP 03/09/95	NT-01 EXP 07/25/95	NT-02 EXP 03/09/95	NT-02 EXP 09/22/95	SS-1 EXP 03/09/95	SS-1 EXP 09/22/95
CATIONS (MEQ/L)										
Calcium	4.64	1.35	1.45	1.45	3.09	15.97	1.00	2.94	7.98	8.98
Magnesium	1.65	0.68	0.90	1.15	0.77	3.54	0.24	0.70	1.23	1.56
Potassium	0.26	0.17	0.15	0.06	0.06	0.25	0.04	0.09	0.09	0.15
Sodium	7.40	5.22	5.22	0.06	0.35	1.74	0.10	0.14	0.61	1.35
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	-	-	-	-	-	-	-	-	-	-
Total Cations	13.94	7.42	7.72	2.72	4.26	21.50	1.38	3.88	9.91	12.05
ANIONS (MEQ/L)										
Alkalinity- CO3	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	3.54	3.46	3.12	2.78	1.20	3.88	0.40	1.90	6.45	6.55
Chloride	0.18	0.11	0.10	0.05	0.20	0.71	0.07	0.09	1.18	2.71
Fluoride	0.02	0.02	0.02	0.01	0.01	0.08	0.00	0.01	0.00	0.01
Nitrate Nitrogen	14.28	4.21	3.88	0.04	2.43	12.14	0.58	1.79	1.64	2.00
Sulfate	0.27	0.35	0.42	0.06	0.35	1.46	0.21	0.90	1.10	1.29
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	18.28	8.15	7.73	2.95	4.19	18.26	1.25	4.68	10.39	12.57
CHARGE BALANCE (%)	-13	-5	-0	-4	1	8	5	-9	-2	-2
TDS (mg/L)	1538	286	502	168	330	2010	110	392	586	956
TSS (mg/L)	227	570	16.5	26	5	1	10	7.5	2	3.5
Turbidity (NTU)	85	340	13	19	16	2.5	20	17	1	4.1

APPENDIX I
Ion-Charge Balance Calculations, 1995

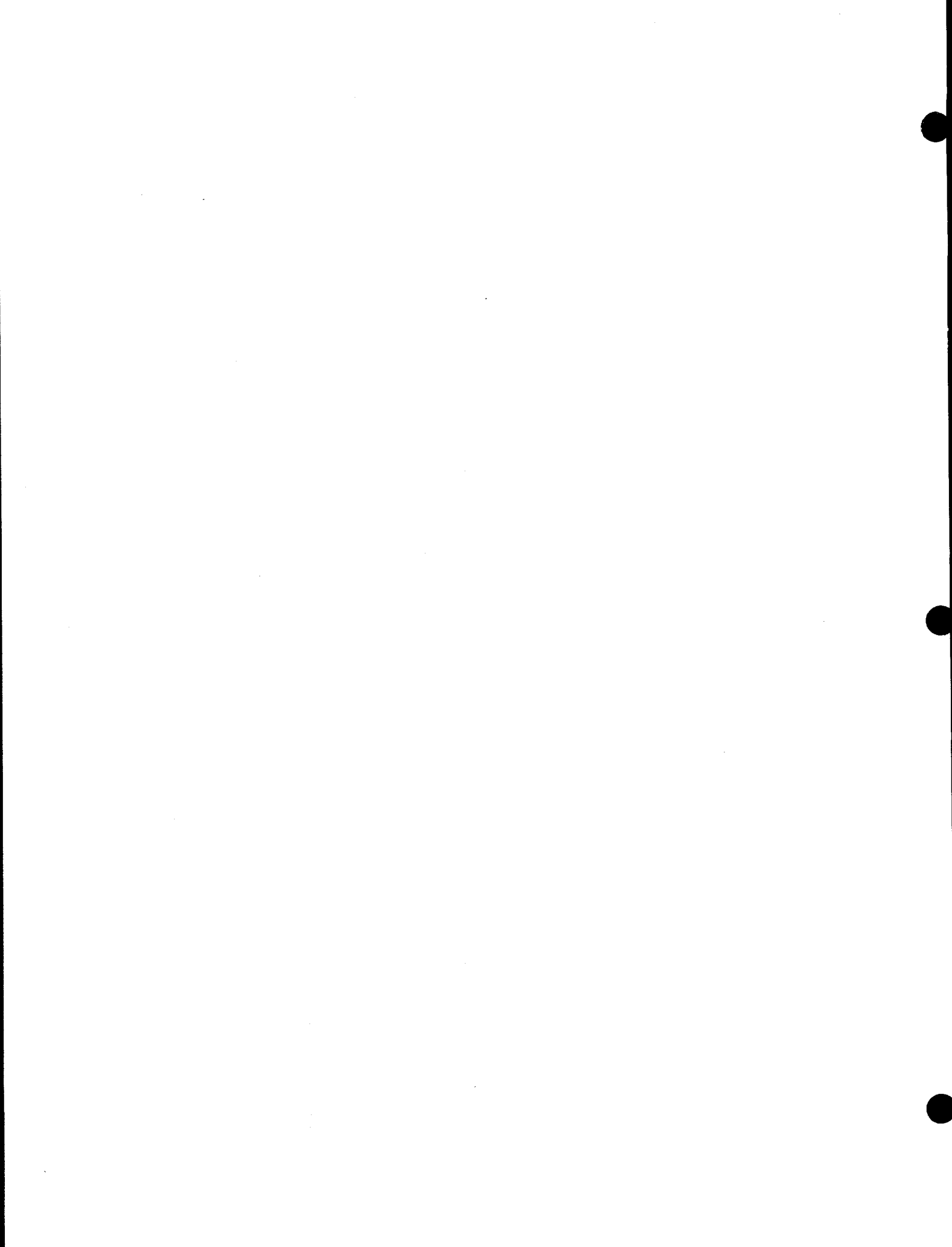
Sampling Point Location Date Sampled	SS-4 EXP 03/09/95	SS-4 EXP 07/25/95	SS-5 EXP 03/09/95	SS-5 EXP 07/25/95	SS-5.95K EXP 05/23/95	SS-5.95K EXP 10/26/95	SS-6 EXP 03/09/95	SS-6 EXP 07/25/95	SS-6.6K EXP 05/23/95
CATIONS (MEQ/L)									
Calcium	2.79	4.99	1.20	3.39	1.95	2.00	0.95	1.65	2.69
Magnesium	1.23	1.89	0.90	1.65	1.81	1.97	0.56	1.48	1.07
Potassium	0.05	0.10	0.02	0.04	0.00	0.02	0.00	0.00	0.03
Sodium	0.32	0.74	0.07	0.35	0.04	0.06	0.02	0.03	0.16
Hydrogen Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.	.	.	.	.	.
Total Cations	4.40	7.72	2.19	5.43	3.79	4.04	1.53	3.15	3.95
ANIONS (MEQ/L)									
Alkalinity- CO3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkalinity-HCO3	3.34	4.92	1.96	4.28	3.74	4.04	1.28	3.06	3.62
Chloride	0.34	0.79	0.10	0.39	0.04	0.07	0.05	0.05	0.19
Fluoride	0.01	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Nitrate Nitrogen	0.26	1.64	0.09	0.54	0.00	0.02	0.05	0.03	0.02
Sulfate	0.27	0.54	0.10	0.29	0.06	0.07	0.10	0.05	0.17
Hydroxyl Ion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Anions	4.22	7.91	2.25	5.51	3.84	4.20	1.48	3.19	3.99
CHARGE BALANCE (%)	2	-1	-1	-1	-1	-2	2	-1	-0
TDS (mg/L)	210	496	110	332	188	188	76	174	214
TSS (mg/L)	22	<1	<1	24	<1	1.5	<1	<1	36
Turbidity (NTU)	15	1.5	4.7	0.8	0.5	0.75	3.6	2.3	4.6

APPENDIX I
Ion-Charge Balance Calculations, 1995

Sampling Point Location	SS-6W EXP 05/23/95	SS-6W EXP 10/26/95	SS-7 EXP 05/23/95	SS-7 EXP 10/26/95
Date Sampled				
CATIONS (MEQ/L)				
Calcium	1.35	2.54	1.70	2.64
Magnesium	1.07	1.73	0.79	1.56
Potassium	0.02	0.02	0.00	0.04
Sodium	0.09	0.14	0.09	0.25
Hydrogen Ion	0.00	0.00	0.00	0.00
Ammonia Nitrogen	.	.	.	.
Total Cations	2.52	4.43	2.57	4.50
ANIONS (MEQ/L)				
Alkalinity- CO ₃	0.00	0.00	0.00	0.00
Alkalinity-HCO ₃	2.32	3.78	2.30	3.78
Chloride	0.08	0.17	0.08	0.28
Fluoride	0.00	0.00	0.00	0.00
Nitrate Nitrogen	0.00	0.13	0.02	0.34
Sulfate	0.09	0.44	0.04	0.33
Hydroxyl Ion	0.00	0.00	0.00	0.00
Total Anions	2.49	4.51	2.44	4.73
CHARGE BALANCE (%)	1	-1	3	-3
TDS (mg/L)	134	272	144	228
TSS (mg/L)	<1	6	<1	3
Turbidity (NTU)	1.8	2.4	3	1.2

APPENDIX J

**TRACE METAL CONCENTRATIONS THAT EXCEED
MAXIMUM CONTAMINANT LEVELS**



EXPLANATION

SAMPLING POINT:

BCK	-	Bear Creek Kilometer
CWESTTOE	-	Burial Ground C-West Southeast Toe French Drain
GCS-01	-	Grassy Creek Spring 01
GW	-	Monitoring Well
MS-1	-	Bear Creek Main Stem Headwaters (Station 1)
NT	-	Northern Tributary to Bear Creek
SEEP 1	-	Burial Ground A-North Seep Area
SEEP 2	-	Burial Ground C-East Seep Area
SS	-	Spring Station
TS	-	Tankfarm Spring (Bear Creek Headwaters)

LOCATION:

AGLLSF	-	Above Grade Low-Level Storage Facility
B9714	-	Y-12 TSD Garage Facility (Building 9714)
BG	-	Bear Creek Burial Grounds WMA
EXP	-	Exit Pathway Monitoring Transect or Station
OLF	-	Oil Landfarm WMA
RS	-	Rust Spoil Area
S3	-	S-3 Site
SPI	-	Spoil Area I

NOTES:

<	-	Compound not detected at the reported minimum attainable detection limit
.	-	Metal Concentration less than the Maximum Contaminant Level (MCL)
DIS	-	Filtered sample
TOT	-	Unfiltered sample
mg/L	-	milligrams per liter
NTU	-	Nephelometric Turbidity Units
AAS	-	Atomic Absorption Spectroscopy
ICAP	-	Inductively Coupled Arc Plasma Spectroscopy
CVAA	-	Cold Vapor Atomic Absorption
d	-	Laboratory Qualifier, diluted sample (reporting limits raised accordingly)
S	-	Laboratory Qualifier, spike recovery not within limits

EXPLANATION (cont'd)

MCLS:

<u>Metal</u>	<u>MCL (mg/L)</u>
Barium (ICP)	2.0
Cadmium (AAS or ICAP)	0.005
Chromium (AAS or ICAP)	0.10
Lead (AAS or ICAP)	0.05
Mercury (CVAA)	0.002

Because of inherent analytical interferences, ICP results for arsenic, selenium, and silver were not evaluated with respect to MCLs. Historical AAS results for these metals have shown only isolated and sporadic occurrences where concentrations exceeded MCLs.

APPENDIX J
Trace Metal Concentrations That Exceed
Maximum Contaminant Levels, 1995

WELL IDENTITY	WASTE DISPOSAL SITE NAME	GW-040	GW-042	GW-042	GW-042	GW-042	GW-042	GW-042	GW-042	GW-042	GW-042	GW-042
DATE SAMPLED		08/10/95	02/01/95	02/01/95	06/06/95	06/06/95	08/09/95	08/09/95	10/11/95	10/11/95	10/11/95	10/11/95
SAMPLE		TOT	TOT	DIS	TOT	DIS	TOT	DIS	TOT	DIS	TOT	DIS
SAMPLE TYPE												
BARIUM	ICAP (MG/L)	.	.	.	.	.	.	.	.	.	.	.
CADMIUM	AAS (MG/L)	.	0.046	0.022	0.0075	0.0082	0.011	0.011	0.0053	0.034	.	.
CADMIUM	ICAP (MG/L)	.	0.038	0.013	0.007	0.0074	0.011	0.013	0.0063	0.033	.	.
CHROMIUM	AAS (MG/L)	0.11	.	.	.	.	.	.	.	.	.	.
CHROMIUM	ICAP (MG/L)	0.028	.	.	.	.	.	.	.	.	.	.
LEAD	AAS (MG/L)	.	.	.	.	.	.	.	.	.	.	.
LEAD	ICAP (MG/L)	.	.	.	.	.	.	.	.	.	.	.
MERCURY	CVAA (MG/L)	.	.	.	.	.	.	.	.	.	.	.
TOTAL SUSPENDED SOLIDS	(MG/L)	637	<1	.	<1	.	<1	.	<1	.	.	.
TURBIDITY	(NTU)	850	2.2	.	3.7	.	2.7	.	5	.	.	.

APPENDIX J
Trace Metal Concentrations That Exceed
Maximum Contaminant Levels, 1995

WELL IDENTITY WASTE DISPOSAL SITE NAME DATE SAMPLED SAMPLE TYPE	GW-056 EXP 08/04/95 TOT	GW-056 EXP 08/04/95 DIS	GW-064 OLF 03/26/95 TOT	GW-064 OLF 03/26/95 DIS	GW-064 OLF 08/06/95 TOT	GW-064 OLF 08/06/95 DIS	GW-080 BG 12/09/95 TOT	GW-080 BG 12/09/95 DIS	GW-087 OLF 09/27/95 TOT	GW-087 OLF 09/27/95 DIS
BARIUM	.	.	.	.	.	.	.	.	.	.
CADMIUM	.	.	.	.	.	.	.	.	.	.
CADMIUM	.	.	.	.	.	.	.	.	.	.
CHROMIUM	0.23	<0.01	.	.	.	.	.	.	<0.002	0.014
CHROMIUM	0.16	<0.01	.	.	.	.	.	.	<0.003	0.014
CHROMIUM	.	.	.	.	.	.	.	.	.	.
LEAD	.	.	.	.	.	.	0.042	<0.004	.	.
LEAD	.	.	0.051	<0.05	0.076	<0.05	0.056	<0.05	.	.
MERCURY	.	.	.	.	.	.	.	.	.	.
TOTAL SUSPENDED SOLIDS	3	.	770	.	654	.	47	.	66	.
TURBIDITY	6.1	.	1350	.	480	.	78	.	90	.

APPENDIX J
Trace Metal Concentrations That Exceed
Maximum Contaminant Levels, 1995

WELL IDENTITY	GW-162	GW-162	GW-276	GW-276	GW-276	GW-276	GW-276
WASTE DISPOSAL SITE NAME	GW-162	GW-162	GW-276	GW-276	GW-276	GW-276	GW-276
DATE SAMPLED	05/31/95	05/31/95	01/24/95	01/24/95	01/24/95	07/29/95	07/29/95
SAMPLE TYPE	TOT	DIS	TOT	DIS	DIS	TOT	DIS
SAMPLE TYPE	TOT	DIS	TOT	DIS	DIS	TOT	DIS
BARIUM	ICAP (NG/L)	.	.	.	.	.	.
CADMIUM	AAS (NG/L)	.	.	.	.	.	.
CADMIUM	ICAP (NG/L)	.	.	.	.	.	.
CHROMIUM	AAS (NG/L)	<0.01	<0.01	.	.	.	.
CHROMIUM	ICAP (NG/L)	0.19	<0.01	.	.	.	.
LEAD	AAS (NG/L)	.	.	.	.	.	.
LEAD	ICAP (NG/L)	.	.	.	.	.	.
MERCURY	CVAA (NG/L)	.	.	.	.	.	.
TOTAL SUSPENDED SOLIDS	(NG/L)	5.5	9	.	.	234	.
TURBIDITY	(NTU)	9.5	5.5	.	.	1400	.

APPENDIX J

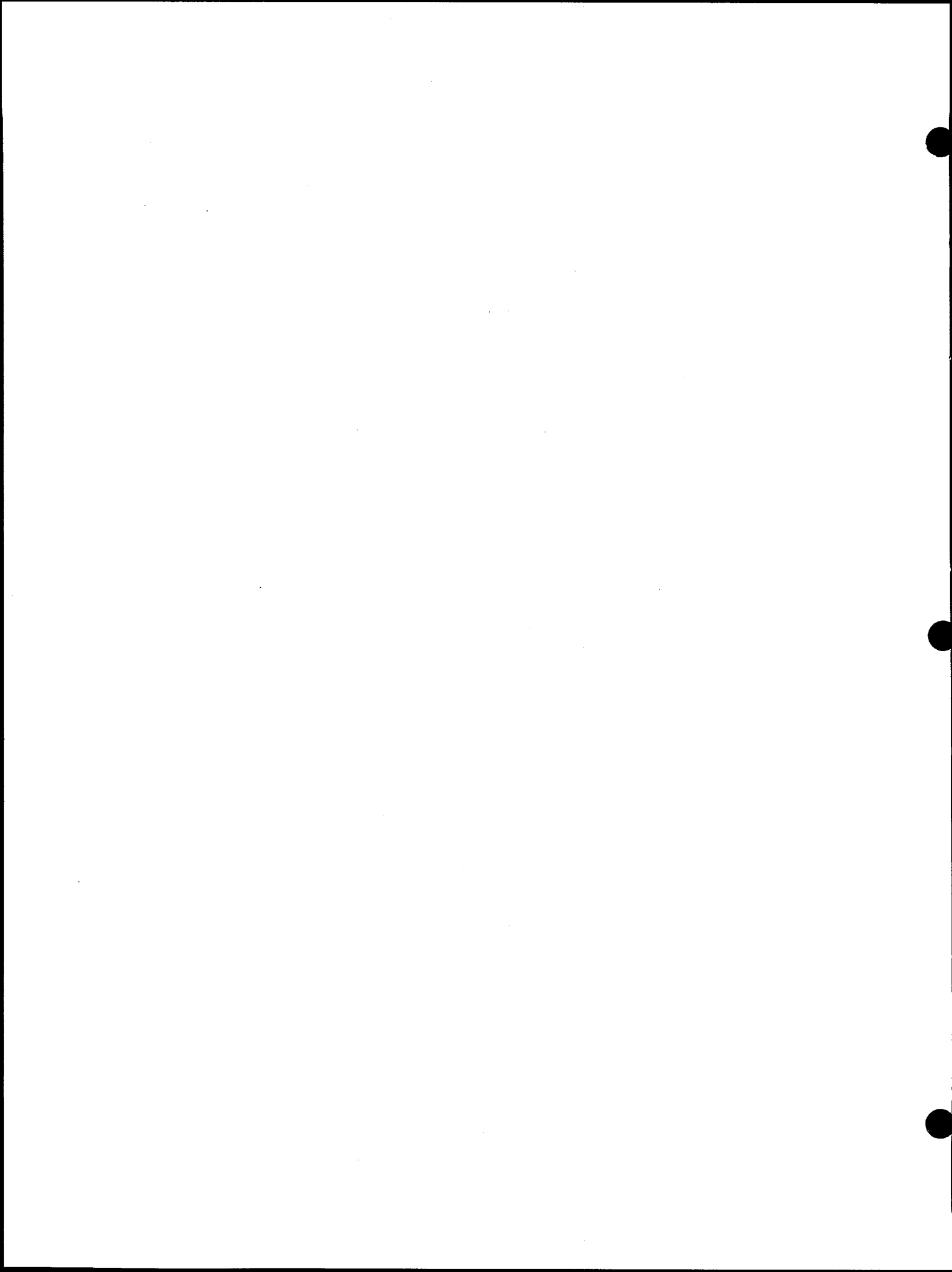
TOTAL SUSPENDED SOLIDS
TURBIDITY

APPENDIX J
Trace Metal Concentrations That Exceed
Maximum Contaminant Levels, 1995

WELL IDENTITY WASTE DISPOSAL SITE NAME DATE SAMPLED SAMPLE TYPE	GW-793 AGLLSF 01/23/95 TOT	GW-793 AGLLSF 01/23/95 DIS	GW-828 OLF 08/24/95 TOT	GW-828 OLF 08/24/95 DIS	GW-829 OLF 06/27/95 TOT	GW-829 OLF 06/27/95 DIS	NT-01 EXP 07/25/95 TOT	NT-01 EXP 07/25/95 DIS
BARIUM	ICAP (MG/L)	.	.	.	3	1.5	.	.
CADMIUM	AAS (MG/L)	.	.	.	.	.	0.031	0.031
CADMIUM	ICAP (MG/L)	.	.	.	.	.	0.026	0.031
CHROMIUM	AAS (MG/L)	.	0.13	.	0.11	<0.01	.	.
CHROMIUM	ICAP (MG/L)	.	0.056	<0.01	1.3	<0.01	.	.
LEAD	AAS (MG/L)	.	0.057	<0.004	0.059	<0.004	<0.004	<0.004
LEAD	ICAP (MG/L)	0.051	<0.05	<0.05	0.1	<0.05	<0.05	0.065
MERCURY	CVAAL (MG/L)	.	.	.	.	.	.	.
TOTAL SUSPENDED SOLIDS	(MG/L)	1	5550	.	227	.	1	.
TURBIDITY	(NTU)	2.4	1330	.	85	.	2.5	.



