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WASTE DISPOSAL INC. SUPERFUND SITE

Project Coordinator

March 1, 1999 Project No. 94-256

Ms. Andria Benner
U.S. Environmental Protection Agency
75 Hawthorne Street, No. H-7-2
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Transmittal
1998 Annual Ground Water Monitoring Report
Waste Disposal, Inc. Superfund Site

Dear Ms. Benner:

Enclosed is a copy of the 1998 Annual Ground Water Monitoring Report for the Waste Disposal, Inc. (WDI) Superfund Site located in Santa Fe Springs, California. The submittal of this annual report is consistent with the timetable noted in your February 2, 1999 letter.

Appendix B of the annual report is currently being transferred to CD-ROM and will be submitted to EPA under a separate cover when completed. This submittal will consist of the following:

- Appendix B (CD ROM):
  - Ground Water Laboratory Reports and QA/QC Documentation Reports (September 1997 to October 1998).
  - Laboratory Validation Reports (September 1997 to October 1998).
- Table 5.4 (Summary of QA/QC Laboratory Data Evaluation)

Please feel free to call me with any questions or comments at (562) 692-4535.

Sincerely,

Ian Webster
WDIG Project Coordinator

IW/EA:rm
Enclosure

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1998 ANNUAL GROUND WATER MONITORING REPORT
WASTE DISPOSAL, INC. SUPERFUND SITE
SANTA FE SPRINGS, CALIFORNIA

Prepared for

United States Environmental Protection Agency

Prepared by

TRC

Irvine, California

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Project No. 94-256
March 1999

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1.0 INTRODUCTION

1. This Annual Ground Water Monitoring Report provides a summary and evaluation of the 1998 ground water quality monitoring data collected at the Waste Disposal, Inc. (WDI) Superfund site in Santa Fe Springs, California. This report is submitted as required under the amended Statement of Work (SOW) of the Amended Administrative Order, Docket 97-09.

2. The purpose of this annual report is to review the ground water conditions at the WDI site and to evaluate potential ground water contamination from WDI sources. This report has been prepared with the following objectives:
   - Summarize the ground water data collected by the Waste Disposal, Inc. Group (WDIG) from September 1997 through October 1998.
   - Evaluate the data as to trends or other observations.
   - Provide a formal transmittal of the laboratory data and Quality Assurance/Quality Control (QA/QC) to the United States Environmental Protection Agency (EPA).
   - Submit a proposed modification to the current ground water monitoring program, based on the findings of historical and current ground water conditions.

3. On January 14, 1999, CDM Federal Programs Corporation (CDM Federal) submitted to the EPA a ground water evaluation report for the WDI site.[1] The purpose of the evaluation was to review and assess the ground water monitoring and source characterization data, to update the conceptual model for the WDI site and to establish a framework for future long-term ground water monitoring programs. These findings have been incorporated herein.

4. The remainder of this report is organized in the following sections:
   - Section 2.0 - Project Background
   - Section 3.0 - Regional and Site Hydrogeologic Conditions
   - Section 4.0 - Ground Water Sampling Results
   - Section 5.0 - Quality Assurance/Quality Control Data Evaluation
   - Section 6.0 - Summary and Recommendations
   - Section 7.0 - References

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[1] CDM Federal Programs Corporation, Ground Water Data Evaluation Report, Waste Disposal, Inc. Superfund Site, January 14, 1999.

2.0 PROJECT BACKGROUND

2.1 GENERAL SITE HISTORY

1. This general site history is taken from various reports and studies conducted at the site. Extensive site history information is available in previous documents (e.g., Remedial Investigation [RI] Report, EBASCO, 1989d, Intermediate (60%) Design Report, (TRC, 1995).

2. The WDI Superfund site is located in the city of Santa Fe Springs, Los Angeles County, California on an approximate 40-acre parcel of land (see Figures 2.1 and 2.2). The site is bordered on the northwest by Santa Fe Springs Road, on the northeast by Fedco Distribution Center and St. Paul High School, on the southwest by Los Nietos Road, and on the southeast by Greenleaf Avenue. Areas of the site along Los Nietos Road and Santa Fe Springs Road are occupied by industrial complexes. The site property along Greenleaf Avenue, which is the closest property boundary to residential areas (approximately 500 feet), has one remaining structure (Area 5), and a few remaining foundations from previous structures (Areas 6 and 7).

3. The WDI site contains a buried 42-million-gallon-capacity concrete reservoir originally constructed above grade for crude petroleum storage. The reservoir was decommissioned for storage in the late 1920s and beginning in the 1950's was used for disposal of a range of wastes and solid fill materials. Aerial photographs from the mid-1940s to early 1950s show the reservoir as being empty. After 1949, activities were regulated under permit from Los Angeles County until completion of closure in 1964. Reliable documentation on disposal was not maintained; as a result, a comprehensive history of the site is not available. However, investigations have shown that disposed material included drilling muds, sludges and construction debris, both in the reservoir and in unlined disposal pits in Areas 2, 4, 5 and 7.

4. In 1953, WDI started receiving clean fill for covering the site, including the reservoir area and unlined disposal pits. Available data indicates that between 5 to 15 feet of clean fill exists in all or most of the site. Since 1953, the site has been divided into multiple lots, and various businesses have developed on the site. The site was backfilled throughout the 1950s, with disposal continuing on portions of the site into the 1960s when the site was fully closed. A small, northwestern portion of the reservoir area is covered with an asphalt parking lot, used for recreational vehicle storage. The remainder of the reservoir area is undeveloped.

5. The site was placed on the National Priorities List (NPL) in July of 1987. In 1988, EPA undertook a removal action, erecting a fence around the southeast corner of the site to improve security and prevent accidental exposure to alleged surface contamination. During the years 1988 to 1993, EPA undertook a Remedial Investigation/Feasibility Study (RI/FS) (EPA, 1993c) process which led to the selected remedy presented in the Record of Decision (ROD) (EPA, 1993d).

6. The WDIG, initially comprised of the eight companies named in the original Administrative Order, Docket No. 94-17, undertook Predesign and Design activities during 1995 and 1996, and has submitted a Predesign/Intermediate (60%) Design Report (TRC, 1995) and a Pre-Final (90%) Design Report (TRC, 1996a).

7. The expanded WDIG, now comprised of 21 companies named in the Amended Administrative Order, Docket 97-09, has undertaken additional RD Investigative Activities, which are currently being completed, plus other activities requested by EPA (e.g., stormwater management, in-business air monitoring).

8. EPA has undertaken the performance of the Gas Contingency Plan (EPA, 1997) plus oversight of various experimental investigative activities such as Gore-Sorber™ probes and geophysical surveys. These studies were undertaken by EPA to evaluate the use of the Gore-Sorber™ technology, and to evaluate the use of geophysical methods to collect additional information on the reservoir conditions.

2.2 SUMMARY OF PRIOR INVESTIGATIONS

1. In 1988, as part of EPA's RI/FS, 27 ground water wells were installed at the WDI site. The majority of the wells were screened at the 1998 water table elevations with only a few extending to about 50 feet below the water table. Refer to Table 2.1 which summarizes the well type, screen interval, depth to ground water (October 1998) and the location of the monitoring wells relative to the WDI waste sources.

2. The wells were initially monitored in November 1988 by EPA. EPA also monitored selected wells three times in 1992 (February, May and August). Refer to Figure 2.3 for location of the wells. In June and September of 1995, WDIG resampled the wells EPA had selected. In September 1997, site ground water monitoring was reinstated when WDIG began quarterly sampling of the entire well network.