APPENDIX K
NITRATE CONCENTRATIONS



EXPLANATION

SAMPLING POINT:

BCK	-	Bear Creek Kilometer
CWESTTOE	-	Burial Ground C-West Southeast Toe French Drain
GCS-01	-	Grassy Creek Spring 01
GW	-	Monitoring Well
MS-1	-	Bear Creek Main Stem Headwaters (Station 1)
NT	-	Northern Tributary to Bear Creek
SEEP 1	-	Burial Ground A-North Seep Area
SEEP 2	-	Burial Ground C-East Seep Area
SS	-	Spring Station
TS	-	Tankfarm Spring (Bear Creek Headwaters)

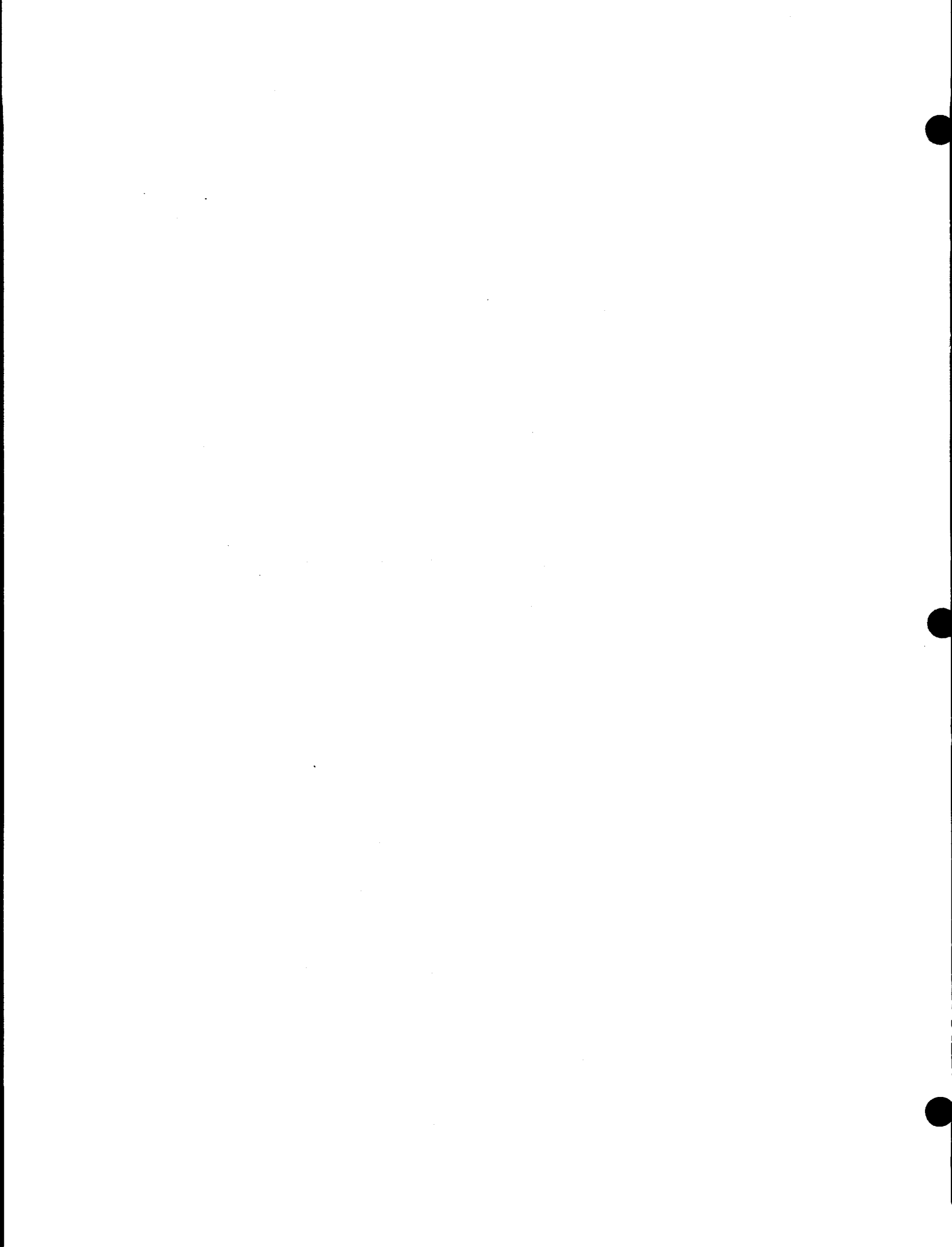
LOCATION:

AGLLSF	-	Above Grade Low-Level Storage Facility
B9714	-	Y-12 TSD Garage Facility (Building 9714)
BG	-	Bear Creek Burial Grounds WMA
EXP	-	Exit Pathway Monitoring Transect or Station
OLF	-	Oil Landfarm WMA
RS	-	Rust Spoil Area
S3	-	S-3 Site
SPI	-	Spoil Area I

NOTES:

All concentrations reported as nitrate (as N) in mg/L

<	-	Compound not detected at the reported minimum attainable detection limit
.	-	Not sampled
mg/L	-	milligrams per liter



Appendix K
Average Annual Detected Nitrate Concentrations (mg/L), 1995

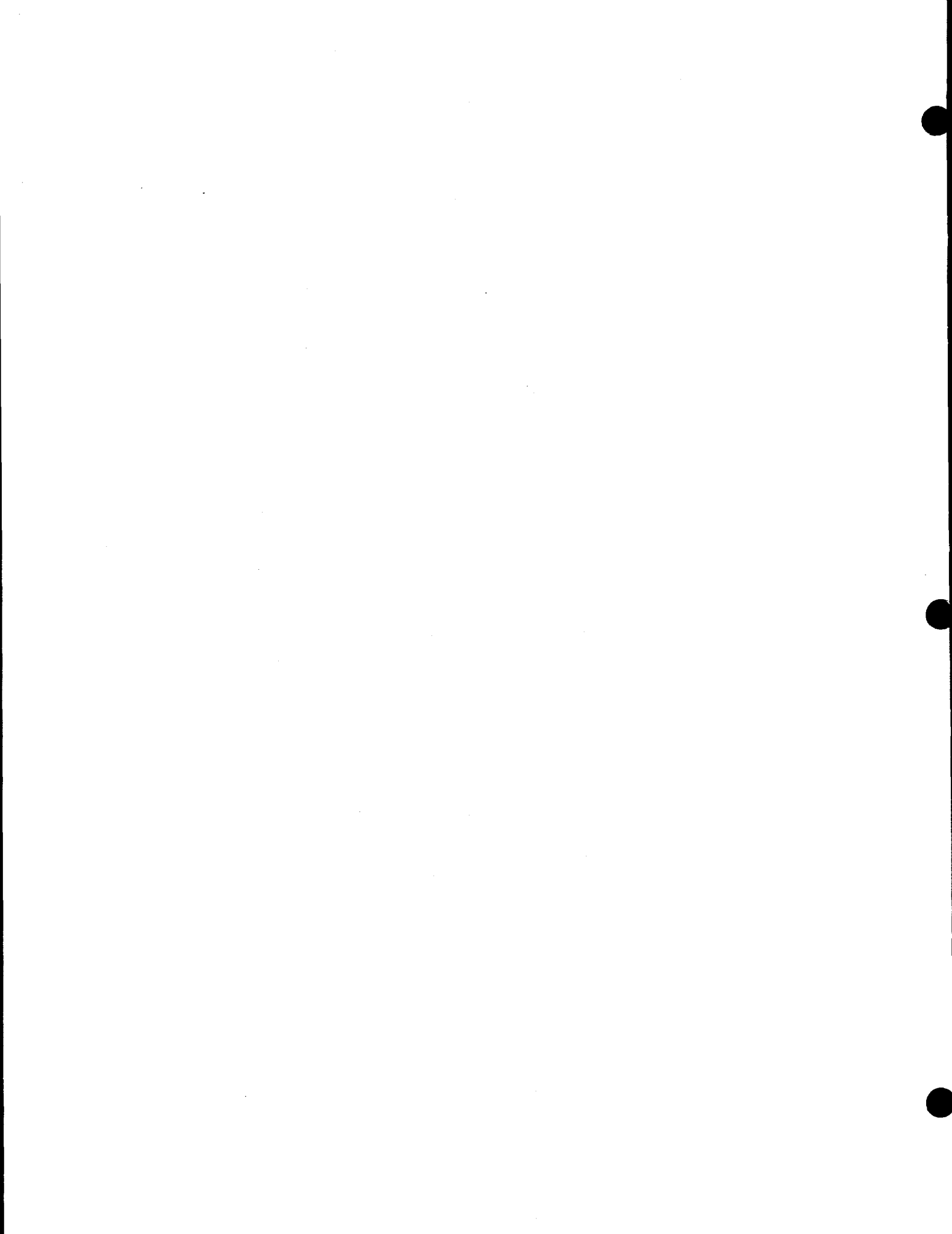
Sampling Point	Location	No. Detected	1995 Average	1st Q	2nd Q	3rd Q	4th Q
BCK-00.63	EXP	2	1.25	1.2	.	1.3	.
BCK-04.55	EXP	2	1.35	1.5	.	1.2	.
BCK-09.40	EXP	2	4.95	3.9	.	6	.
BCK-11.97	EXP	2	108.50	27	.	190	.
GCS1	EXP	1	0.27	.	<0.2	.	0.274
GW-014	BG	0	.	.	.	<0.2	.
GW-040	BG	1	0.34	0.34	<0.2	<0.2	<0.2
GW-042	BG	2	0.39	0.32	<0.2	<0.2	0.46
GW-043	OLF	0	.	<0.2	<0.2	<0.2	<0.2
GW-044	OLF	1	0.34	<0.2	<0.2	<0.2	0.341
GW-046	BG	1	1.60	.	.	1.6	.
GW-047	BG	3	0.57	0.57	0.55	0.59	.
GW-053	BG	1	0.76	0.76	<0.2	<0.2	<0.2
GW-056	EXP	2	0.37	0.52	.	0.22	.
GW-057	EXP	1	0.49	0.49	.	<0.2	.
GW-061	BG	3	14.67	11	15	18	.
GW-064	OLF	3	5.10	5	4.9	5.4	.
GW-066	OLF	1	7.40	.	.	7.4	.
GW-069	BG	2	0.89	<0.2	0.4	<0.2	1.38
GW-079	BG	2	0.41	<0.2	0.48	0.34	<0.93
GW-080	BG	0	.	<0.2	<0.2	<0.2	<0.2
GW-084	OLF	0	.	<0.2	<0.2	<0.2	<0.2
GW-085	OLF	4	152.00	180	17	220	191
GW-087	OLF	1	0.52	.	.	0.52	.
GW-095	BG	0	.	<0.2	<0.2	<0.2	<0.2
GW-100	S3	1	190.00	.	.	190	.
GW-115	S3	2	0.52	0.62	.	0.42	.
GW-124	S3	1	51.00	.	.	51	.
GW-162	BG	1	0.33	<0.2	<0.2	<0.2	0.33
GW-228	OLF	1	40.00	.	.	40	.
GW-229	OLF	1	0.54	.	.	0.54	.
GW-236	S3	1	65.00	.	.	65	.
GW-248	BG	0	.	.	.	<0.2	.
GW-257	BG	1	0.36	.	.	0.36	.
GW-276	S3	2	185.50	151	.	220	.
GW-287	BG	1	0.42	0.42	<0.2	<0.2	<0.2
GW-288	BG	1	0.25	.	.	0.25	.
GW-289	BG	1	0.49	.	.	0.49	.
GW-290	BG	0	.	.	.	<0.2	.
GW-291	BG	1	0.31	.	.	0.31	.
GW-311	RS	3	0.67	0.78	0.74	.	0.497
GW-312	RS	3	0.60	0.74	0.51	0.54	.
GW-315	SPI	4	11.80	3.4	12	15	16.8
GW-317	SPI	3	0.50	0.67	0.54	0.3	.

Appendix K
Average Annual Detected Nitrate Concentrations (mg/L), 1995

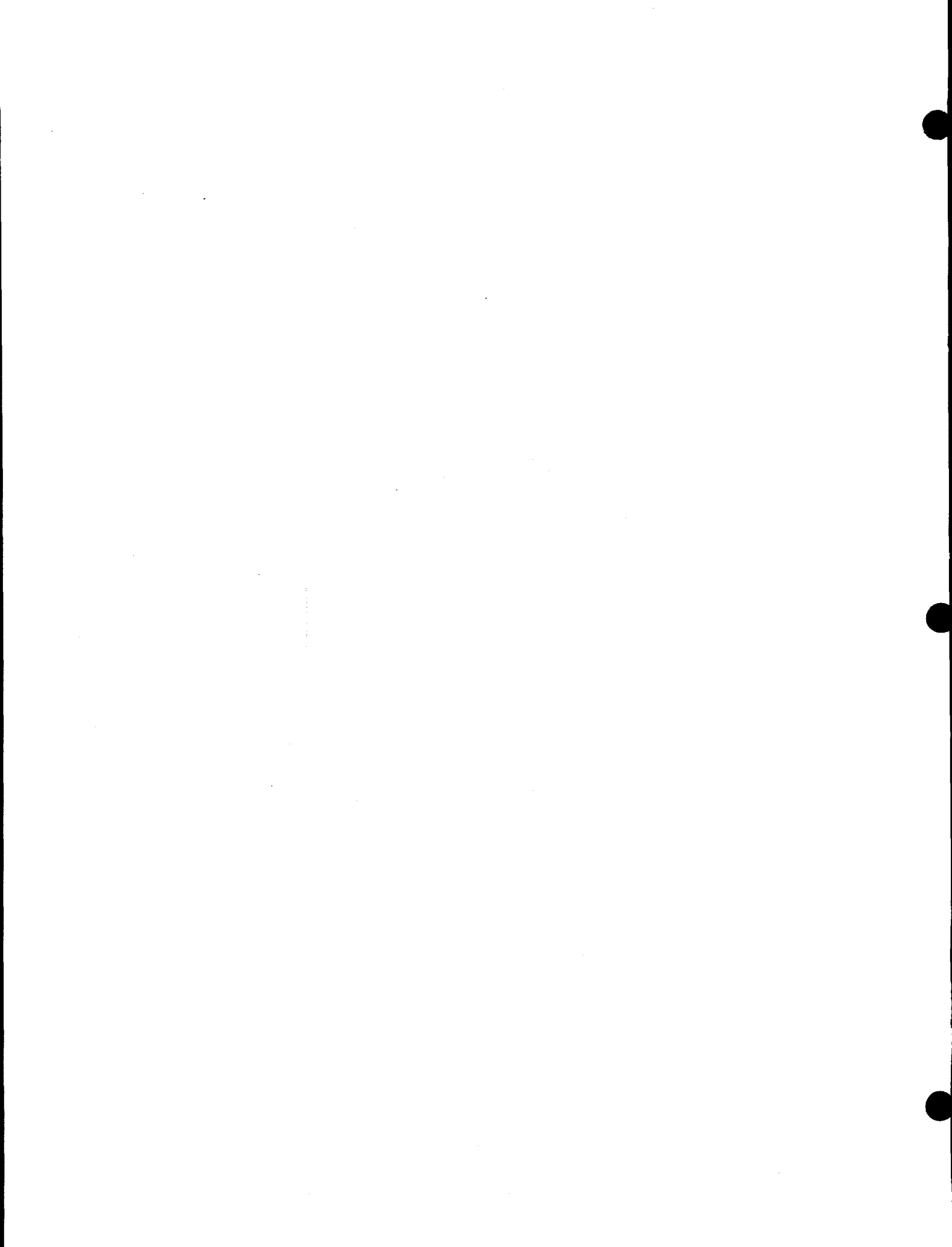
Sampling Point	Location	No. Detected	1995 Average	1st Q	2nd Q	3rd Q	4th Q
GW-346	S3	1	830.00	.	.	830	.
GW-347	S3	3	0.40	0.51	0.44	0.25	.
GW-348	S3	3	7.80	8.2	7.6	7.6	.
GW-363	OLF	1	0.39	0.39	<0.2	<0.2	<0.2
GW-370	BG	2	0.33	0.34	<0.2	0.31	.
GW-372	BG	1	0.24	<0.2	0.24	<0.2	<0.2
GW-373	BG	1	0.52	0.52	<0.2	<0.2	<0.2
GW-537	OLF	4	852.75	760	980	900	771
GW-613	S3	1	0.84	0.84	.	<0.2	.
GW-614	S3	0	.	<0.2	.	<0.2	.
GW-621	EXP	2	4.60	3.6	.	5.6	.
GW-627	BG	0	.	<0.2	<0.2	<0.2	<0.2
GW-637	OLF	0	.	<0.2	<0.2	<0.2	.
GW-642	BG	0	.	<0.2	<0.2	<0.2	<0.2
GW-652	BG	3	0.51	0.47	0.54	0.53	.
GW-653	BG	0	.	<0.2	<0.2	<0.2	<0.2
GW-654	BG	1	0.42	0.42	<0.2	<0.2	<0.2
GW-683	EXP	2	5.30	1.3	.	9.3	.
GW-684	EXP	2	5.85	2.9	.	8.8	.
GW-685	EXP	2	2.70	2.4	.	3	.
GW-694	EXP	2	18.00	20	.	16	.
GW-695	EXP	2	7.65	8.5	.	6.8	.
GW-703	EXP	2	20.50	22	.	19	.
GW-704	EXP	2	15.50	16	.	15	.
GW-706	EXP	2	17.00	16	.	18	.
GW-710	EXP	0	.	<0.2	.	<0.2	.
GW-711	EXP	0	.	<0.2	.	<0.2	.
GW-712	EXP	2	0.70	0.77	.	0.63	.
GW-713	EXP	2	0.58	0.62	.	0.53	.
GW-714	EXP	2	4.10	4.3	.	3.9	.
GW-715	EXP	2	1.10	1	.	1.2	.
GW-723	EXP	2	11.35	16	.	6.7	.
GW-724	EXP	2	39.50	41	.	38	.
GW-725	EXP	2	42.00	49	.	35	.
GW-736	EXP	2	31.50	32	.	31	.
GW-737	EXP	2	33.00	33	.	33	.
GW-738	EXP	2	18.50	18	.	19	.
GW-739	EXP	2	6.45	7	.	5.9	.
GW-740	EXP	2	3.65	4.1	.	3.2	.
GW-793	AGLLSF	1	0.42	0.42	<0.2	<0.2	<0.2
GW-794	AGLLSF	4	0.72	0.32	0.87	0.99	0.69
GW-795	AGLLSF	2	1.61	0.67	<0.2	<0.2	2.54
GW-800	OLF	1	0.42	0.42	<0.2	<0.2	.
GW-828	OLF	3	4.89	.	2.8	11	0.876

Appendix K
Average Annual Detected Nitrate Concentrations (mg/L), 1995

Sampling Point	Location	No. Detected	1995 Average	1st Q	2nd Q	3rd Q	4th Q
GW-829	OLF	3	104.43	.	200	59	54.3
GW-830	B9714	1	0.62	.	.	0.62	.
MS-1	S3	1	5.80	.	5.8	.	.
NT-01	EXP	2	102.00	34	.	170	.
NT-02	EXP	2	16.55	8.1	.	25	.
NT-1N	S3	1	23.00	.	23	.	.
NT-1S	S3	1	110.00	.	110	.	.
SS-1	EXP	2	25.50	23	.	28	.
SS-4	EXP	2	13.35	3.7	.	23	.
SS-5	EXP	2	4.35	1.2	.	7.5	.
SS-5.95K	EXP	1	0.27	.	<0.2	.	0.274
SS-6	EXP	2	0.57	0.68	.	0.45	.
SS-6.6K	EXP	1	0.25	.	0.25	.	.
SS-6W	EXP	1	1.80	.	<0.2	.	1.8
SS-7	EXP	2	2.49	.	0.24	.	4.74
TS	S3	1	1.30	.	1.3	.	.



APPENDIX L
QA/QC DATA SUMMARIES



EXPLANATION

SAMPLING POINT:

BCK	-	Bear Creek Kilometer
CWESTTOE	-	Burial Ground C-West Southeast Toe French Drain
GCS-01	-	Grassy Creek Spring 01
GW	-	Monitoring Well
MS-1	-	Bear Creek Main Stem Headwaters (Station 1)
NT	-	Northern Tributary to Bear Creek
SEEP 1	-	Burial Ground A-North Seep Area
SEEP 2	-	Burial Ground C-East Seep Area
SS	-	(Bear Creek) Spring Station
TS	-	Tankfarm Spring (Bear Creek Headwaters)

LOCATION:

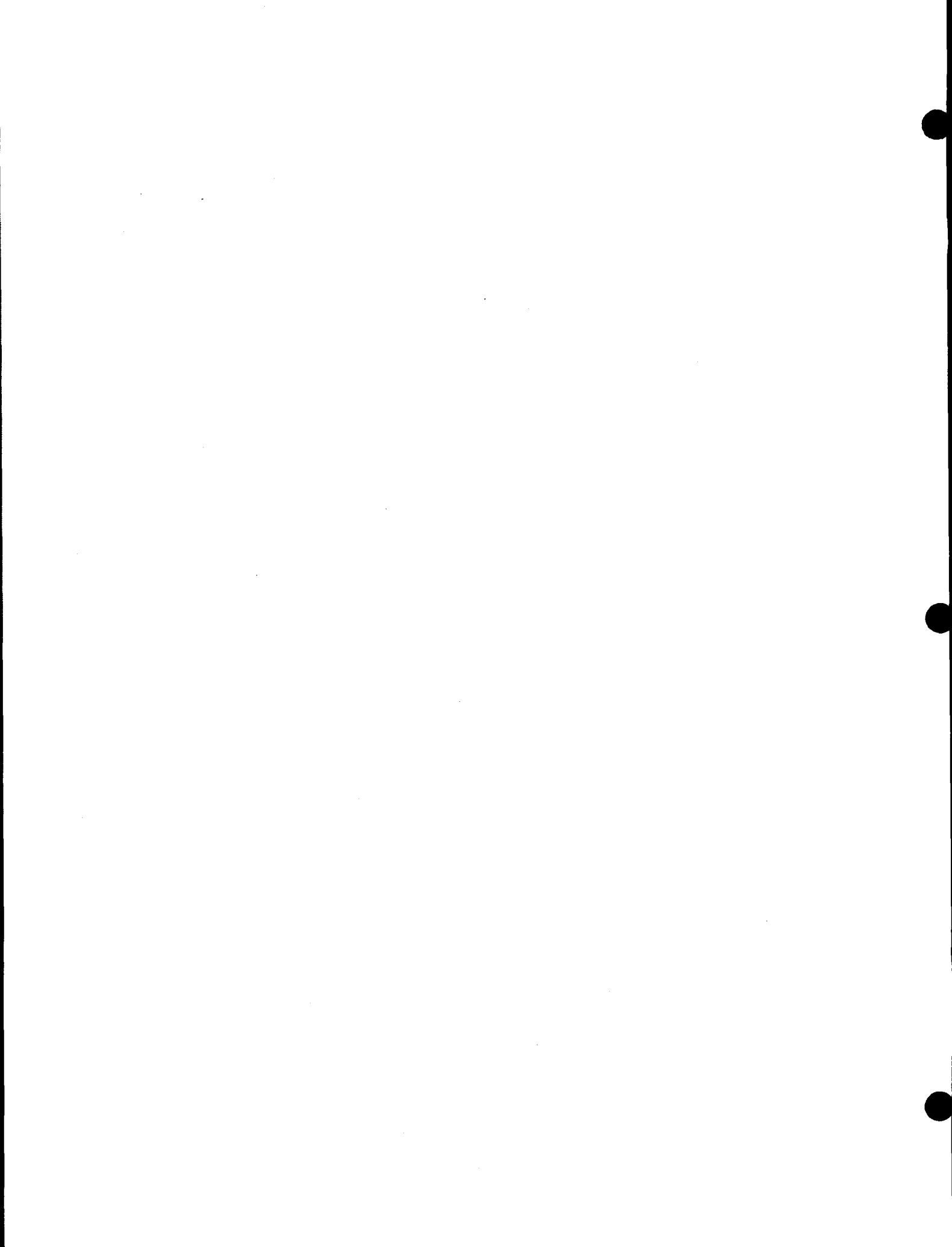
AGLLSF	-	Above Grade Low-Level Storage Facility
B9714	-	Y-12 TSD Garage Facility (Building 9714)
BG	-	Bear Creek Burial Grounds WMA
EXP	-	Exit Pathway Monitoring Location: Maynardville Limestone Transverse (-A, -B, -C, -W) Spring or Surface Water Sampling Location (-SW)
OLF	-	Oil Landfarm WMA
RS	-	Rust Spoil Area
S3	-	S-3 Site
SPI	-	Spoil Area I

NOTES:

.	-	Not analyzed
U	-	Compound not detected at the reported minimum attainable detection limit

UNITS:

ug/L	-	micrograms per liter
mg/L	-	milligrams per liter
pCi/L	-	picoCuries per liter
Bq/L	-	Becquerels per liter
CE+/-	-	Counting Error (two standard deviations)



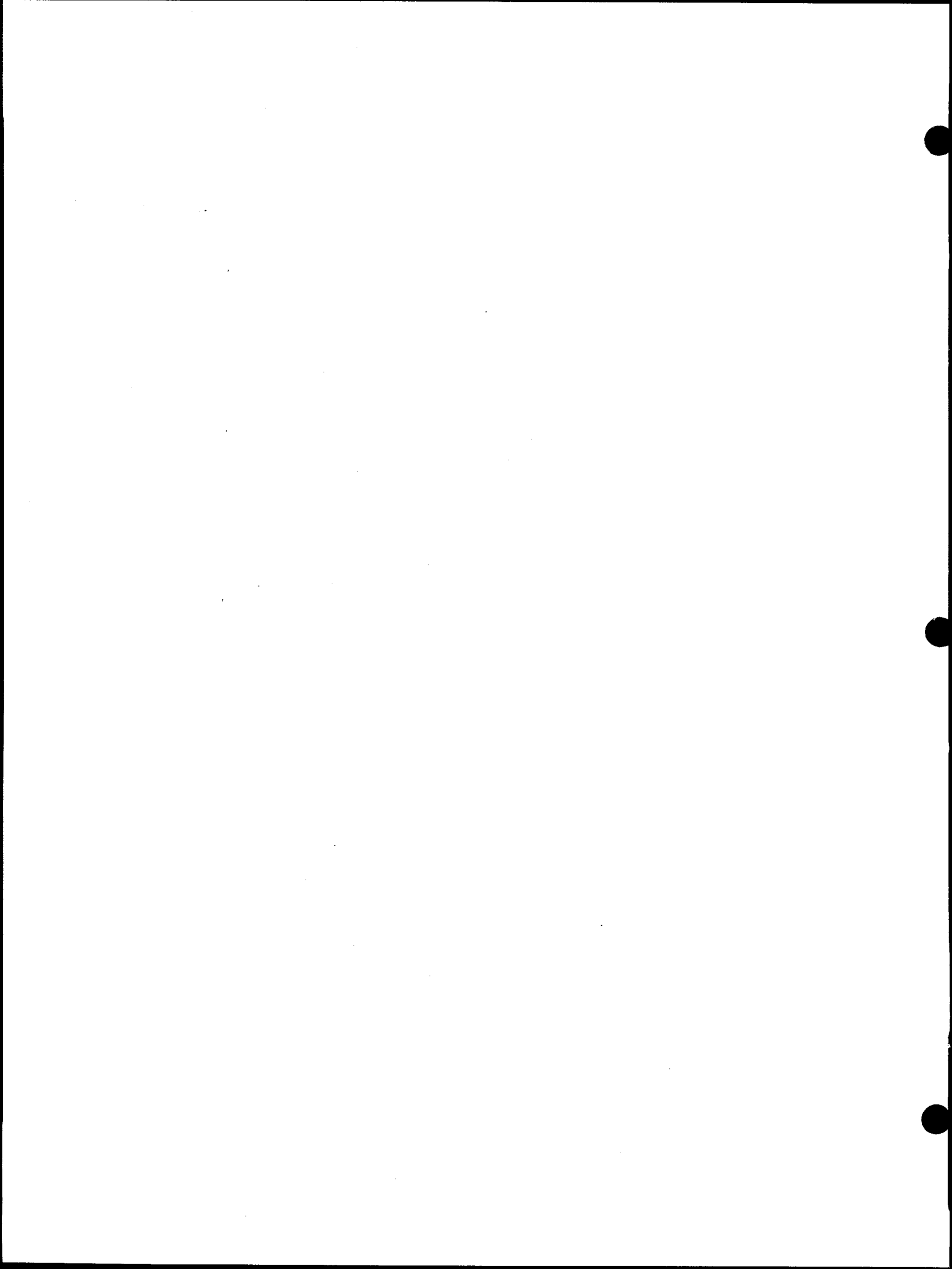
Compounds Detected in QA/QC Samples, CY 1995

Trip Blank Samples	Quarter of CY 1995				Annual Total
	First	Second	Third	Fourth	
Total Number of Samples	46	20	54	17	137
Samples With VOCs	40	17	42	15	114
Percent Contaminated	87	85	78	88	83
Acetone	5	1	2	7	15
2-Butanone	4	2	3	5	14
1,2-Dichloroethane	0	0	6	0	6
Methylene chloride	3	0	0	8	11
Tetrachloroethene	2	0	0	0	2
Toluene	6	0	0	0	6
1,1,1-Trichloroethane	40	16	36	15	107
Xylenes	2	0	0	0	2

Laboratory Blank Samples	Quarter of CY 1995				Annual Total
	First	Second	Third	Fourth	
Total Number of Samples	30	14	35	10	89
Samples With VOCs	5	0	5	5	15
Percent Contaminated	17	0	14	50	17
Acetone	1	0	1	4	6
2-Butanone	2	0	2	2	6
1,2-Dichloroethane	0	0	2	0	2
Methylene chloride	3	0	0	0	3
Tetrachloroethene	1	0	0	0	1
Toluene	2	0	0	0	2
Xylenes	1	0	0	0	1

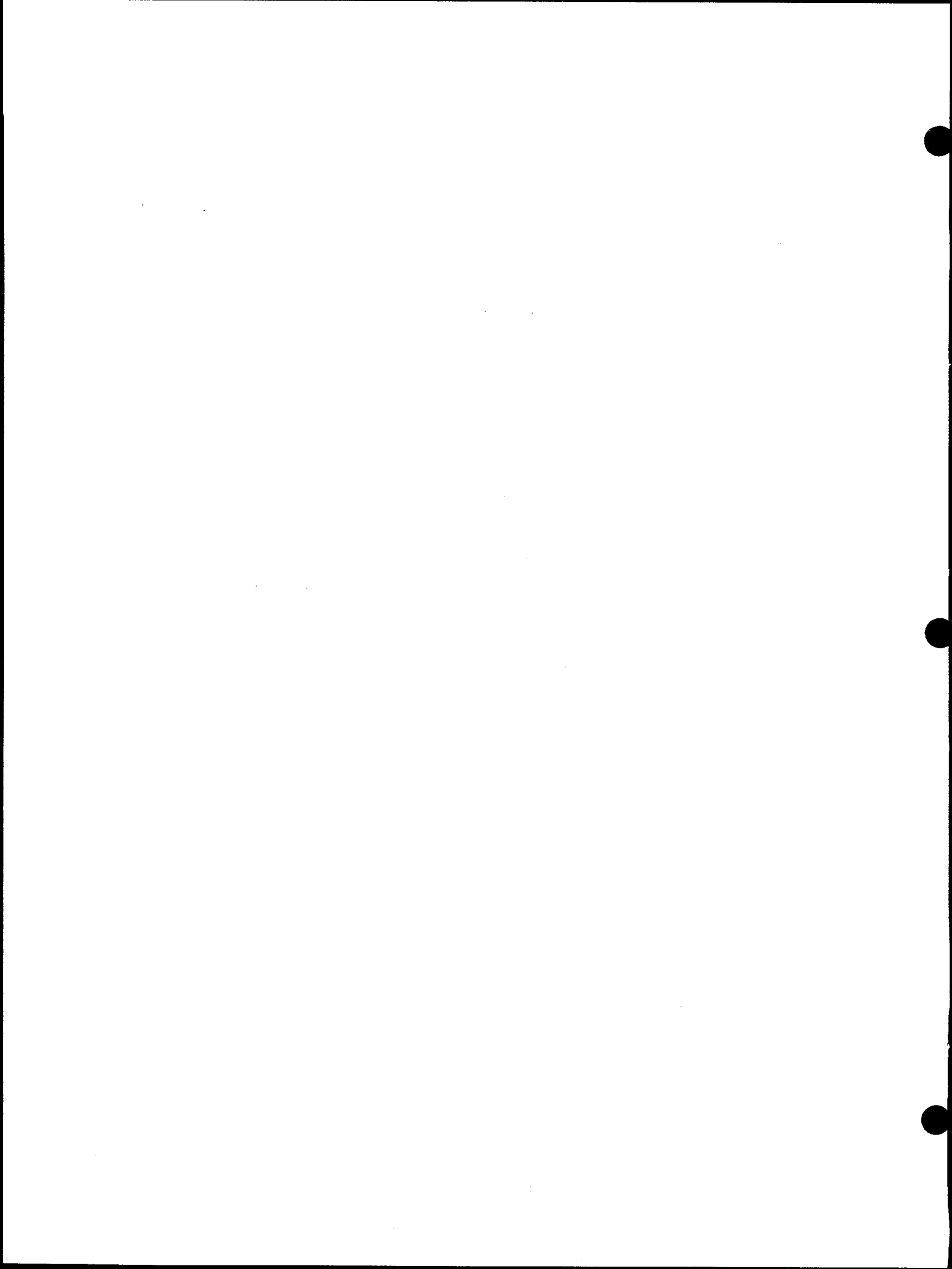
Rinsate Samples	Quarter of CY 1995				Annual Total
	First	Second	Third	Fourth	
Total Number of Samples	14	5	16	5	40
Samples With VOCs	11	4	8	4	27
Percent Contaminated	79	80	50	80	68
Acetone	1	0	0	2	3
Bromodichloromethane	1	0	0	0	1
2-Butanone	1	0	0	1	2
Chloroform	1	0	0	0	1
1,2-Dichloropropane	1	0	0	0	1
Methylene chloride	4	0	0	2	6
Tetrachloroethene	1	0	0	0	1
Toluene	1	0	0	0	1
1,1,1-Trichloroethane	10	4	8	4	26
Xylenes	1	0	0	0	1

Field Blank Samples	Quarter of CY 1995				Annual Total
	First	Second	Third	Fourth	
Total Number of Samples	1	0	1	0	2
Samples With VOCs	1	0	0	0	2
Percent Contaminated	100		0		
Acetone	1		0		



APPENDIX L.1

**CORRELATION OF GROUNDWATER AND SURFACE WATER
SAMPLES TO ASSOCIATED BLANKS**



APPENDIX L.1
Correlation of Samples to Associated Blanks
First Quarter 1995

Sampling Point	Location	Date Sampled	Sample No.	Trip Blank No.	Lab Blank No.
BCK-00.63	EXP-SW	03/09/95	950310-040	950310-045	950310-012
BCK-04.55	EXP-SW	03/09/95	950310-042	950310-045	950310-012
BCK-09.40	EXP-SW	03/09/95	950310-034	950310-045	950310-012
BCK-11.97	EXP-SW	03/09/95	950310-142	950310-149	950313-001
GW-040	BG	02/01/95	950202-006	950202-005	950206-005
GW-042	BG	02/01/95	950202-008	950202-005	950206-005
GW-043	OLF	03/16/95	950317-008	950317-010	950320-001
GW-044	OLF	03/16/95	950317-004	950317-010	950320-001
GW-047	BG	01/25/95	950126-028	950126-033	950127-013
GW-053	BG	03/28/95	950329-037	950329-039	950403-103
GW-056	EXP-A	03/05/95	950307-036	950307-040	950310-011
GW-057	EXP-A	03/05/95	950307-038	950307-040	950310-011
GW-061	BG	03/28/95	950329-040	950329-039	950403-103
GW-064	OLF	03/26/95	950327-082	950327-084	950328-003
GW-069	BG	03/25/95	950327-023	950327-027	950327-044
GW-079	BG	03/26/95	950327-041	950327-043	950328-043
GW-080	BG	03/25/95	950327-025	950327-027	950327-044
GW-084	OLF	03/23/95	950324-011	950324-013	950327-044
GW-085	OLF	03/26/95	950327-078	950327-084	950328-043
GW-095	BG	03/27/95	950328-006	950328-008	950328-043
GW-115	S3	01/14/95	950117-066	950117-075	950117-102
GW-162	BG	01/26/95	950127-019	950127-021	950130-023
GW-276	S3	01/24/95	950125-006	950125-009	950127-013
GW-287	BG	03/26/95	950327-037	950327-043	950327-044
GW-311	RS	03/25/95	950327-104	950327-110	950328-003
GW-312	RS	03/25/95	950327-106	950327-110	950328-003
GW-315	SPI	03/15/95	950316-018	950316-027	950317-029
GW-317	SPI	03/14/95	950315-039	950315-041	950316-040
GW-347	S3	03/15/95	950316-020	950316-027	950317-029
GW-348	S3	03/15/95	950316-022	950316-027	950317-029
GW-363	OLF	01/23/95	950124-005	950124-011	950125-065
GW-370	BG	02/01/95	950202-003	950202-005	950206-005
GW-372	BG	01/31/95	950201-012	950201-018	950202-026
GW-373	BG	01/31/95	950201-014	950201-018	950202-026
GW-537	OLF	03/26/95	950327-080	950327-084	950328-003
GW-613	S3	01/11/95	950112-010	950112-017	950113-017
GW-614	S3	01/11/95	950112-012	950112-017	950113-017
GW-621	EXP-B	03/29/95	950330-022	950330-028	950404-053
GW-627	BG	03/28/95	950329-081	950329-083	950403-103
GW-637	OLF	01/24/95	950125-068	950125-072	950125-065
GW-642	BG	01/31/95	950201-010	950201-018	950202-026
GW-652	BG	03/27/95	950328-016	950328-015	950403-103
GW-653	BG	03/27/95	950328-013	950328-015	950331-095
GW-654	BG	03/26/95	950327-039	950327-043	950327-044
GW-683	EXP-A	03/09/95	950313-077	950313-121	950313-037
GW-684	EXP-A	03/10/95	950313-082	950313-084	950315-059
GW-685	EXP-A	03/08/95	950308-100	950308-102	950309-050
GW-694	EXP-B	03/30/95	950331-002	950331-006	950404-053
GW-695	EXP-B	03/29/95	950330-026	950330-028	950404-053
GW-703	EXP-B	03/29/95	950330-029	950330-031	950404-053
GW-704	EXP-B	03/30/95	950331-004	950331-006	950404-053
GW-706	EXP-B	03/31/95	950331-050	950331-052	950404-053
GW-710	EXP-W	01/15/95	950117-049	950117-052	950119-019
GW-711	EXP-W	01/13/95	950113-055	950113-059	950117-102