3. During the irregularly spaced monitoring rounds (November 1988 through September 1997 timeframe), the following ground water conditions have been observed from EPA and WDIG sampling episodes:

   - Trichloroethelene (TCE) and tetrachloroethelene (PCE) are the primary volatile organic compounds (VOCs), generally detected along the western portion of the site.
   - Toluene has been detected sporadically adjacent to and downgradient of WDI waste sources.
   - Light non-aqueous phase liquid (LNAPL) and dense non-aqueous phase liquid (DNAPL) have not been observed in any of the ground water samples.
   - Primary metals (i.e., arsenic, chromium and lead) have been detected at very low concentrations with only isolated sampling rounds exceeding their maximum containment levels (MCLs). These concentrations were observed in upgradient, crossgradient and downgradient wells at the site.
   - Elevated concentrations of aluminum, iron, manganese and selenium have been observed, but reflect a regional ground water condition not a site specific condition.

4. CDM Federal's ground water evaluation report summarizes and evaluates the data collected from the sampling episodes noted above. Appendix A contains copies of tables provided by CDM Federal which list the well network, dates sampled and ground water analytical results for selected constituents.

5. The remainder of this report summarizes CDM Federal's Ground Water Data Evaluation Report findings and WDIG's results from the quarterly sampling events conducted between September 1997 through October 1998.

3.0 REGIONAL AND SITE HYDROGEOLOGIC CONDITIONS

1. CDM Federal's Ground Water Data Evaluation Report provides a detailed description of the regional and site hydrogeologic conditions. The source for CDM Federal's hydrogeologic summary was collected from previous site investigations/characterizations conducted during the 1988 and 1989 RI (EBASCO, 1989b) and subsequent site monitoring data. The following sections summarize the information provided in CDM Federal's report.

3.1 REGIONAL HYDROGEOLOGIC CONDITIONS

1. The WDI site is located in the Whittier Area in the Montebello forebay of the Los Angeles Central Ground Water Basin. Regional geological maps indicate that Recent age alluvium sediments, consisting of sand and gravel, with occasional lenses of clay underlie the site. The Recent sediments in the near vicinity of the site attain a maximum thickness of approximately 80 feet and are underlain by the Lakewood and San Pedro formations (primarily Pleistocene age fluvial sedimentary deposits).

2. The Lakewood formation includes the Artesia and Gage aquifers. These aquifers consist of mostly sand interbedded with clay lenses. The Hollydale, Jefferson, Lynwood, Silverado and Sunnyside aquifers are found in the San Pedro formation. This formation consists mostly of sands and gravels, which are also separated by clay lenses.

3.2 SITE HYDROGEOLOGIC CONDITIONS

1. Based on RI soil boring characterization (EBASCO, 1989a), the subsurface stratigraphy and materials encountered at the WDI site include:
   - Five to 15 feet of fill material covering the concrete reservoir, waste containment areas, and most of the remainder site.
   - An interval of clay and sandy silt, 10 to 25 feet thick underlies the fill and sump-like material.
   - The near-surface silt layer is underlain by sandy, pebbly, channelized braid river (fluvial) deposits, at least 50 feet thick. These fluvial deposits include medium- and coarse-grained sand and fine-gravel interbedded with discontinuous layers and lenses of clay and silt. A 10-foot thick unit of silt and clay is interbedded with the coarser-grained river deposits in the southeast portion of the site.
   - During the 1988-1989 soil boring investigation, ground water was encountered in the upper interval of the sandy and pebbly river deposits at depths ranging from 48 to 65 feet below ground surface (bgs).

- RI borings, drilled to depths of 80 to 130 feet bgs, indicate that interbedded sand and pebbly sand units underlie the shallower fluvial channelized deposits.

2. Recent monitoring (October 1998) shows the depth to ground water at the WDI site to range from approximately 28.5 feet bgs (GW-02) to 48.5 feet bgs (GW-23/GW-24). Table 2.1 shows recent ground water depths measured at the site during October 1998. Table 3.1 shows historical ground water elevations at the site since October 1988.

3. Ground water flow at the site is to the south and southwest. Refer to Figure 3.1 showing the ground water contour map during the 1998 monitoring period for the site.