APPENDIX L.1
Correlation of Samples to Associated Blanks
First Quarter 1995

Sampling Point	Location	Date Sampled	Sample No.	Trip Blank No.	Lab Blank No.
GW-712	EXP-W	01/13/95	950113-057	950113-059	950117-102
GW-713	EXP-W	01/14/95	950117-068	950117-075	950117-102
GW-714	EXP-W	01/14/95	950117-072	950117-075	950117-102
GW-715	EXP-W	01/14/95	950117-070	950117-075	950117-102
GW-723	EXP-C	02/20/95	950221-054	950221-056	950223-001
GW-724	EXP-C	02/19/95	950220-086	950220-088	950223-088
GW-725	EXP-C	02/28/95	950301-053	950301-057	950302-013
GW-736	EXP-C	02/28/95	950301-055	950301-057	950302-013
GW-737	EXP-C	03/01/95	950302-017	950302-020	950310-011
GW-738	EXP-C	02/18/95	950220-081	950220-085	950223-088
GW-739	EXP-C	02/17/95	950220-089	950220-091	950223-088
GW-740	EXP-C	02/16/95	950217-044	950217-046	950221-001
GW-793	AGLLSF	01/23/95	950124-007	950124-011	950125-065
GW-794	AGLLSF	01/24/95	950125-070	950125-072	950125-065
GW-795	AGLLSF	01/25/95	950126-030	950126-033	950127-013
GW-800	OLF	03/25/95	950327-108	950327-110	950328-003
GW-828-100	OLF	02/14/95	950214-083	950214-084	950214-014
GW-828-200	OLF	02/18/95	950220-070	950220-071	950220-040
GW-829-116	OLF	03/07/95	950307-080	950307-081	950307-077
GW-829-029	OLF	03/01/95	950301-140	950301-141	950301-001
NT-01	EXP-SW	03/09/95	950310-138	950310-149	950313-001
NT-02	EXP-SW	03/09/95	950310-144	950310-148	950313-001
SS-1	EXP-SW	03/09/95	950310-140	950310-149	950313-001
SS-4	EXP-SW	03/09/95	950310-146	950310-148	950313-037
SS-5	EXP-SW	03/09/95	950310-038	950310-044	950310-012
SS-6	EXP-SW	03/09/95	950310-036	950310-044	950310-012

APPENDIX L.1
Correlation of Samples to Associated Blanks
Second Quarter 1995

Sampling Point	Location	Date Sampled	Sample No.	Trip Blank No.	Lab Blank No.
GCS1	EXP-SW	05/23/95	950524-017	950524-019	950525-001
GW-040	BG	06/06/95	950606-078	950606-080	950607-004
GW-042	BG	06/06/95	950606-081	950606-080	950612-008
GW-043	OLF	06/01/95	950602-013	950602-017	950606-006
GW-044	OLF	06/01/95	950602-015	950602-017	950606-006
GW-047	BG	06/18/95	950619-087	950619-086	950621-031
GW-053	BG	06/28/95	950629-005	950629-007	950630-034
GW-061	BG	06/28/95	950629-002	950629-007	950630-034
GW-064	OLF	06/07/95	950608-006	950608-005	950608-011
GW-069	BG	06/27/95	950627-110	950627-112	950629-001
GW-079	BG	06/19/95	950619-103	950619-105	950622-001
GW-080	BG	06/19/95	950619-108	950619-105	950622-001
GW-084	OLF	06/07/95	950608-003	950608-005	950608-011
GW-085	OLF	06/08/95	950609-012	950609-014	950612-008
GW-095	BG	06/20/95	950621-054	950621-049	950622-022
GW-162	BG	05/31/95	950531-059	950531-061	950601-040
GW-287	BG	06/20/95	950621-047	950621-049	950622-022
GW-311	RS	06/06/95	950607-005	950607-007	950608-011
GW-312	RS	06/06/95	950607-008	950607-007	950608-011
GW-315	SPI	06/26/95	950627-041	950627-045	950629-001
GW-317	SPI	06/21/95	950621-138	950621-140	950622-001
GW-347	S3	06/21/95	950621-143	950621-140	950622-001
GW-348	S3	06/26/95	950627-043	950627-045	950629-001
GW-363	OLF	06/17/95	950619-031	950619-026	950621-031
GW-370	BG	06/05/95	950606-022	950606-021	950606-065
GW-372	BG	06/02/95	950602-128	950602-127	950606-006
GW-373	BG	06/05/95	950606-019	950606-021	950606-065
GW-537	OLF	06/08/95	950609-015	950609-014	950612-008
GW-627	BG	06/22/95	950622-120	950622-122	950623-006
GW-637	OLF	06/17/95	950619-029	950619-026	950621-031
GW-642	BG	06/02/95	950602-125	950602-127	950606-006
GW-652	BG	06/20/95	950621-050	950621-049	950622-022
GW-653	BG	06/20/95	950621-052	950621-049	950622-022
GW-654	BG	06/19/95	950619-106	950619-105	950622-001
GW-793	AGLLSF	06/17/95	950619-024	950619-026	950621-001
GW-794	AGLLSF	06/18/95	950619-084	950619-086	950621-031
GW-795	AGLLSF	06/18/95	950619-089	950619-086	950621-031
GW-800	OLF	05/31/95	950531-056	950531-058	950601-040
GW-828	OLF	06/27/95	950628-010	950628-012	950629-001
GW-829	OLF	06/27/95	950628-013	950628-012	950629-001
MS1	EXP-SW	05/03/95	950504-117		
NT-1N	EXP-SW	05/03/95	950504-114		
NT-1S	EXP-SW	05/03/95	950504-115		
SS-5.95K	EXP-SW	05/23/95	950524-009	950524-019	950525-001
SS-6.6K	EXP-SW	05/23/95	950524-013	950524-019	950525-001
SS-6W	EXP-SW	05/23/95	950524-011	950524-019	950525-001
SS-7	EXP-SW	05/23/95	950524-015	950524-019	950525-001
TS	EXP-SW	05/03/95	950504-116		

APPENDIX L.1
Correlation of Samples to Associated Blanks
Third Quarter 1995

Sampling Point	Location	Date Sampled	Sample No.	Trip Blank No.	Lab Blank No.
BCK-00.63	EXP-SW	07/25/95	950725-081	950725-097	950726-040
BCK-04.55	EXP-SW	07/25/95	950725-083	950725-097	950726-040
BCK-09.40	EXP-SW	07/25/95	950725-087	950725-097	950726-040
BCK-11.97	EXP-SW	07/25/95	950725-093	950725-097	950727-001
GW-014	BG	08/04/95	950807-044	950807-046	950809-035
GW-040	BG	08/10/95	950811-012	950811-014	950821-032
GW-042	BG	08/09/95	950810-012	950810-014	950821-032
GW-043	OLF	08/04/95	950807-057	950807-056	950809-035
GW-044	OLF	08/04/95	950807-054	950807-056	950809-035
GW-046	BG	08/09/95	950810-005	950810-009	950821-032
GW-047	BG	07/24/95	950725-012	950725-009	950726-001
GW-053	BG	09/25/95	950926-006	950926-005	950928-025
GW-056	EXP-A	08/04/95	950807-041	950807-043	950809-035
GW-057	EXP-A	08/05/95	950807-071	950807-073	950812-036
GW-061	BG	09/21/95	950922-079	950922-078	950925-093
GW-064	OLF	08/06/95	950808-110	950808-117	950812-036
GW-066	OLF	09/27/95	950928-002	950928-004	950929-001
GW-069	BG	08/15/95	950815-114	950815-116	950817-003
GW-079	BG	09/18/95	950919-039	950919-041	950920-110
GW-080	BG	09/21/95	950922-076	950922-078	950922-091
GW-084	OLF	08/05/95	950807-120	950807-122	950809-034
GW-085	OLF	08/06/95	950808-112	950808-117	950812-036
GW-087	OLF	09/27/95	950928-005	950928-004	950929-001
GW-095	BG	09/20/95	950921-005	950921-007	950921-010
GW-100	S3	09/06/95	950906-081	950906-083	950906-008
GW-115	S3	07/30/95	950731-048	950731-044	950801-013
GW-124	S3	09/16/95	950918-029	950918-031	950918-001
GW-162	BG	08/03/95	950803-080	950803-082	950804-040
GW-228	OLF	09/17/95	950918-037	950918-036	950918-083
GW-229	OLF	09/17/95	950918-034	950918-036	950918-083
GW-236	S3	09/16/95	950918-032	950918-031	950920-001
GW-248	BG	08/08/95	950809-005	950809-007	950811-092
GW-257	BG	08/08/95	950809-010	950809-007	950814-056
GW-276	S3	07/29/95	950731-033	950731-032	950801-013
GW-287	BG	09/18/95	950919-044	950919-041	950920-110
GW-288	BG	08/09/95	950810-007	950810-009	950821-032
GW-289	BG	08/08/95	950809-008	950809-007	950814-056
GW-290	BG	08/07/95	950808-146	950808-148	950811-092
GW-291	BG	08/03/95	950804-005	950804-007	950809-012
GW-312	RS	08/06/95	950808-115	950808-117	950811-092
GW-315	SPI	08/21/95	950822-011	950822-015	950824-001
GW-317	SPI	08/15/95	950816-001	950816-003	950817-003
GW-346	S3	08/31/95	950901-007	950901-009	950912-062
GW-347	S3	08/15/95	950816-004	950816-003	950817-003
GW-348	S3	08/21/95	950822-013	950822-015	950824-001
GW-363	OLF	07/19/95	950720-010	950720-016	950726-033
GW-370	BG	08/08/95	950809-042	950809-047	950811-092
GW-372	BG	08/07/95	950808-158	950808-164	950811-093
GW-373	BG	08/08/95	950809-045	950809-047	950811-092
GW-537	OLF	08/03/95	950804-032	950804-034	950809-012
GW-613	S3	07/24/95	950725-017	950725-019	950726-040
GW-614	S3	07/24/95	950725-020	950725-019	950726-040
GW-621	EXP-B	08/30/95	950831-002	950831-004	950830-065
GW-627	BG	09/25/95	950926-003	950926-005	950928-025

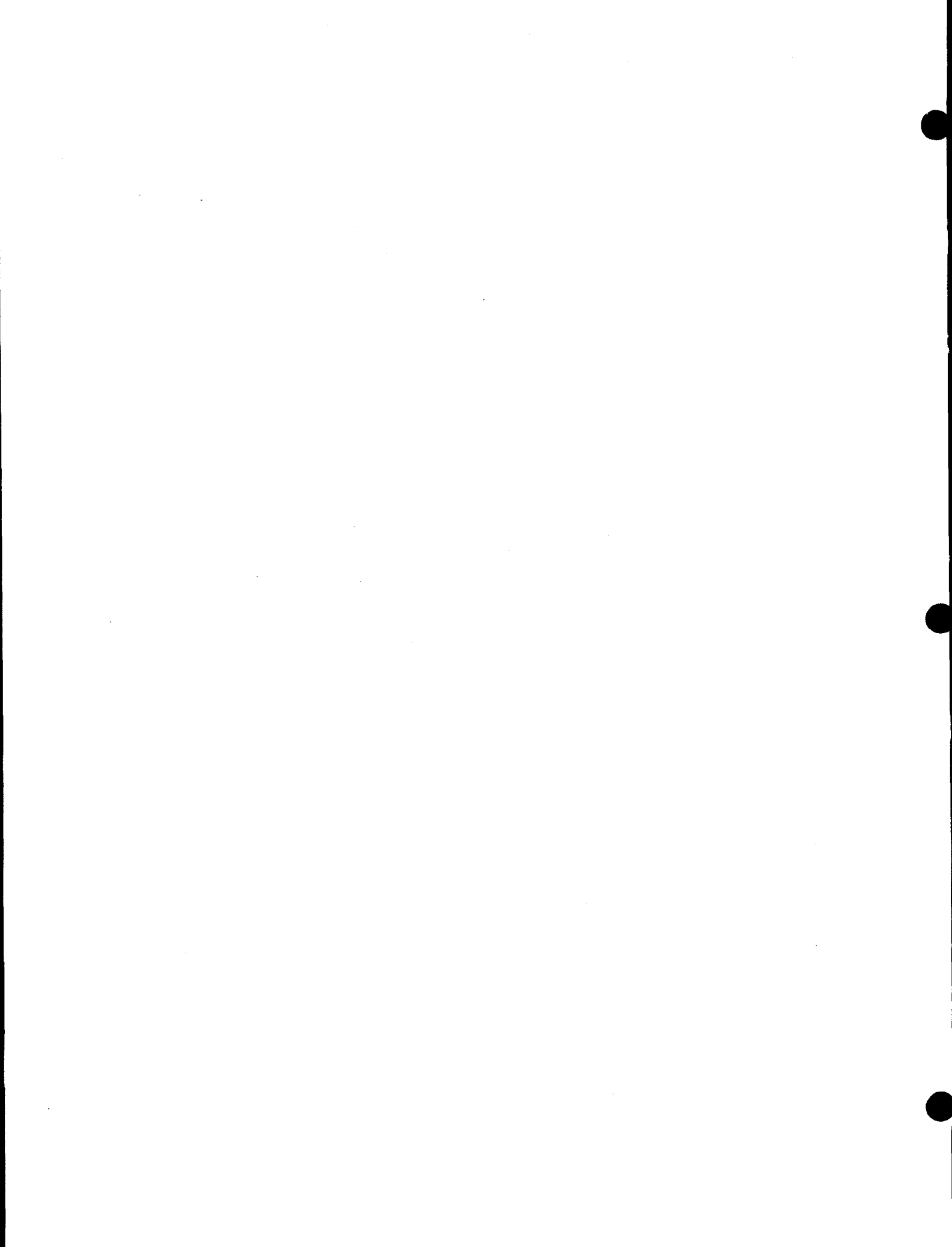
APPENDIX L.1
Correlation of Samples to Associated Blanks
Third Quarter 1995

Sampling Point	Location	Date Sampled	Sample No.	Trip Blank No.	Lab Blank No.
GW-637	OLF	07/19/95	950720-012	950720-016	950726-033
GW-642	BG	08/07/95	950808-160	950808-164	950811-093
GW-652	BG	09/19/95	950919-097	950919-099	950921-010
GW-653	BG	09/20/95	950921-008	950921-007	950921-010
GW-654	BG	09/18/95	950919-042	950919-041	950920-110
GW-683	EXP-A	08/06/95	950808-031	950808-038	950809-004
GW-684	EXP-A	08/06/95	950808-033	950808-038	950809-004
GW-685	EXP-A	08/06/95	950808-036	950808-038	950812-033
GW-694	EXP-B	08/31/95	950901-001	950901-003	950912-063
GW-695	EXP-B	08/30/95	950831-005	950831-004	950830-065
GW-703	EXP-B	08/30/95	950831-043	950831-042	950912-063
GW-704	EXP-B	08/31/95	950831-070	950831-072	950912-063
GW-706	EXP-B	08/30/95	950831-040	950831-042	950912-062
GW-710	EXP-W	07/27/95	950728-014	950728-016	950731-106
GW-711	EXP-W	07/27/95	950727-049	950727-051	950731-106
GW-712	EXP-W	07/25/95	950725-104	950725-106	950726-040
GW-713	EXP-W	07/27/95	950727-040	950727-042	950731-106
GW-714	EXP-W	07/29/95	950731-030	950731-032	950801-013
GW-715	EXP-W	07/29/95	950731-035	950731-032	950801-013
GW-723	EXP-C	09/13/95	950914-007	950914-009	950914-006
GW-724	EXP-C	09/24/95	950925-066	950925-068	950928-001
GW-725	EXP-C	09/25/95	950926-012	950926-014	950928-001
GW-736	EXP-C	09/26/95	950927-006	950927-008	950928-025
GW-737	EXP-C	09/26/95	950927-009	950927-008	950928-025
GW-738	EXP-C	09/17/95	950918-100	950918-099	950920-001
GW-739	EXP-C	09/16/95	950918-092	950918-094	950918-083
GW-740	EXP-C	09/17/95	950918-097	950918-099	950920-001
GW-793	AGLLSF	07/19/95	950720-014	950720-016	950726-033
GW-794	AGLLSF	07/24/95	950725-007	950725-009	950726-001
GW-795	AGLLSF	07/24/95	950725-010	950725-009	950726-001
GW-800	OLF	08/05/95	950807-125	950807-122	950809-004
GW-828	OLF	08/24/95	950825-028	950825-030	950822-045
GW-829	OLF	08/30/95	950830-084	950830-086	950830-065
GW-830	B9714	09/14/95	950914-105	950914-107	950915-037
NT-01	EXP-SW	07/25/95	950725-095	950725-097	950727-001
NT-02	EXP-SW	09/22/95	950922-115	950922-112	950925-093
SS-1	EXP-SW	09/22/95	950922-113	950922-112	950925-093
SS-4	EXP-SW	07/25/95	950725-091	950725-097	950726-001
SS-5	EXP-SW	07/25/95	950725-089	950725-097	950726-001
SS-6	EXP-SW	07/25/95	950725-085	950725-097	950726-040

APPENDIX L.1
Correlation of Samples to Associated Blanks
Fourth Quarter 1995

Sampling Point	Location	Date Sampled	Sample No.	Trip Blank No.	Lab Blank No.
GCS1	EXP-SW	10/26/95	951026-071	951026-079	951027-040
GW-040	BG	10/11/95	951012-006	951012-003	951012-036
GW-042	BG	10/11/95	951012-004	951012-003	951012-036
GW-043	OLF	10/18/95	951019-102	951019-101	951023-035
GW-044	OLF	10/18/95	951019-011	951019-013	951023-035
GW-053	BG	12/10/95	951211-051	951211-055	951212-093
GW-069	BG	12/07/95	951207-077	951207-079	951212-093
GW-079	BG	12/09/95	951210-026	951210-028	951212-093
GW-080	BG	12/09/95	951210-029	951210-028	951212-093
GW-084	OLF	10/19/95	951019-099	951019-101	951023-035
GW-085	OLF	10/25/95	951026-057	951026-061	951027-040
GW-095	BG	12/11/95	951212-001	951212-003	951213-007
GW-162	BG	10/11/95	951012-001	951012-003	951012-036
GW-287	BG	12/10/95	951211-059	951211-061	951212-093
GW-311	RS	10/25/95	951026-055	951026-061	951027-040
GW-315	SPI	12/07/95	951208-025	951208-027	951211-013
GW-363	OLF	10/19/95	951020-004	951020-006	951023-035
GW-372	BG	10/12/95	951013-079	951013-081	951016-028
GW-373	BG	10/12/95	951013-084	951013-081	951016-028
GW-537	OLF	10/25/95	951026-059	951026-061	951027-040
GW-627	BG	12/10/95	951211-053	951211-055	951212-093
GW-642	BG	10/10/95	951011-005	951011-007	951016-028
GW-653	BG	12/08/95	951210-014	951210-016	951212-036
GW-654	BG	12/09/95	951210-031	951210-028	951212-036
GW-793	AGLLSF	10/19/95	951020-009	951020-006	951023-035
GW-794	AGLLSF	10/24/95	951024-148	951024-150	951026-034
GW-795	AGLLSF	10/24/95	951024-151	951024-150	951026-034
GW-828	OLF	12/08/95	951210-011	951210-013	951212-036
GW-829	OLF	12/10/95	951211-057	951211-061	951212-093
SS-5.95K	EXP-SW	10/26/95	951026-075	951026-079	951027-040
SS-6W	EXP-SW	10/26/95	951026-077	951026-079	951031-007
SS-7	EXP-SW	10/26/95	951026-073	951026-079	951027-040

APPENDIX L.2
TRIP BLANK DATA SUMMARY



APPENDIX L.2
VOCs Detected in Trip Blank Samples, First Quarter 1995

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Sample No.	950112-017	950113-059	950117-052	950117-075	950124-011	950125-009	950125-072	950126-033	950127-021
Acetone	10U	10U	10U	10U	10U	10U	9	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	10U	10U
Methylene chloride	10U	10U	10U	10U	10U	10U	10U	10U	10U
Tetrachloroethene	10U	10U	10U	10U	10U	10U	10U	10U	10U
Toluene	10U	10U	10U	10U	10U	10U	8	10U	10U
1,1,1-Trichloroethane	4	6	9	8	6	7	7	9	10
Xylenes	10U	10U	10U	10U	10U	10U	10U	10U	10U

(CONTINUED)

Sample No.	950201-018	950202-005	950214-084	950217-046	950220-071	950220-085	950220-088	950220-091	950221-056
Acetone	10U	10U	10U	12	15	10U	4	4	10U
2-Butanone	10U	10U	10U	10U	10U	11	11	11	10U
Methylene chloride	10U	10U	10U	10U	2	10U	10U	10U	10U
Tetrachloroethene	10U	10U	10U	10U	10U	10U	10U	10U	10U
Toluene	10U	10U	10U	10U	10U	1	1	1	10U
1,1,1-Trichloroethane	15	15	3	1	4	5	7	3	6
Xylenes	10U	10U	10U	10U	10U	10U	10U	10U	10U

(CONTINUED)

Sample No.	950301-057	950301-141	950302-020	950307-040	950307-081	950308-102	950310-044	950310-045	950310-148
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	10U	10U
Methylene chloride	10U	10U	10U	10U	10U	10U	10U	10U	10U
Tetrachloroethene	10U	10U	10U	10U	10U	10U	10U	10U	10U
Toluene	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-Trichloroethane	10U	3	4	7	7	4	10U	10U	10U
Xylenes	10U	10U	10U	10U	10U	10U	10U	10U	10U

(CONTINUED)

Sample No.	950310-149	950313-084	950313-121	950315-041	950316-027	950317-010	950324-013	950327-027	950327-043
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	18	10U	10U	10U	10U	10U	10U	10U
Methylene chloride	10U	10U	10U	10U	10U	10U	4	3	10U
Tetrachloroethene	10U	2	2	10U	10U	10U	10U	10U	10U
Toluene	10U	5	5	10U	10U	10U	10U	10U	10U
1,1,1-Trichloroethane	10U	3	1	6	6	6	2	4	10U
Xylenes	10U	2	2	10U	10U	10U	10U	10U	10U

(CONTINUED)

APPENDIX L.2
VOCs Detected in Trip Blank Samples, First Quarter 1995

2

Sample No.	950327- 084	950327- 110	950328- 008	950328- 015	950329- 039	950329- 083	950330- 028	950330- 031	950331- 006
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	10U	10U
Methylene chloride	10U	10U	10U	10U	10U	10U	10U	10U	10U
Tetrachloroethene	10U	10U	10U	10U	10U	10U	10U	10U	10U
Toluene	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-Trichloroethane	1	3	2	2	3	2	3	3	4
Xylenes	10U	10U	10U	10U	10U	10U	10U	10U	10U

(CONTINUED)

Sample No.	950331- 052
Acetone	10U
2-Butanone	10U
Methylene chloride	10U
Tetrachloroethene	10U
Toluene	10U
1,1,1-Trichloroethane	4
Xylenes	10U

APPENDIX L.2
VOCs Detected in Trip Blank Samples, Second Quarter 1995

3

Sample No.	950524- 019	950531- 058	950531- 061	950602- 017	950602- 127	950606- 021	950606- 080	950607- 007	950608- 005
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	8	10U	10U	10U	11	10U	10U	10U	10U
1,1,1-Trichloroethane	10U	10U	2	10U	1	3	3	1	3

(CONTINUED)

Sample No.	950609- 014	950619- 026	950619- 086	950619- 105	950621- 049	950621- 140	950622- 122	950627- 045	950627- 112
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-Trichloroethane	10U	4	5	4	5	4	4	3	3

(CONTINUED)

Sample No.	950628- 012	950629- 007
Acetone	12	10U
2-Butanone	10U	10U
1,1,1-Trichloroethane	3	4

APPENDIX L.2
VOCs Detected in Trip Blank Samples, Third Quarter 1995

4

Sample No.	950720-016	950725-009	950725-019	950725-097	950725-106	950727-042	950727-051	950728-016	950731-032
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-Dichloroethane	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-Trichloroethane	10U	10U	10U	10U	10U	1	1	2	2

(CONTINUED)

Sample No.	950731-044	950803-082	950804-007	950804-034	950807-043	950807-046	950807-056	950807-073	950807-122
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-Dichloroethane	10U	10U	4	4	4	4	4	4	10U
1,1,1-Trichloroethane	2	3	10U	10U	10U	10U	10U	10U	2

(CONTINUED)

Sample No.	950808-038	950808-117	950808-148	950808-164	950809-007	950809-047	950810-009	950810-014	950811-014
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-Dichloroethane	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-Trichloroethane	10U	1	2	10U	3	2	10U	10U	10U

(CONTINUED)

Sample No.	950815-116	950816-003	950822-015	950825-030	950830-086	950831-004	950831-042	950831-072	950901-003
Acetone	10U	10U	8	10U	10U	10U	10U	10U	10U
2-Butanone	10U	9	10U	10U	10U	10U	10U	10U	10U
1,2-Dichloroethane	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-Trichloroethane	1	1	3	3	4	4	4	2	2

(CONTINUED)

Sample No.	950901-009	950906-083	950914-009	950914-107	950918-031	950918-036	950918-094	950918-099	950919-041
Acetone	10U	10U	10U	10U	7	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-Dichloroethane	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-Trichloroethane	10U	3	1	1	2	2	2	2	3

(CONTINUED)

Sample No.	950919-099	950921-007	950922-078	950922-112	950925-068	950926-005	950926-014	950927-008	950928-004
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10	10U	10U	10U	9
1,2-Dichloroethane	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-Trichloroethane	3	3	4	10U	4	5	4	5	5

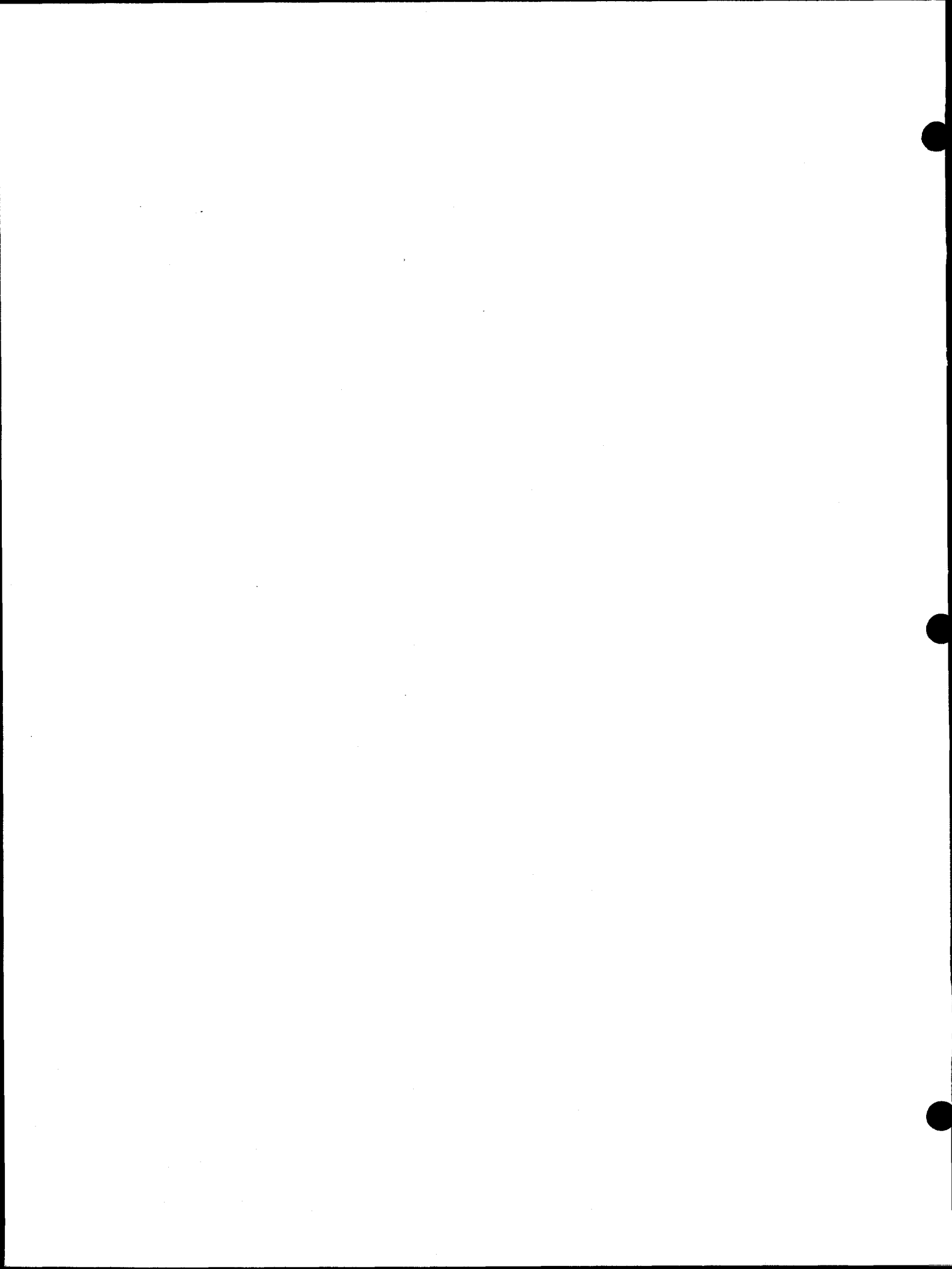
APPENDIX L.2
VOCs Detected in Trip Blank Samples, Fourth Quarter 1995

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Sample No.	951011- 007	951012- 003	951013- 081	951019- 013	951019- 101	951020- 006	951024- 150	951026- 061	951026- 079
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	10U	10U
Methylene chloride	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-Trichloroethane	2	2	2	10U	10U	1	4	4	4

(CONTINUED)

Sample No.	951207- 079	951208- 027	951210- 013	951210- 016	951210- 028	951211- 055	951211- 061	951212- 003
Acetone	13	13	13	10	11	10	10U	12
2-Butanone	10U	10	10U	11	10	10	10U	10
Methylene chloride	5	5	4	4	4	4	3	3
1,1,1-Trichloroethane	2	2	2	2	2	2	2	2



APPENDIX L.3
LABORATORY BLANK DATA SUMMARY

APPENDIX L.3
VOCs Detected in Laboratory Blank Samples, First Quarter 1995

1

Sample No.	950113-017	950117-102	950119-019	950125-065	950127-013	950130-023	950202-026	950206-005	950214-014
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	10U	10U
Methylene chloride	10U	10U	10U	10U	10U	10U	10U	10U	10U
Tetrachloroethene	10U	10U	10U	10U	10U	10U	10U	10U	10U
Toluene	10U	10U	10U	10U	10U	10U	10U	10U	10U
Xylenes	10U	10U	10U	10U	10U	10U	10U	10U	10U

(CONTINUED)

Sample No.	950220-040	950221-001	950223-001	950223-088	950302-013	950307-077	950309-050	950310-011	950310-012
Acetone	10U	10U	10U	3	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	14	10U	10U	10U	10U	10U
Methylene chloride	10U	1	10U	10U	10U	10U	10U	10U	10U
Tetrachloroethene	10U	10U	10U	10U	10U	10U	10U	10U	10U
Toluene	10U	10U	10U	1	10U	10U	10U	10U	10U
Xylenes	10U	10U	10U	10U	10U	10U	10U	10U	10U

(CONTINUED)

Sample No.	950313-001	950313-037	950315-059	950316-040	950317-029	950320-001	950327-044	950328-003	950328-043
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	11	10U
Methylene chloride	10U	10U	10U	10U	10U	10U	4	1	10U
Tetrachloroethene	10U	10U	2	10U	10U	10U	10U	10U	10U
Toluene	10U	10U	5	10U	10U	10U	10U	10U	10U
Xylenes	10U	10U	3	10U	10U	10U	10U	10U	10U

(CONTINUED)

Sample No.	950331-095	950403-103	950404-053
Acetone	10U	10U	10U
2-Butanone	10U	10U	10U
Methylene chloride	10U	10U	10U
Tetrachloroethene	10U	10U	10U
Toluene	10U	10U	10U
Xylenes	10U	10U	10U

APPENDIX L.3
VOCs Detected in Laboratory Blank Samples, Second Quarter 1995

2

Sample No.	950525- 001	950601- 040	950606- 006	950606- 065	950607- 004	950608- 011	950612- 008	950621- 001	950621- 031
None Detected	-	-	-	-	-	-	-	-	-

(CONTINUED)

Sample No.	950622- 001	950622- 022	950623- 006	950629- 001	950630- 034
None Detected	-	-	-	-	-

3

[illegible]

(CONTINUED)

Sample No.	950809- 034	950809- 035	950811- 092	950811- 093	950812- 033	950812- 036	950814- 056	950817- 003	950821- 032
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-Dichloroethane	10U	3	10U	10U	10U	10U	10U	10U	10U

(CONTINUED)

[illegible]

(CONTINUED)

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APPENDIX L.3
VOCs Detected in Laboratory Blank Samples, Fourth Quarter 1995

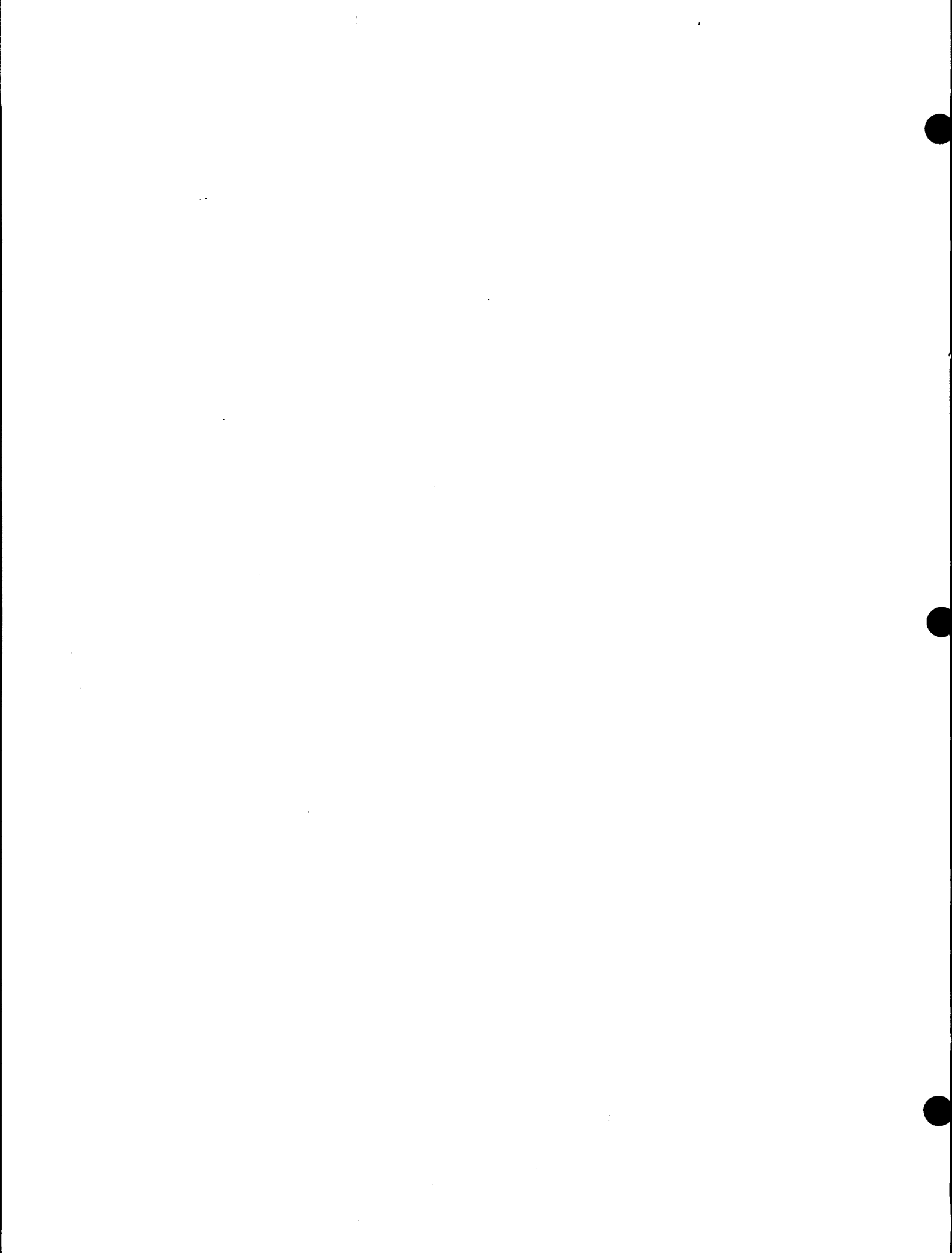
4

Sample No.	951012- 036	951016- 028	951023- 035	951026- 034	951027- 040	951031- 007	951211- 013	951212- 036	951212- 093
Acetone	10U	10U	10U	10U	10U	9	14	11	10U
2-Butanone	10U	10	10U	10U	10U	10U	10U	10U	10U

(CONTINUED)

Sample No.	951213- 007
Acetone	9
2-Butanone	10

APPENDIX L.4
EQUIPMENT RINSATE DATA SUMMARY



APPENDIX L.4
Equipment Rinsate Data Summary, First Quarter 1995

1

Sampling Group	ER BC 1			ER BC 2	ER BC 3	ER BC 4		ER BC 5	ER BC 6
Associated Well	GW-276	GW-710	GW-715	GW-315	GW-537	GW-723	GW-737	GW-370	GW-795
Pump Number	8	2	11	5	7	11	2	11	11
VOLATILE ORGANICS (ug/L)	.	.	.	.	.	.	.	.	.
Acetone	10U	10U	10U	10U	10U	10U	10U	10U	10U
Bromodichloromethane	3	10U	10U	10U	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	10U	10U	10U	10U	10U
Chloroform	25	10U	10U	10U	10U	10U	10U	10U	10U
1,2-Dichloropropane	9	10U	10U	10U	10U	10U	10U	10U	10U
Methylene chloride	10U	10U	10U	10U	2	10U	2	4	10U
Tetrachloroethene	10U	10U	10U	10U	10U	10U	10U	10U	10U
Toluene	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,1,1-Trichloroethane	10U	10U	10U	5	3	7	4	1	10
Xylenes	10U	10U	10U	10U	10U	10U	10U	10U	10U

(CONTINUED)

Sampling Group	ER BC 7		ER BC 8		ER BC 9
Associated Well	GW-694	GW-706	GW-061	GW-627	GW-684
Pump Number	7	10	10	7	10
VOLATILE ORGANICS (ug/L)	.	.	.	.	.
Acetone	10U	10U	10U	10U	8
Bromodichloromethane	10U	10U	10U	10U	10U
2-Butanone	10U	10U	10U	10U	16
Chloroform	10U	10U	10U	10U	10U
1,2-Dichloropropane	10U	10U	10U	10U	10U
Methylene chloride	10U	10U	10U	10U	2
Tetrachloroethene	10U	10U	10U	10U	2
Toluene	10U	10U	10U	10U	5
1,1,1-Trichloroethane	4	10U	3	3	2
Xylenes	10U	10U	10U	10U	3