3.3 SITE GROUND WATER CONDITIONS

1. CDM Federal calculated the hydraulic gradients (horizontal and vertical), flow velocity and prepared hydrographs for the ground water conditions using monitoring data collected prior to September 1997. The following summarizes the information provided by CDM Federal:
   - Horizontal Ground Water Gradient:
     - Ranges from 0.002 feet/foot (western portion) to 0.003 feet/foot (eastern portion).
     - Increase to 0.035 feet/foot at the southwest corner of the site.
   - Vertical Ground Water Gradient:
     - Maximum downward gradient was 0.052 feet/foot (GW-15 and -16).
     - Vertical hydraulic gradients for well pairs were similar for the 1991 and 1997 monitoring events.
     - However, a significant elevation difference (6.03 feet) and downward gradient (0.121 feet/foot) was observed at well pair GW-23/GW-24.
   - Ground Water Flow Velocity:
     - Based on assumed hydraulic conductivities (50 gallons per day per square foot [gpd/ft^2] for silty/clayey sand; 500 gpd/ft^2 for pebbly sand), velocity of the ground water flow at the site is estimated to range from 6 to 60 feet/year (USEPA, 1993b).
   - Ground Water Hydrographs:
     - Water level trends evident for each well are very similar with a moderate increase in water level between 1988 and 1992, and a pronounced increase between August 1992 and June 1995 monitoring events. September 1997 water levels have declined less than one foot from levels observed during September 1995.

- During the monitoring period reviewed, the highest ground water elevation measured in the vicinity of the buried reservoir was 119.9 feet above mean sea level (msl) (GW-04, September 1995), which is approximately 20 feet below the estimated base of the concrete reservoir.
- The pronounced rise in water levels documented in the site wells for 1992 through 1995 were explained as a period of active aquifer recharging in the Montebello Forebay spreading grounds, which are located immediately north and upgradient of the WDI site. Water levels in the Montebello Forebay wells rose 10 feet or more during this period as a result of the water replenishment operations (TRC, 1996b).
- Ground water elevations appear to have stabilized with minimal fluctuations in depths since 1995. Refer to Table 3.1 showing the change in elevation from previous monitoring episodes.

2. Since the physical characteristics (i.e., depth to ground water, flow direction) of the ground water conditions have not changed significantly at the site during WDIG's 1998 monitoring program, WDIG concurs with CDM Federal's ground water findings.

4.0 GROUND WATER SAMPLING RESULTS

1. This section summarizes the chemical characteristics of ground water conditions at the WDI site. This summary was generated from the data compiled since ground water monitoring was initiated in 1988.

2. In September 1997, site ground water monitoring was reinstated when split sampling occurred with EPA and WDIG. Since then, WDIG has been performing quarterly sampling of the complete well network at the site. Table 4.1 provides the EPA methods used for laboratory analysis of the ground water samples collected by WDIG.

3. The following summarizes the analytical ground water conditions at the site conducted by EPA and WDIG sampling events since 1988:
   - Volatile Organic Compounds (VOCs):
     - The most common VOCs reported for ground water samples are TCE and PCE.
     - PCE and TCE are the only VOCs that have been detected above their MCL (5 micrograms per liter [µg/L]) for both parameters) in ground water samples.
     - Toluene was detected during several of EPA's monitoring events; however, WDIG has not detected toluene concentrations since September 1997.
   - Semivolatile Organic Compounds (SVOCs):
     - Ground water analysis for SVOCs since 1988 has indicated no consistent pattern and are typically not detected in the ground water at the site. SVOC detecting may be the result of trace levels generated from laboratory contamination.
   - Pesticides/PCBs:
     - Pesticides or PCBs have not been detected in the ground water.
   - Metals:
     - Arsenic, chromium and lead analyses for ground water samples show no consistent distribution or detection above the MCL for these metals. Elevated concentrations of arsenic and chromium have been reported for the upgradient monitoring well (i.e., GW-01), but not consistently for wells across the site. This indicates that the presence of arsenic and chromium may be an artifact or anomaly related to the GW-01 well location.
     - Ground water metals analyses have shown elevated concentrations of aluminum, iron, manganese, and selenium, locally at concentrations above primary or secondary drinking water standards (CDM Federal, 1998). However, the consistency and distribution

of detections (i.e., higher concentrations in upgradient wells) suggest that elevated concentrations of these metals represent a regional ground water quality condition, which probably is not related to migration from WDI waste sources.