APPENDIX L.4
Equipment Rinsate Data Summary, First Quarter 1995

2

Sampling Group	ER BC 1			ER BC 7	
	GW-276	GW-710	GW-715	GW-694	GW-706
	8	2	11	7	10
NITRATE/METALS (mg/L)	.	.	.	.	.
Nitrate (as N)	0.58	<0.2	<0.2	<0.2	0.32
Aluminum	<0.02	<0.02	<0.02	<0.02	0.032
Antimony	<0.05	<0.05	<0.05	<0.05	<0.05
Arsenic	<0.05	<0.05	<0.05	<0.05	<0.05
Barium	0.024	<0.001	0.0046	<0.001	<0.001
Beryllium	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Boron	0.16	0.097	0.093	0.016	0.0089
Cadmium	<0.003	<0.003	<0.003	<0.003	<0.003
Calcium	27	0.056	5	0.19	0.19
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt	<0.005	<0.005	<0.005	<0.005	<0.005
Copper	0.0049	<0.004	<0.004	<0.004	<0.004
Iron	<0.005	<0.005	0.045	0.008	0.0072
Magnesium	7.9	0.0089	7.3	0.0061	0.034
Manganese	<0.001	<0.001	0.0019	<0.001	<0.001
Molybdenum	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium	1.6	<0.6	9.9	<0.6	<0.6
Selenium	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.006	<0.006	<0.006	<0.006	<0.006
Sodium	5.5	0.25	38	0.16	0.15
Strontium	0.069	<0.0004	0.0068	<0.0004	0.0006
Thorium	<0.2	<0.2	<0.2	<0.2	<0.2
Vanadium	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	1.2	0.0032	0.011	0.0051	0.0084
RADIOCHEMISTRY	.	.	.	.	.
Gross Alpha (pCi/L)	-0.801	-0.00347	0.153	1.67	1.41
Gross Alpha (CE+/-)	0.72	0.56	1.9	1.5	1.5
Gross Beta (pCi/L)	-0.737	-1.37	6.29	0.26	3.47
Gross Beta (CE+/-)	2.5	2.6	3.1	2.5	2.7
Americium 241 (pCi/L)	0.877	1.24	1.09	.	.
Americium 241 (CE+/-)	1	2.2	1.9	.	.
Iodine 129 (Bq/L)	0.1	0.1	0.1	.	.
Iodine 129 (CE +/-)	2.3	1.9	1.1	.	.
Neptunium 237 (pCi/L)	-0.139	0	0	.	.
Neptunium 237 (CE+/-)	0.56	0.5	0.52	.	.
Plutonium 238 (pCi/L)	0.139	0.277	0.142	.	.
Plutonium 238 (CE+/-)	0.62	0.39	0.28	.	.
Plutonium 239 (pCi/L)	0	0	0	.	.
Plutonium 239 (CE+/-)	0.48	0.48	0.49	.	.
Radium (Bq/L)	0.009	<0.001	<0.014	.	.
Radium (CE+/-)	0.022	0.03	0.03	.	.
Strontium (pCi/L)	-16.4	13.4	-1.86	.	.
Strontium (CE+/-)	23	22	5.1	.	.
Technetium 99 (pCi/L)	35.2	7.93	2.37	.	.
Technetium 99 (CE+/-)	37	37	36	.	.
Tritium (Bq/L)	6	82	53	.	.
Tritium (CE+/-)	23	31	33	.	.
Uranium 234 (pCi/L)	-0.133	0.115	0.357	.	.
Uranium 234 (CE+/-)	0.53	0.23	0.41	.	.
Uranium 235 (pCi/L)	-3.07	22	30.9	.	.
Uranium 235 (CE+/-)	13	91	91	.	.
Uranium 238 (pCi/L)	0	0.115	-0.119	.	.
Uranium 238 (CE+/-)	0.46	0.4	0.48	.	.

APPENDIX L.4
Equipment Rinsate Data Summary, Second Quarter 1995

3

Sampling Group	ER BC 2	ER BC 3	ER BC 5	ER BC 6	ER BC 8
Associated Well	GW-829	GW-537	GW-370	GW-794	GW-061
Pump Number	4	10	6	4	10
VOLATILE ORGANICS (ug/L)	.	.	.	.	.
1,1,1-Trichloroethane	3	100	2	5	3

APPENDIX L.4
Equipment Rinsate Data Summary, Third Quarter 1995

4

Sampling Group	ER BC 1			ER BC 2	ER BC 3	ER BC 4		ER BC 5	ER BC 6
Associated Well	GW-276	GW-710	GW-711	GW-829	GW-085	GW-723	GW-737	GW-370	GW-795
Pump Number	4	2	6	2	10	2	10	10	8
VOLATILE ORGANICS (ug/L)	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	10U	10U	10U	4	2	2	5	2	10U

(CONTINUED)

Sampling Group	ER BC 7		ER BC 8	ER BC 9	ER BC 11	ER BC 12
Associated Well	GW-694	GW-704	GW-053	GW-684	GW-228	GW-288
Pump Number	7	11	8	4	8	7
VOLATILE ORGANICS (ug/L)	-	-	-	-	-	-
1,1,1-Trichloroethane	10U	10U	5	3	2	10U

APPENDIX L.4
Equipment Rinsate Data Summary, Third Quarter 1995

5

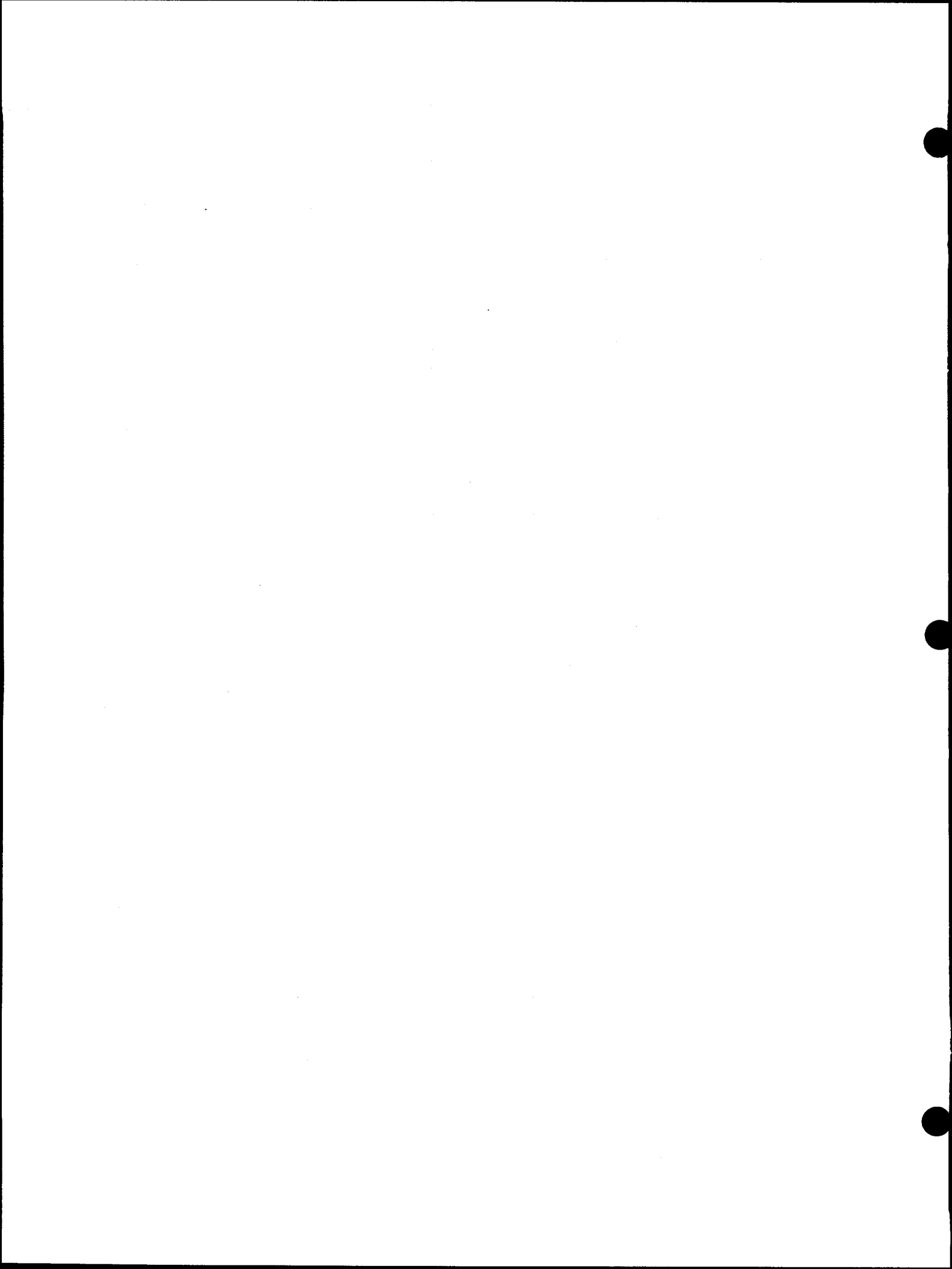
Sampling Group	ER BC 1			ER BC 7	
Associated Well	GW-276	GW-710	GW-711	GW-694	GW-704
Pump Number	4	2	6	7	11
NITRATE/METALS (mg/L)	.	.	.	.	.
Nitrate (as N)	<0.2	<0.2	0.52	<0.2	<0.2
Aluminum	0.58	<0.02	<0.02	<0.02	<0.02
Antimony	<0.05	<0.05	<0.05	<0.05	<0.05
Arsenic	<0.05	<0.05	<0.05	<0.05	<0.05
Barium	0.012	<0.001	0.0013	<0.001	<0.001
Beryllium	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Boron	0.011	0.012	0.014	<0.004	<0.004
Cadmium	<0.003	<0.003	<0.003	<0.003	<0.003
Calcium	1.1	0.038	0.2	1.3	0.71
Chromium	0.045	<0.01	<0.01	<0.01	<0.01
Cobalt	<0.005	<0.005	<0.005	<0.005	<0.005
Copper	0.0059	<0.004	<0.004	<0.004	<0.004
Iron	0.8	<0.005	0.0059	0.098	0.11
Magnesium	0.21	<0.003	0.068	0.23	0.14
Manganese	0.011	<0.001	<0.001	0.0012	<0.001
Molybdenum	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel	0.01	<0.01	<0.01	<0.01	<0.01
Potassium	<0.6	<0.6	<0.6	<0.6	<0.6
Selenium	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.006	<0.006	<0.006	<0.006	<0.006
Sodium	0.23	0.088	0.34	0.12	0.14
Strontium	0.0032	<0.0004	0.0044	0.003	0.0018
Thorium	<0.2	<0.2	<0.2	<0.2	<0.2
Vanadium	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	0.0064	<0.002	0.0034	0.0088	0.0029
RADIOCHEMISTRY	.	.	.	.	.
Gross Alpha (pCi/L)	3.36	-0.891	-1.03	0.702	0.141
Gross Alpha (CE+/-)	4.8	1.3	1.2	1	0.86
Gross Beta (pCi/L)	96.7	-0.947	-0.261	2.66	-0.183
Gross Beta (CE+/-)	19	2.7	2.7	2.7	2.6
Americium 241 (pCi/L)	0	0	0	.	.
Americium 241 (CE+/-)	0.23	0.23	0.22	.	.
Iodine 129 (Bq/L)	0.1	0.01	0.1	.	.
Iodine 129 (CE +/-)	1.9	0.98	1.9	.	.
Neptunium 237 (pCi/L)	0.405	0.158	0.0751	.	.
Neptunium 237 (CE+/-)	0.51	0.32	0.21	.	.
Plutonium 238 (pCi/L)	0.286	0.195	0	.	.
Plutonium 238 (CE+/-)	0.31	0.39	0.58	.	.
Plutonium 239 (pCi/L)	0.409	0.975	0.505	.	.
Plutonium 239 (CE+/-)	0.37	0.87	0.58	.	.
Potassium 40 (pCi/L)	.	101	.	.	.
Potassium 40 (CE+/-)	.	64	.	.	.
Radium (Bq/L)	0.021	0.014	-0.002	.	.
Radium (CE+/-)	0.03	0.025	0.025	.	.
Strontium (pCi/L)	4.44	12.3	39	.	.
Strontium (CE+/-)	6.2	17	19	.	.
Technetium 99 (pCi/L)	10.6	7.09	-0.381	.	.
Technetium 99 (CE+/-)	8.5	8.5	8.3	.	.
Tritium (Bq/L)	3	100	-15	.	.
Tritium (CE+/-)	23	24	24	.	.
Uranium 234 (pCi/L)	0.229	0.206	0.224	.	.
Uranium 234 (CE+/-)	0.24	0.22	0.24	.	.
Uranium 235 (pCi/L)	-0.315	3.82	3.27	.	.
Uranium 235 (CE+/-)	7.1	7.1	7.1	.	.
Uranium 238 (pCi/L)	0.196	0	0	.	.
Uranium 238 (CE+/-)	0.23	0.2	0.22	.	.

APPENDIX L.4
Equipment Rinsate Data Summary, Fourth Quarter 1995

6

Sampling Group	ER BC 2	ER BC 5	ER BC 6	ER BC 8
Associated Well	GW-829	GW-373	GW-363	GW-053
Pump Number	6	11	11	8
				5
VOLATILE ORGANICS (ug/L)	.	.	.	.
Acetone	10U	10U	10U	12
2-Butanone	10U	10U	10U	10U
Methylene chloride	10U	10U	10U	3
1,1,1-Trichloroethane	10U	2	3	2