- LNAPL and DNAPL:
  - At the WDI site, the measured concentrations of VOCs dissolved in ground water have never exceeded 100 µg/L for any potential LNAPL/DNAPL constituents. Therefore, because the ground water beneath the WDI site does not contain dissolved solvents or BTEX at concentrations exceeding 100 µg/L, and an oily sheen has not been observed in any ground water sample, it can be concluded, at present, that no LNAPL or DNAPL sources are contributing to ground water contamination at the site.

4. Refer to Tables 4.2 through 4.6 for the analytical data for the 1998 sampling episodes conducted by WDIG. Figures 4.1 to 4.4 summarize historical and current ground water conditions at the WDI site.

5. Refer to Appendix B for the laboratory data and supporting QA/QC documentation for ground water samples collected by WDIG from September 1997 through October 1998. The information for Appendix B is provided on CD-ROM.

5.0 QUALITY ASSURANCE/QUALITY CONTROL DATA EVALUATION

1. Ground water monitoring has been performed by WDIG as part of the 1997 RD Investigative Activities Workplan and Comprehensive Quarterly Ground Water Monitoring Program (TRC, 1997a) (Workplan). The Quality Assurance Project Plan (QAPP), which is provided in the Workplan as Appendix B, outlines the procedures to be used to assure that field investigation activities provide accurate and representative data and the design calculations and drawings are complete and correct. The QAPP was approved by EPA on September 12, 1997.

2. The laboratory analysis of the ground water samples (including QC samples) were performed by VOC Analytical located in Glendale, California and by Del Mar Analytical located in Irvine, California. The following sections briefly review the QA/QC field and laboratory reporting procedures for the Ground Water Monitoring Program. Section 5.2 discusses the data and its compliance with the QAPP requirements.

5.1 GROUND WATER MONITORING FIELD AND LABORATORY QA/QC PROCEDURES

5.1.1 FIELD QA/QC PROCEDURES

1. Field data is collected on the following parameters using field instrumentation (HYDAC and totalizer meter):
   - pH
   - Temperature
   - Conductivity
   - Volume purged (gallons)

2. The purpose of collecting this information is to confirm that a representative ground water sample is being collected.

3. Field instruments are calibrated and maintained using the procedures outlined in the Standard Operating Procedures (SOP) E of the QAPP.

5.1.2 LABORATORY QA/QC PROCEDURES

1. Table 5.1 provides a summary of the Data Quality Objectives (DQO) for the ground water monitoring program. Based on these requirements, relevant QA/QC levels were established.

2. Table 5.2 provides a summary of the field collection QA requirements (i.e., collection of trip blanks, field blanks, field duplicates and matrix spikes and matrix spike duplicates) for the ground water samples.

3. All ground water monitoring samples are to be collected and submitted to the laboratory under a chain-of-custody, as indicated in SOP I of the QAPP.

4. Table 4.1 provides a summary of laboratory QC analysis limits for the ground water samples. This table indicates guidelines for detection limits, accuracy, precision and completeness for each analyte. Table 4.1 also specifies the sample container types, the preservation system and the maximum allowable holding time.

5. Table 5.3 provides a summary of the relevant internal laboratory QA requirements for the ground water samples, which include calibration requirements, blank analyses, method blanks, matrix spike and matrix spike duplicates and surrogate compound requirements.

5.2 QA/QC FIELD AND LABORATORY DATA EVALUATION

5.2.1 FIELD DATA EVALUATION

1. As part of the field data collection, the field instrumentation was calibrated on a regular basis, as required by the QAPP. Appendix C provides the monitoring well purge and sample forms for the field monitoring activities. Based on these records, the QAPP requirements have been achieved.