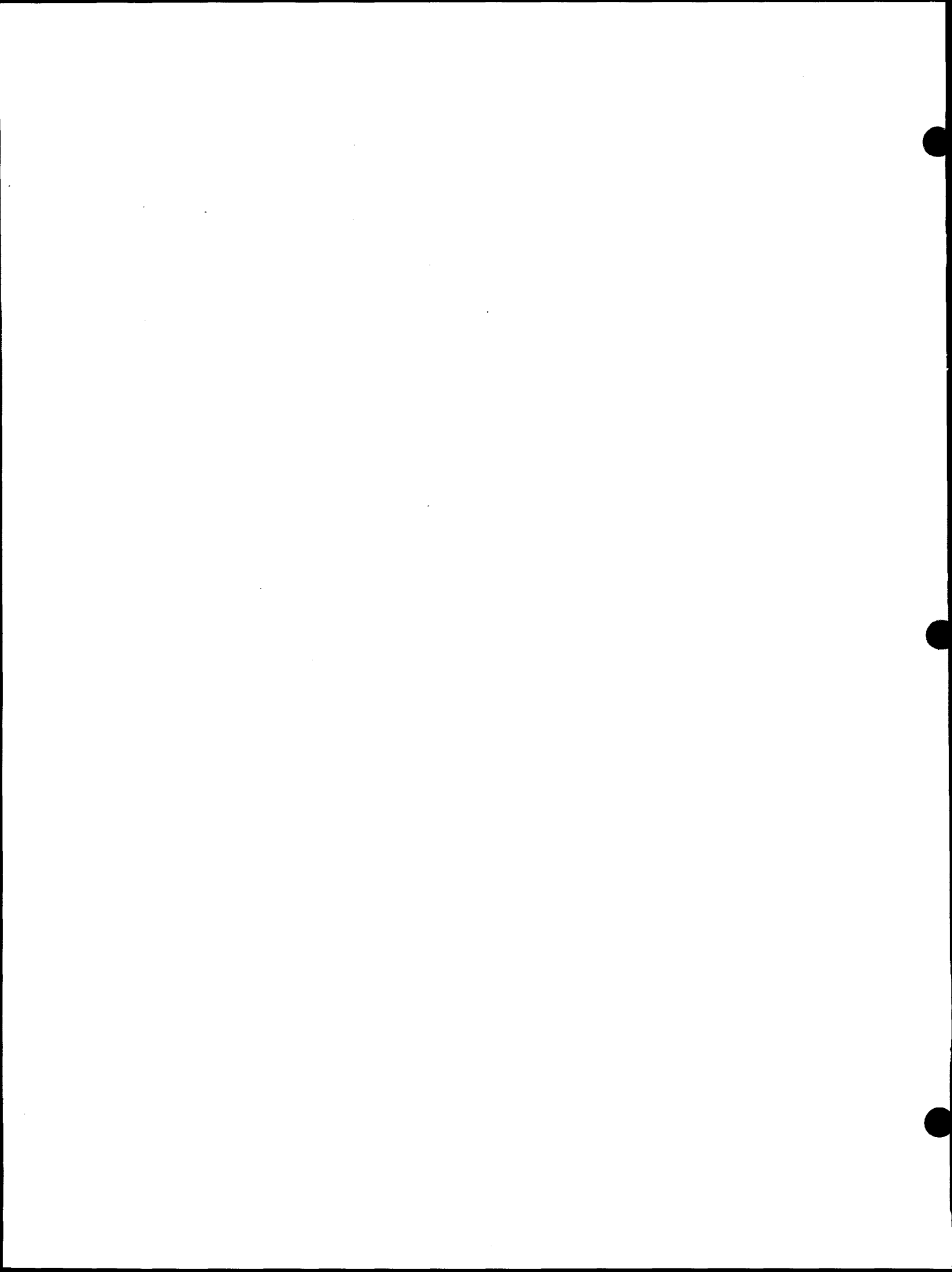
APPENDIX L.5
FIELD BLANK DATA SUMMARY



APPENDIX L.5
Field Blank Data Summary, 1995

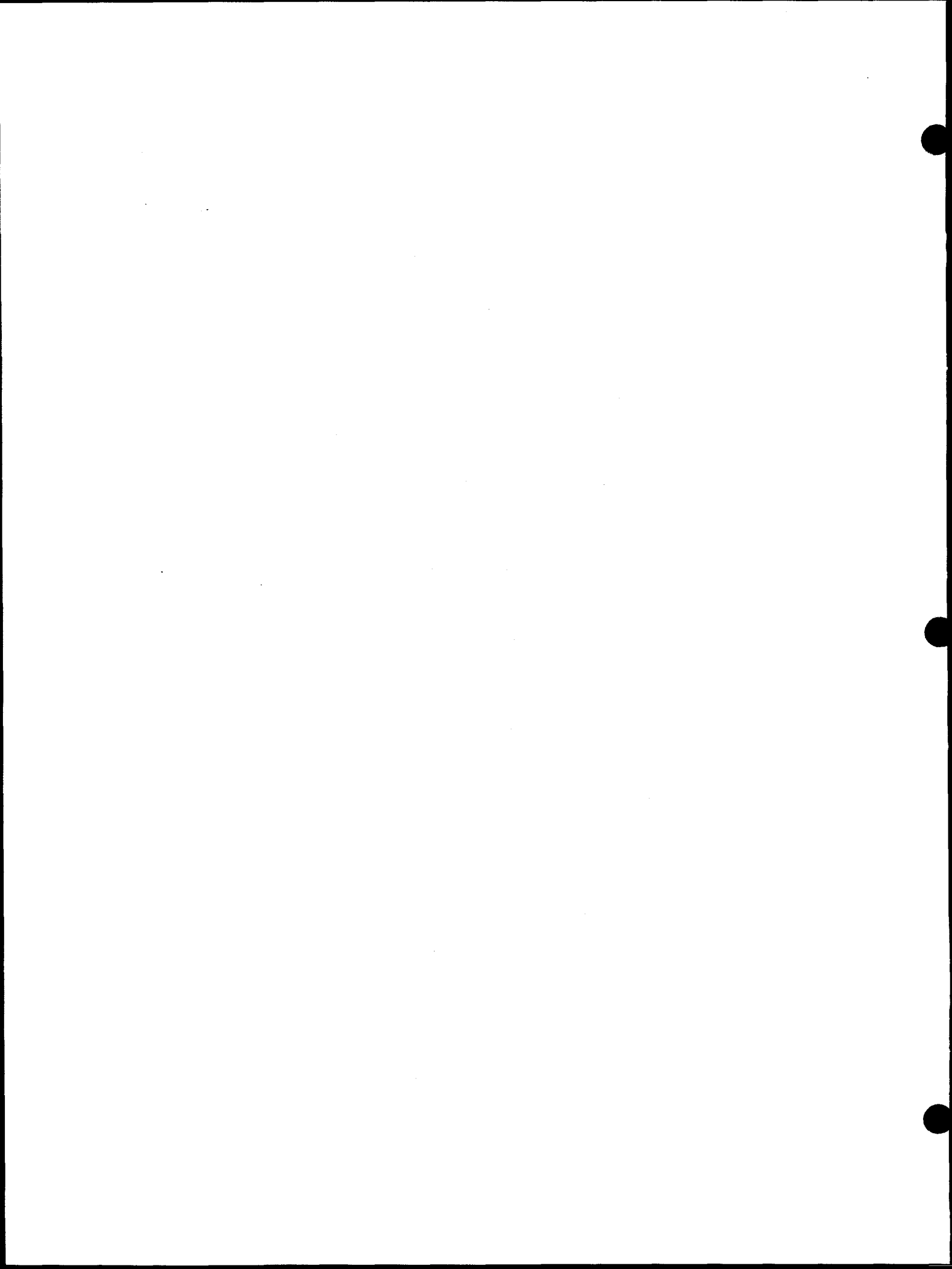
1

Sampling Group	FB BC 1	
Date Sampled	01/11/95	07/29/95
VOLATILE ORGANICS (ug/L)	.	.
Acetone	35	100
NITRATE/METALS (mg/L)	.	.
Nitrate (as N)	<0.2	<0.2
Aluminum	<0.02	<0.02
Antimony	<0.05	<0.05
Arsenic	<0.05	<0.05
Barium	<0.001	<0.001
Beryllium	<0.0003	<0.0003
Boron	0.068	0.03
Cadmium	<0.003	<0.003
Calcium	0.046	0.097
Chromium	<0.01	<0.01
Cobalt	<0.005	<0.005
Copper	<0.004	<0.004
Iron	0.0069	0.12
Magnesium	0.0099	0.0098
Manganese	<0.001	<0.001
Molybdenum	<0.01	<0.01
Nickel	<0.01	<0.01
Potassium	<0.6	<0.6
Selenium	<0.05	<0.05
Silver	<0.006	<0.006
Sodium	0.22	0.24
Strontium	<0.0004	0.00073
Thorium	<0.2	<0.2
Vanadium	<0.005	<0.005
Zinc	0.0068	0.012
RADIOCHEMISTRY	.	.
Gross Alpha (pCi/L)	0.139	0.542
Gross Alpha (CE+/-)	0.64	4.1
Gross Beta (pCi/L)	-1.74	3.05
Gross Beta (CE+/-)	2.6	12
Americium 241 (pCi/L)	0.863	0.0307
Americium 241 (CE+/-)	1.2	0.087
Iodine 129 (Bq/L)	0.1	0.01
Iodine 129 (CE +/-)	1.8	0.99
Neptunium 237 (pCi/L)	0	0.316
Neptunium 237 (CE+/-)	0.49	0.45
Plutonium 238 (pCi/L)	0	0.0401
Plutonium 238 (CE+/-)	0.47	0.11
Plutonium 239 (pCi/L)	0	0.401
Plutonium 239 (CE+/-)	0.47	0.36
Radium (Bq/L)	0.045	0.015
Radium (CE+/-)	0.042	0.028
Strontium (pCi/L)	-11.1	0.838
Strontium (CE+/-)	24	5.8
Technetium 99 (pCi/L)	-8.57	0.359
Technetium 99 (CE+/-)	21	8.3
Tritium (Bq/L)	35	11
Tritium (CE+/-)	25	24
Uranium 234 (pCi/L)	0.362	0.707
Uranium 234 (CE+/-)	0.72	0.43
Uranium 235 (pCi/L)	6.4	-8.07
Uranium 235 (CE+/-)	19	7.4
Uranium 238 (pCi/L)	0.362	0.321
Uranium 238 (CE+/-)	0.51	0.29



APPENDIX M

**VALIDATED RESULTS OF
VOLATILE ORGANIC COMPOUND ANALYSES**



EXPLANATION

SAMPLING POINT:

BCK	-	Bear Creek Kilometer
CWESTTOE	-	Burial Ground C-West Southeast Toe French Drain
GCS-01	-	Grassy Creek Spring 01
GW	-	Monitoring Well
MS-1	-	Bear Creek Main Stem Headwaters (Station 1)
NT	-	Northern Tributary
SEEP 1	-	Burial Ground A-North Seep Area
SEEP 2	-	Burial Ground C-East Seep Area
SS	-	(Bear Creek) Spring Station
TS	-	Tankfarm Spring (Bear Creek Headwaters)

LOCATION:

AGLLSF	-	Above Grade Low-Level Storage Facility
B9714	-	Y-12 TSD Garage Facility (Building 9714)
BG	-	Bear Creek Burial Grounds WMA
EXP	-	Exit Pathway Monitoring Location: Maynardville Limestone Transverse (-A, -B, -C, -W) Spring or Surface Water Sampling Location (-SW)
OLF	-	Oil Landfarm WMA
RS	-	Rust Spoil Area
S3	-	S-3 Site
SPI	-	Spoil Area I

NOTES:

All results in micrograms per liter (ug/L).

FP1	-	False Positive result, screened by laboratory blank
FP2	-	False Positive result, screened by trip blank
.	-	Compound not detected at the reported minimum attainable detection limit.

Results of VOC analyses reported for each groundwater sample were evaluated using results for each associated laboratory and trip blank sample to identify false positives (i.e., results that are probable artifacts of the groundwater sampling or analysis procedures). To identify the false positives, the maximum concentration of each VOC detected in either blank sample (Appendix L.2 and L.3) is multiplied by a qualification factor to determine the blank qualification result (BQR) for the compound. A factor of 5 is used for most compounds and a factor of 10 is used for the common laboratory reagents methylene chloride, acetone, 2-butanone, and toluene (U.S. Environmental Protection Agency 1988). If a compound detected in the blank samples is also detected in an associated groundwater sample, the concentration reported for the groundwater sample (Appendix E) is compared to the corresponding BQR. If the concentration of the compound in the groundwater sample is at or below the BQR, the result is considered a false positive.

APPENDIX M
Validated VOC Results, 1995

Sampling Point	BCK-00.63	BCK-04.55	BCK-09.40	BCK-11.97	GCS1	GW-014	GW-040
Location	EXP-SW	EXP-SW	EXP-SW	EXP-SW	EXP-SW	BG	BG
Date Sampled	03/09/95	03/09/95	03/09/95	03/09/95	05/23/95	08/04/95	06/06/95
Acetone	.	.	.	.	.	.	.
Benzene	.	.	.	.	.	.	.
Bromodichloromethane	.	.	.	.	.	.	.
Bromoform	.	.	.	.	.	.	.
Bromomethane	.	.	.	.	.	.	.
2-Butanone	.	.	.	.	.	.	.
Carbon disulfide	.	.	.	.	.	.	.
Carbon tetrachloride	.	.	.	.	.	.	.
Chlorobenzene	.	.	.	.	.	.	.
Chlorodibromomethane	.	.	.	.	.	.	.
Chloroethane	.	.	.	.	.	.	.
Chloroform	.	.	.	.	.	.	.
Chloromethane	.	.	.	.	.	.	.
1,1-Dichloroethane	.	.	.	.	.	450	.
1,2-Dichloroethane	.	.	.	.	.	73	.
1,1,1-Trichloroethane	.	.	.	.	.	100	.
1,2-Dichloroethene	.	.	.	.	.	2300	.
1,2-Dichloropropane	.	.	5	2	.	.	.
cis-1,3-Dichloropropene	.	.	.	.	.	.	.
trans-1,3-Dichloropropene	.	.	.	.	.	.	.
Ethylbenzene	.	.	.	.	.	.	.
2-Hexanone	.	.	.	.	.	.	.
4-Methyl-2-pentanone	.	.	.	.	.	.	.
Methylene chloride	.	.	.	.	.	.	.
Styrene	.	.	.	.	.	.	.
1,1,2,2-Tetrachloroethane	.	.	.	.	.	.	.
Tetrachloroethene	.	.	.	.	.	.	.
Toluene	.	.	.	.	.	.	.
1,1,1-Trichloroethane	.	.	.	.	.	.	.
1,1,2-Trichloroethane	.	.	.	.	.	.	.
Trichloroethene	.	.	.	.	.	.	.
Vinyl acetate	.	.	.	.	.	410	.
Vinyl chloride	.	.	.	.	.	170	.
Xylenes	.	.	.	.	.	.	.

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

2

Sampling Point	GW-040	GW-042	GW-043	GW-044	GW-046
Location	BG	BG	OLF	OLF	BG
Date Sampled	10/11/95	02/01/95	06/06/95	08/09/95	10/11/95
Acetone	.	.	.	.	.
Benzene	.	.	.	.	.
Bromodichloromethane	.	.	.	.	.
Bromoform	.	.	.	.	.
Bromomethane	.	.	.	.	.
2-Butanone	.	.	.	.	.
Carbon disulfide	.	.	.	.	.
Carbon tetrachloride	.	.	.	.	.
Chlorobenzene	.	.	.	.	.
Chlorodibromomethane	.	.	.	.	.
Chloroethane	.	.	.	.	.
Chloroform	.	.	.	.	.
Chloromethane	.	.	.	.	.
1,1-Dichloroethane	.	.	.	.	.
1,2-Dichloroethane	.	.	.	.	.
1,1,1-Trichloroethane	.	.	.	.	.
1,2-Dichloroethene	.	.	.	.	.
1,2-Dichloropropane	.	.	.	.	.
cis-1,3-Dichloropropene	.	.	.	.	.
trans-1,3-Dichloropropene	.	.	.	.	.
Ethylbenzene	.	.	.	.	.
2-Hexanone	.	.	.	.	.
4-Methyl-2-pentanone	.	.	.	.	.
Methylene chloride	.	.	.	.	.
Styrene	.	.	.	.	.
1,1,2,2-Tetrachloroethane	.	.	.	.	.
Tetrachloroethene	.	.	.	.	.
Toluene	.	.	.	.	.
1,1,1-Trichloroethane	.	.	.	.	.
1,1,2-Trichloroethane	.	.	.	.	.
Trichloroethene	.	.	.	.	.
Vinyl acetate	.	.	.	.	.
Vinyl chloride	.	.	.	.	.
Xylenes	.	.	.	.	.

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point	GW-047	GW-053	GW-056	GW-057	GW-061
Location	BG	BG	EXP-A	EXP-A	BG
Date Sampled	01/25/95 06/18/95 07/24/95 03/28/95 06/28/95 09/25/95 12/10/95 03/05/95 08/04/95 03/05/95 08/05/95 03/28/95 06/28/95 09/21/95				
Acetone					
Benzene					
Bromodichloromethane					
Bromoform					
Bromomethane					
2-Butanone					
Carbon disulfide					
Carbon tetrachloride					
Chlorobenzene					
Chlorodibromomethane					
Chloroethane					
Chloroform					
Chloromethane					
1,1-Dichloroethane		8			
1,2-Dichloroethane	10				
1,1,1-Trichloroethane					
1,1,2-Trichloroethane					
1,2-Dichloroethane	19	16			
1,2-Dichloropropane					
cis-1,3-Dichloropropene					
trans-1,3-Dichloropropene					
Ethylbenzene					
2-Hexanone					
4-Methyl-2-pentanone					
Methylene chloride					
Styrene					
1,1,2,2-Tetrachloroethane					
Tetrachloroethene					
Toluene		2			
1,1,1-Trichloroethane					
1,1,2-Trichloroethane		3			
Trichloroethene	2				
Vinyl acetate					
Vinyl chloride	10	7			
Xylenes					

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point	GW-064	GW-066	GW-069	GW-079	GW-080
Location	OLF	OLF	BG	BG	BG
Date Sampled	03/26/95	06/07/95	08/06/95	09/27/95	03/25/95
Acetone	.	.	.	.	.
Benzene	.	.	.	.	.
Bromodichloromethane	.	.	.	.	.
Bromoform	.	.	.	.	.
Bromomethane	.	.	.	.	.
2-Butanone	.	.	8	.	.
Carbon disulfide	.	.	.	.	.
Carbon tetrachloride	1	.	.	.	.
Chlorobenzene	.	.	.	.	.
Chlorodibromomethane	.	.	.	.	.
Chloroethane	2	.	.	.	.
Chloroform	2	.	.	.	.
Chloromethane	.	.	.	.	.
1,1-Dichloroethane	.	1	.	.	.
1,2-Dichloroethane	.	2	.	.	.
1,1-Dichloroethene	7	3	.	.	.
1,2-Dichloroethene	.	11	.	.	.
1,2-Dichloropropane	.	.	.	.	.
cis-1,3-Dichloropropene	.	.	.	.	.
trans-1,3-Dichloropropene	.	.	.	.	.
Ethylbenzene	.	.	.	.	.
2-Hexanone	.	.	FP1	.	.
4-Methyl-2-pentanone	.	.	.	.	.
Methylene chloride	.	.	.	.	FP1
Styrene	.	.	.	.	.
1,1,2,2-Tetrachloroethane	.	.	.	.	.
Tetrachloroethene	1	21	.	.	.
Toluene	.	.	.	.	.
1,1,1-Trichloroethane	FP2	.	.	.	.
1,1,2-Trichloroethane	.	FP2	.	.	.
Trichloroethene	64	12	.	.	.
Vinyl acetate	.	.	.	.	.
Vinyl chloride	.	99	2	.	.
Xylenes	.	.	.	.	.

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point	GW-080	GW-084	GW-085	GW-087	GW-095
Location	BG	OLF	OLF	OLF	BG
Date Sampled	09/21/95	12/09/95	03/23/95	06/07/95	08/05/95
Acetone	.	.	.	.	.
Benzene	.	.	.	.	.
Bromodichloromethane	.	.	.	.	.
Bromoform	.	.	.	.	.
Bromomethane	.	.	.	.	.
2-Butanone	.	.	.	.	.
Carbon tetrachloride	.	.	.	.	.
Chlorobenzene	.	.	.	.	.
Chlorodibromomethane	.	.	.	.	.
Chloroethane	.	.	.	.	.
Chloroform	.	.	.	.	.
Chloromethane	.	.	.	.	.
1,1-Dichloroethane	.	.	.	.	.
1,2-Dichloroethane	.	.	.	.	.
1,1,1-Trichloroethane	.	.	.	.	.
1,2-Dichloroethene	.	.	.	.	.
1,2-Dichloropropane	.	.	.	.	.
cis-1,3-Dichloropropene	.	.	.	.	.
trans-1,3-Dichloropropene	.	.	.	.	.
Ethylbenzene	.	.	.	.	.
2-Hexanone	.	.	.	.	.
4-Methyl-2-pentanone	.	.	.	.	.
Methylene chloride	.	.	.	.	.
Styrene	.	.	.	.	.
1,1,2,2-Tetrachloroethane	.	.	.	.	.
Tetrachloroethene	.	.	.	.	.
Toluene	.	.	.	.	.
1,1,1-Trichloroethane	.	.	.	.	.
1,1,2-Trichloroethane	.	.	.	.	.
Trichloroethene	.	.	.	.	.
Vinyl acetate	.	.	.	.	.
Vinyl chloride	.	.	.	.	.
Xylenes	.	.	.	.	.

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point	GW-095	GW-100	GW-115	GW-124	GW-162	GW-228	GW-229	GW-236	GW-248	GW-257
Location	BG	S3	S3	S3	BG	OLF	OLF	S3	BG	BG
Date Sampled	12/11/95	09/06/95	01/14/95	09/16/95	01/26/95	05/31/95	08/03/95	09/16/95	08/08/95	08/08/95
Acetone	FP2									
Benzene										
Bromodichloromethane										
Bromoform										
Bromomethane	FP1									
2-Butanone										
Carbon disulfide										
Carbon tetrachloride										
Chlorobenzene										
Chlorodibromomethane										
Chloroethane										
Chloroform				1						
Chloromethane										
1,1-Dichloroethane								5		
1,2-Dichloroethane										
1,1,1-Trichloroethane										
1,2-Dichloroethene						14				
1,2-Dichloropropane										
cis-1,3-Dichloropropene										
trans-1,3-Dichloropropene										
Ethylbenzene										
2-Hexanone										
4-Methyl-2-pentanone										
Methylene chloride										
Styrene										
1,1,2,2-Tetrachloroethane										
Tetrachloroethene				1				2		140
Toluene								FP2		
1,1,1-Trichloroethane										
1,1,2-Trichloroethane										
Trichloroethene						28				3
Vinyl acetate										
Vinyl chloride										
Xylenes										

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point	GW-276	GW-287	GW-288	GW-289	GW-290	GW-291	GW-311	GW-312						
Location	S3	BG	BG	BG	BG	BG	RS	RS						
Date sampled	01/24/95	07/29/95	03/26/95	06/20/95	09/18/95	12/10/95	08/09/95	08/08/95	08/07/95	03/25/95	08/03/95	06/06/95	10/25/95	03/25/95
Acetone														
Benzene														
Bromodichloromethane														
Bromoform														
Bromomethane														
2-Butanone														
Carbon disulfide														
Carbon tetrachloride														
Chlorobenzene														
Chlorodibromomethane														
Chloroethane														
Chloroform	1													
Chloromethane														
1,1-Dichloroethane														
1,2-Dichloroethane														
1,1-Dichloroethene														
1,2-Dichloroethene														
1,2-Dichloropropane														
cis-1,3-Dichloropropene														
trans-1,3-Dichloropropene														
Ethylbenzene														
2-Hexanone														
4-Methyl-2-pentanone														
Methylene chloride														
Styrene														
1,1,2,2-Tetrachloroethane														
Tetrachloroethene	37													
Toluene														
1,1,1-Trichloroethane														
1,1,2-Trichloroethane														
Trichloroethene														
Vinyl acetate														
Vinyl chloride														
Xylenes														

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point	GW-312	GW-315	GW-317	GW-346	GW-347	GW-348		
Location	RS	SPI	SPI	S3	S3	S3		
Date Sampled	06/06/95	08/06/95	03/15/95	12/07/95	03/14/95	06/21/95	08/15/95	03/15/95
Acetone	.	.	.	.	.	.	.	.
Benzene	.	.	.	.	.	.	.	.
Bromodichloromethane	.	.	.	.	.	.	.	.
Bromoform	.	.	.	.	.	.	.	.
Bromomethane	.	.	.	.	.	.	.	.
2-Butanone	.	.	.	.	.	.	.	.
Carbon disulfide	.	.	.	.	.	.	.	.
Carbon tetrachloride	.	.	.	.	.	.	.	.
Chlorobenzene	.	.	.	.	.	.	.	.
Chlorodibromomethane	.	.	.	.	.	.	.	.
Chloroethane	.	.	.	.	.	.	.	.
Chloroform	2	1	2	2	.	.	.	.
Chloromethane	.	.	.	.	.	.	.	.
1,1-Dichloroethane	.	.	.	.	.	.	.	.
1,2-Dichloroethane	.	.	.	.	.	.	.	.
1,1-Dichloroethene	.	.	.	.	.	.	.	.
1,2-Dichloroethene	.	9	15	15	.	.	.	.
1,2-Dichloropropane	.	.	.	.	.	.	.	.
cis-1,3-Dichloropropene	.	.	.	.	.	.	.	.
trans-1,3-Dichloropropene	.	.	.	.	.	.	.	.
Ethylbenzene	.	.	.	.	.	.	.	.
2-Hexanone	.	.	.	.	.	.	.	.
4-Methyl-2-pentanone	.	.	.	.	.	.	.	.
Methylene chloride	.	.	.	.	.	.	.	.
Styrene	.	.	.	.	.	.	.	.
1,1,2,2-Tetrachloroethane	.	15	27	26	.	.	.	.
Tetrachloroethene	.	.	.	.	.	.	.	.
Toluene	.	.	.	.	.	.	.	.
1,1,1-Trichloroethane	.	.	.	.	.	.	.	.
1,1,2-Trichloroethane	.	.	.	.	.	.	.	.
Trichloroethene	.	.	.	.	.	.	.	.
Vinyl acetate	74	56	8	11	.	.	.	.
Vinyl chloride	.	.	.	.	.	.	.	.
Xylenes	.	.	.	.	.	.	.	.