5.2.2 LABORATORY DATA EVALUATION

1. The laboratory data is divided into two levels of evaluation. The first level is data inspection which evaluates the following elements as shown in Table 4.1:
   - Detection Limits
   - Accuracy
   - Precision

- Completeness
- Container Type
- Preservation
- Holding

2. The second level of evaluation is the formal data validation process. In this process, each data point is evaluated for its adherence with all of the project QA/QC requirements. The results of the formal data validation activities are presented in Section 5.3.

3. The data presented in Chapter 4.0 (September 1997 through October 1998 timeframe) has been evaluated for its compliance with the requirements provided in Table 4.1.

4. The results shown in Appendix C indicate that the data met the general QA/QC requirements for the critical elements shown in Table 5.3, and therefore the data is considered usable.

5.3 DATA VALIDATION RESULTS

1. Validation activities are still in progress for ground water samples collected during October 1998. Appendix B contains the data validation reports for the sampling episodes conducted from September 1997 through July 1998. Table 5.4, which provides a summary of the laboratory data qualities and the remainder of Appendix B (October 1998 data validation report) will be formulated under a separate cover and submitted to EPA when they are completed.

6.0 SUMMARY AND RECOMMENDATIONS

6.1 SUMMARY OF FINDINGS

1. Several site constituents of concern (COCs) (VOCs and metals) have been detected above their respective MCLs in the ground water samples. However, these exceedances do not appear to be related to site wastes based on their distribution in ground water (i.e., some contaminants are detected upgradient or cross-gradient from WDI waste sources).

2. VOCs detected in ground water samples are primarily PCE and TCE, with concentrations generally less than 20 µg/L. PCE and TCE concentrations in several locations are above their respective MCL of 5 µg/L for primary drinking water. These VOCs have been detected only in the western part of the site in both upgradient and deep monitoring wells. Based on ground water flow conditions, the distributions of detection, and information on offsite ground water contamination sites, the sources of PCE and TCE detected in the western portion of the site appears to be from solvent releases associated with upgradient industrial sites.

3. Toluene has been detected sporadically by EPA (maximum concentration was 64 µg/L which is below its MCL[150 µg/L]) in ground water sampled adjacent to and downgradient of WDI waste sources. WDIG has not detected toluene in the ground water since September 1997 and therefore does not agree with CDM Federal to list toluene as a COC and that previous detections are not site related.

4. CDM Federal concludes in their Ground Water Data Evaluation Report that no significant impact on ground water has been identified from WDI site based on available ground water sampling results with the location and characteristics of the waste sources at the site. WDIG generally concurs with this conclusion since data collected by WDIG from September 1997 through October 1998 is consistent with CDM Federal's.

6.2 EPA AND WDIG RECOMMENDATIONS

1. On January 14, 1999, WDIG submitted a request for a reduction to the current ground water monitoring program. The following summarizes the proposed modifications:
   - VOCs
     - Selected wells to semiannual frequency.
     - 2-Chlorovinylether (2-CVE) analysis is discontinued.
   - SVOCs
     - All wells to semiannual frequency.

- Metals
  - Selected wells to semiannual frequency.
  - The totals analyses are discontinued.

Refer to Table 6.1 for a complete description of the proposed plan.

2. On February 2, 1999, EPA granted a Preliminary Approval to the proposed plan for First Quarter 1999 sampling episode.[2] Based on the supporting information provided in this report, WDIG recommends implementing the proposed program for future ground water monitoring.

3. In addition, CDM Federal submitted a recommendation for long-term ground water monitoring at the site in their Ground Water Data Evaluation Report. The following summarizes CDM Federal's recommendations:
   - Installation of one additional upgradient (adjacent to GWM-01) monitoring well (GW-32) and one downgradient (southeast perimeter of reservoir boundary) monitoring well (GW-33). See Figure 2.3 for the proposed locations of the two wells.
   - Revised well network to be sampled based on ground water flow conditions and distribution of water sources.
   - Revised list of analytical parameters and frequency of testing.