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point	GW-348	GW-363	GW-370	GW-372	GW-373
Location	S3	OLF	BG	BG	BG
Date Sampled	06/26/95	01/23/95	06/17/95	07/19/95	08/08/95
Acetone	.	.	.	.	.
Benzene	.	.	.	.	.
Bromodichloromethane	.	.	.	.	.
Bromoform	.	.	.	.	.
Bromomethane	.	.	.	.	.
2-Butanone	.	.	.	.	.
Carbon disulfide	.	.	.	.	.
Carbon tetrachloride	.	.	.	.	.
Chlorobenzene	.	.	.	.	.
Chlorodibromomethane	.	.	.	.	.
Chloroethane	.	.	.	.	.
Chloroform	.	.	.	.	.
Chloromethane	.	.	.	.	.
1,1-Dichloroethane	.	.	.	.	.
1,2-Dichloroethane	.	.	.	.	.
1,1-Dichloroethene	.	.	.	.	.
1,2-Dichloroethene	.	.	.	.	.
1,2-Dichloropropane	.	.	.	.	.
cis-1,3-Dichloropropene	.	.	.	.	.
trans-1,3-Dichloropropene	.	.	.	.	.
Ethylbenzene	.	.	.	.	.
2-Hexanone	.	.	.	.	.
4-Methyl-2-pentanone	.	.	.	.	.
Methylene chloride	.	.	.	.	.
Styrene	.	.	.	.	.
1,1,2,2-Tetrachloroethane	.	.	.	.	.
Toluene	.	.	.	.	.
1,1,1-Trichloroethane	.	.	.	.	.
1,1,2-Trichloroethane	.	.	.	.	.
Trichloroethene	.	.	.	.	.
Vinyl acetate	.	.	.	.	.
Vinyl chloride	.	.	.	.	.
Xylenes	.	.	.	.	.

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

10

Sampling Point	GW-373	GW-537	GW-613	GW-614	GW-621	GW-627
Location	BG	OLF	S3	S3	EXP-B	BG
Date sampled	06/05/95	08/08/95	03/26/95	10/12/95	03/29/95	08/30/95
Acetone						
Benzene						
Bromodichloromethane						
Bromoform						
Bromomethane						
2-Butanone						
Carbon disulfide						
Carbon tetrachloride						
Chlorobenzene						
Chlorodibromomethane						
Chloroethane						
Chloroform		1				
Chloromethane						
1,1-Dichloroethane						
1,2-Dichloroethane						
1,1,1-Trichloroethane						
1,2-Dichloroethene						
1,2-Dichloropropane						
cis-1,3-Dichloropropene						
trans-1,3-Dichloropropene						
Ethylbenzene						
2-Hexanone						
4-Methyl-2-pentanone						
Methylene chloride						
Styrene						
1,1,2,2-Tetrachloroethane						
Tetrachloroethene						
Toluene						
1,1,1-Trichloroethane						
1,1,2-Trichloroethane						
Trichloroethene						
Vinyl acetate						
Vinyl chloride						
Xylenes						

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point	GW-627		GW-637		GW-642		GW-652		GW-653																			
Location	BG		OLF		BG		BG		BG																			
Date sampled	06/22/95		09/25/95		12/10/95		01/24/95		06/17/95		07/19/95		01/31/95		06/02/95		08/07/95		10/10/95		03/27/95		06/20/95		09/19/95		03/27/95	
Acetone																												
Benzene																												
Bromodichloromethane																												
Bromoform																												
Bromomethane																												
2-Butanone																												
Carbon disulfide																												
Carbon tetrachloride																												
Chlorobenzene																												
Chlorodibromomethane																												
Chloroethane																												
Chloroform																												
Chloromethane																												
1,1-Dichloroethane	4																											
1,2-Dichloroethane	5																											1
1,1-Dichloroethene																												
1,2-Dichloroethene																												
1,2-Dichloropropane																												
cis-1,3-Dichloropropene																												
trans-1,3-Dichloropropene																												
Ethylbenzene																												
2-Hexanone																												
4-Methyl-2-pentanone																												
Methylene chloride																												
Styrene																												
1,1,2,2-Tetrachloroethane																												
Tetrachloroethene	47	55	58																									3
Toluene																												
1,1,1-Trichloroethane																												
1,1,2-Trichloroethane																												
Trichloroethene	7	8	9																									1
Vinyl acetate																												
Vinyl chloride																												
Xylenes																												

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

12

Sampling Point	GW-653		GW-654		GW-683		GW-684		GW-685		GW-694	
Location	BG		BG		EXP-A		EXP-A		EXP-A		EXP-B	
Date Sampled	06/20/95	09/20/95	12/08/95	03/26/95	06/19/95	09/18/95	12/09/95	03/09/95	08/06/95	03/10/95	08/06/95	03/30/95
Acetone		4	FP1							11		
Benzene												
Bromodichloromethane												
Bromoform												
Bromomethane												
2-Butanone												
Carbon disulfide												
Carbon tetrachloride												
Chlorobenzene												
Chlorodibromomethane												
Chloroethane												
Chloroform												
Chloromethane												
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
1,2-Dichloroethene		17	15									
1,2-Dichloropropane			31							2		
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
Ethylbenzene										1		
2-Hexanone												
4-Methyl-2-pentanone												
Methylene chloride										2		
Styrene												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene		2	2							FP1		
Toluene										FP1		
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Vinyl acetate		1	2							2		
Vinyl chloride												
Xylenes										FP1		

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point	GW-694	GW-695	GW-703	GW-704	GW-706	GW-710	GW-711	GW-712
Location	EXP-B	EXP-B	EXP-B	EXP-B	EXP-B	EXP-W	EXP-W	EXP-W
Date Sampled	08/31/95	03/29/95	08/30/95	03/30/95	08/31/95	01/15/95	07/27/95	01/13/95
Acetone	.	.	.	.	.	.	.	.
Benzene	.	.	.	.	.	.	.	.
Bromodichloromethane	.	.	.	.	.	.	.	.
Bromoform	.	.	.	.	.	.	.	.
Bromomethane	.	.	.	.	.	.	.	.
2-Butanone	.	.	.	.	.	.	.	.
Carbon disulfide	.	.	.	.	.	.	.	.
Carbon tetrachloride	.	.	.	.	.	.	.	.
Chlorobenzene	.	.	.	.	.	.	.	.
Chlorodibromomethane	.	.	.	.	.	.	.	.
Chloroethane	.	.	.	.	.	.	.	.
Chloroform	.	.	.	.	.	.	.	.
Chloromethane	.	.	.	.	.	.	.	.
1,1-Dichloroethane	.	.	.	.	.	.	.	.
1,2-Dichloroethane	.	.	.	6	.	.	.	.
1,1-Dichloroethene	.	.	.	.	.	.	.	.
1,2-Dichloroethene	2	.	.	.	.	.	.	.
1,2-Dichloropropane	.	.	.	.	.	.	.	.
cis-1,3-Dichloropropene	.	.	.	.	.	.	.	.
trans-1,3-Dichloropropene	.	.	.	.	.	.	.	.
Ethylbenzene	.	.	.	.	.	.	.	.
2-Hexanone	.	.	.	.	.	.	.	.
4-Methyl-2-pentanone	.	.	.	.	.	.	.	.
Methylene chloride	.	.	.	.	.	.	.	.
Styrene	.	.	.	.	.	.	.	.
1,1,2,2-Tetrachloroethane	.	.	.	.	.	.	.	.
Tetrachloroethene	.	.	.	.	.	.	.	.
Toluene	.	.	.	.	.	.	.	.
1,1,1-Trichloroethane	.	.	.	.	.	.	.	.
1,1,2-Trichloroethane	.	.	.	.	.	.	.	.
Trichloroethene	.	.	.	.	.	.	.	.
Vinyl acetate	19	4	21	17	85	8	.	.
Vinyl chloride	.	.	.	.	.	.	.	.
Xylenes	.	.	.	.	.	.	.	.

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

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Sampling Point	GW-712	GW-713	GW-714	GW-715	GW-723	GW-724	GW-725	GW-736
Location	EXP-W	EXP-W	EXP-W	EXP-W	EXP-C	EXP-C	EXP-C	EXP-C
Date Sampled	07/25/95	01/14/95	07/27/95	01/14/95	02/20/95	02/19/95	02/28/95	02/28/95
Acetone	.	.	.	.	.	.	.	.
Benzene	.	.	.	.	.	.	.	.
Bromodichloromethane	.	.	.	.	.	.	.	.
Bromoform	.	.	.	.	.	.	.	.
Bromomethane	.	.	.	.	.	.	.	FP1
2-Butanone	.	.	.	.	.	.	.	.
Carbon disulfide	.	.	.	.	.	.	.	.
Carbon tetrachloride	.	.	.	.	.	2	4	.
Chlorobenzene	.	.	.	.	.	.	.	.
Chlorodibromomethane	.	.	.	.	.	.	.	.
Chloroethane	.	.	.	.	.	.	.	.
Chloroform	.	.	.	.	.	1	1	1
Chloromethane	.	.	.	.	.	.	.	.
1,1-Dichloroethane	.	.	.	.	.	.	.	.
1,2-Dichloroethane	.	.	.	.	.	.	.	1
1,1,1-Trichloroethane	.	.	.	.	.	.	.	2
1,2-Dichloroethene	.	.	.	.	.	4	4	.
1,2-Dichloropropane	.	.	.	.	.	.	.	.
cis-1,3-Dichloropropene	.	.	.	.	.	.	.	.
trans-1,3-Dichloropropene	.	.	.	.	.	.	.	.
Ethylbenzene	.	.	.	.	.	.	.	.
2-Hexanone	.	.	.	.	.	.	.	.
4-Methyl-2-pentanone	.	.	.	.	.	.	.	.
Methylene chloride	.	.	.	.	.	.	.	.
Styrene	.	.	.	.	.	.	.	.
1,1,2,2-Tetrachloroethane	.	.	.	.	.	.	.	.
Tetrachloroethene	.	.	.	.	.	4	3	1
Toluene	.	.	.	.	.	FP1	.	.
1,1,1-Trichloroethane	.	.	.	.	.	.	2	.
1,1,2-Trichloroethane	.	.	.	.	.	.	.	.
Trichloroethene	.	.	.	.	.	.	.	.
Vinyl acetate	.	.	.	.	.	.	.	.
Vinyl chloride	.	.	.	.	6	150	130	48
Xylenes	.	.	.	.	.	.	.	.

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point	GW-736	GW-737	GW-738	GW-739	GW-740	GW-793	GW-794				
Location	EXP-C	EXP-C	EXP-C	EXP-C	EXP-C	AGLLSF	AGLLSF				
Date Sampled	09/26/95	03/01/95	09/26/95	02/18/95	09/17/95	02/16/95	01/23/95	06/17/95	07/19/95	10/19/95	01/24/95
Acetone	.	.	FP1	FP2	.	.	.	.	.	.	.
Benzene	.	.	.	.	.	.	.	.	.	.	.
Bromodichloromethane	.	.	.	.	.	.	.	.	.	.	.
Bromoform	.	.	.	.	.	.	.	.	.	.	.
Bromomethane	.	.	FP1	FP1	.	.	.	.	.	.	.
2-Butanone	.	.	.	.	.	.	.	.	.	.	.
Carbon disulfide	.	.	.	.	.	.	.	.	.	.	.
Carbon tetrachloride	.	.	1	1	1	2	2	.	.	.	.
Chlorobenzene	.	.	.	.	.	.	.	.	.	.	.
Chlorodibromomethane	.	.	.	.	.	.	.	.	.	.	.
Chloroethane	.	.	.	.	.	.	.	.	.	.	.
Chloroform	.	1	1	1	1	1	1	.	.	.	.
Chloromethane	.	.	.	.	.	.	.	.	.	.	.
1,1-Dichloroethane	.	.	.	.	.	.	.	.	.	.	.
1,2-Dichloroethane	.	.	.	.	.	.	.	.	.	.	.
1,1-Dichloroethene	.	.	.	.	.	.	.	.	.	.	.
1,2-Dichloroethene	4	4	3	4	2	3	3	.	.	.	.
1,2-Dichloropropane	.	.	.	.	.	.	.	.	.	.	.
cis-1,3-Dichloropropene	.	.	.	.	.	.	.	.	.	.	.
trans-1,3-Dichloropropene	.	.	.	.	.	.	.	.	.	.	.
Ethylbenzene	.	.	.	.	.	.	.	.	.	.	.
2-Hexanone	.	.	.	.	.	.	.	.	.	.	.
4-Methyl-2-pentanone	.	.	.	.	.	.	.	.	.	.	.
Methylene chloride	.	.	.	.	.	.	.	.	FP1	.	.
Styrene	.	.	.	.	.	.	.	.	.	.	.
1,1,2,2-Tetrachloroethane	.	.	.	.	.	.	.	.	.	.	.
Tetrachloroethene	4	4	1	1	.	.	.	.	.	.	.
Toluene	.	.	FP1	FP1	.	.	.	.	FP2	.	.
1,1,1-Trichloroethane	.	.	.	.	.	.	.	.	.	.	.
1,1,2-Trichloroethane	.	.	.	.	.	.	.	.	.	.	.
Trichloroethene	10	15	48	52	47	76	76	.	.	.	.
Vinyl acetate	.	.	.	.	.	.	.	.	.	.	.
Vinyl chloride	.	.	.	.	.	.	.	.	.	.	.
Xylenes	.	.	1	.	.	.	.	.	.	.	.

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point	GW-794	GW-795	GW-800	GW-828	GW-828-100
Location	AGLLSF	AGLLSF	OLF	OLF	OLF
Date Sampled	06/18/95 07/24/95 10/24/95 01/25/95 06/18/95 07/24/95 10/24/95 03/25/95 05/31/95 06/27/95 08/24/95 12/08/95 02/14/95				
Acetone	.	.	.	.	.
Benzene	.	.	.	.	.
Bromodichloromethane	.	.	.	.	.
Bromoform	.	.	.	.	.
Bromomethane	.	.	.	.	.
2-Butanone	.	.	.	.	10
Carbon disulfide	.	.	.	.	.
Carbon tetrachloride	.	.	.	.	.
Chlorobenzene	.	.	.	.	.
Chlorodibromomethane	.	.	.	.	.
Chloroethane	.	.	.	.	.
Chloroform	.	.	.	.	.
Chloromethane	.	.	.	.	.
1,1-Dichloroethane	.	.	.	.	.
1,2-Dichloroethane	.	.	.	.	.
1,1,1-Trichloroethane	.	.	.	.	.
1,2-Dichloroethene	.	.	.	.	.
1,2-Dichloropropane	.	.	.	.	.
cis-1,3-Dichloropropene	.	.	.	.	.
trans-1,3-Dichloropropene	.	.	.	.	.
Ethylbenzene	.	.	.	.	.
2-Hexanone	.	.	.	.	.
4-Methyl-2-pentanone	.	.	.	.	.
Methylene chloride	.	.	.	.	.
Styrene	.	.	.	.	.
1,1,2,2-Tetrachloroethane	.	.	.	.	.
Tetrachloroethene	.	.	.	.	.
Toluene	.	.	.	.	.
1,1,1-Trichloroethane	.	.	.	.	.
1,1,2-Trichloroethane	.	.	.	.	.
Trichloroethene	.	.	.	.	.
Vinyl acetate	.	.	.	.	.
Vinyl chloride	.	.	.	.	.
Xylenes	.	.	.	.	.

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point Location	GW-828- 200	GW-829 OLF	GW-829- 029	GW-829- 116	GW-830 B9714	NT-01 EXP-SW	NT-02 EXP-SW	SS-1 EXP-SW	SS-4 EXP-SW
Date Sampled	02/18/95	06/27/95	08/30/95	12/10/95	03/01/95	03/07/95	03/09/95	03/09/95	03/09/95
Acetone				49		173			
Benzene									
Bromodichloromethane									
Bromoform									
Bromomethane									
2-Butanone								9	
Carbon disulfide									
Carbon tetrachloride									
Chlorobenzene									
Chlorodibromomethane									
Chloroethane									
Chloroform	2			3		4			
Chloromethane									
1,1-Dichloroethane									
1,2-Dichloroethane									
1,1,1-Trichloroethane									
1,2-Dichloroethene									
1,2-Dichloropropane									
cis-1,3-Dichloropropene									
trans-1,3-Dichloropropene									
Ethylbenzene									
2-Hexanone									
4-Methyl-2-pentanone									
Methylene chloride									
Styrene									
1,1,2,2-Tetrachloroethane									
Tetrachloroethene								1	
Toluene									
1,1,1-Trichloroethane									
1,1,2-Trichloroethane									
Trichloroethene									
Vinyl acetate									
Vinyl chloride									
Xylenes									2

(CONTINUED)

APPENDIX M
Validated VOC Results, 1995

Sampling Point	SS-4	SS-5	SS-5.95K	SS-6	SS-6.6K	SS-6W	SS-7
Location	EXP-SW	EXP-SW	EXP-SW	EXP-SW	EXP-SW	EXP-SW	EXP-SW
Date Sampled	07/25/95	07/25/95	05/23/95	07/25/95	05/23/95	10/26/95	10/26/95
Acetone	.	.	.	.	.	.	.
Benzene	.	.	.	.	.	.	.
Bromodichloromethane	.	.	.	.	.	.	.
Bromoform	.	.	.	.	.	.	.
Bromomethane	.	.	.	.	.	.	.
2-Butanone	.	.	.	.	.	.	.
Carbon disulfide	.	.	.	.	.	.	.
Carbon tetrachloride	.	.	.	.	.	.	.
Chlorobenzene	.	.	.	.	.	.	.
Chlorodibromomethane	.	.	.	.	.	.	.
Chloroethane	.	.	.	.	.	.	.
Chloroform	.	.	.	.	.	.	.
Chloromethane	.	.	.	.	.	.	.
1,1-Dichloroethane	.	.	.	.	.	.	.
1,2-Dichloroethane	.	.	.	.	.	.	.
1,1-Dichloroethene	.	.	.	.	.	.	.
1,2-Dichloroethene	5	.	.	.	.	.	.
1,2-Dichloropropane	.	.	.	.	.	.	.
cis-1,3-Dichloropropene	.	.	.	.	.	.	.
trans-1,3-Dichloropropene	.	.	.	.	.	.	.
Ethylbenzene	.	.	.	.	.	.	.
2-Hexanone	.	.	.	.	.	.	.
4-Methyl-2-pentanone	.	.	.	.	.	.	.
Methylene chloride	.	.	.	.	.	.	.
Styrene	.	.	.	.	.	.	.
1,1,2,2-Tetrachloroethane	.	.	.	.	.	.	.
Tetrachloroethene	.	.	.	.	.	.	.
Toluene	.	.	.	.	.	.	.
1,1,1-Trichloroethane	.	.	.	.	.	.	.
1,1,2-Trichloroethane	.	.	.	.	.	.	.
Trichloroethene	3	.	.	.	.	.	.
Vinyl acetate	.	.	.	.	.	.	.
Vinyl chloride	.	.	.	.	.	.	.
Xylenes	.	.	.	.	.	.	.

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