4. WDIG has agreed to install GW-32 and GW-33 and add to the monitoring well network. The additional recommendations are still being considered at this time and will be addressed in the future prior to implanting the long term Operation and Maintenance (O&M) program.

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(2) EPA, Preliminary Approval of Implementation of Proposed Modifications to the Ground Water Monitoring Program, Waste Disposal, Inc. (WDI) Superfund Site. February 2, 1999.

7.0 REFERENCES

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Tables

TABLE 2.1

EXISTING GROUND WATER MONITORING WELLS
WASTE DISPOSAL, INC. SUPERFUND SITE

WELL NUMBER	TOP OF WELL CASING ELEVATION (ft above MSL)	WELL TYPE	WELL SCREEN (ft bgs)	OCT. 1998 DEPTH TO WATER (ft below TOC)	LOCATION RELATIVE TO WDI WASTE SOURCES
GW - 01	153.5	Shallow	38 - 58	32.7	Upgradient
GW - 02	149.3	Shallow	33 - 53	28.6	Upgradient
GW - 03	167.5	Shallow	48 - 68	46.9	North Perimeter of Reservoir
GW - 04	166.8	Shallow	48 - 68	46.1	North Perimeter of Reservoir
GW - 05	166.7	Shallow	43 - 63	46.5	East Perimeter of Reservoir
GW - 06	158.4	Shallow	43 - 63	38.5	Underlies BWZ (East Area)
GW - 07	154.5	Shallow	38 - 58	34.8	Crossgradient to BWZ (East Area)
GW - 08	163.4	Shallow	43 - 63	46.1	West Perimeter of Reservoir
GW - 09	153.5	Shallow	38 - 58	33.4	Crossgradient to BWZ (West Area)
GW - 10	154.7	Well Cluster-Shallow	38 - 58	35.3	Crossgradient to BWZ (West Area)
GW - 11	154.7	Well Cluster-Deep	118 - 128	35.8	Crossgradient to BWZ (West Area)
GW - 13	157.5	Shallow	39 - 59	38.2	Downgradient of BWZ (West Area)
GW - 14	157.8	Shallow	38 - 58	38.4	Downgradient of Reservoir
GW - 15	163.3	Well Cluster-Shallow	48 - 68	43.7	Downgradient of Reservoir
GW - 16	163.1	Well Cluster-Interm.	74 - 79	44.0	Downgradient of Reservoir
GW - 18	159.1	Well Cluster-Interm.	69 - 74	40.3	Downgradient of Reservoir
GW - 19	158.9	Well Cluster-Shallow	39 - 59	40.0	Downgradient of Reservoir
GW - 21	155.2	Shallow	36 - 56	36.6	Downgradient of BWZ (East Area)
GW - 22	156.7	Shallow	58 - 78	47.8	Crossgradient to BWZ (West Area)
GW - 23	157.0	Well Cluster-Shallow	43 - 63	48.7	Downgradient of BWZ (West Area)
GW - 24	156.7	Well Cluster-Deep	103 - 113	48.3	Downgradient of BWZ (West Area)
GW - 26	156.0	Shallow	44 - 64	37.8	Downgradient of BWZ (East Area)
GW - 27	157.0	Shallow	43 - 63	39.0	Downgradient of BWZ (East Area)
GW - 28	157.3	Shallow	44 - 64	39.4	Downgradient of BWZ (East Area)
GW - 29	157.4	Well Cluster-Shallow	44 - 64	39.6	Downgradient of BWZ (East Area)
GW - 30	156.8	Well Cluster-Deep	74 - 94	39.4	Downgradient of BWZ (East Area)
GW - 31	167.2	Shallow	43 - 63	46.6	North Perimeter of Reservoir

94-256/Rpts/AnGrWaMoRe (3/1/99/rmm)

ABBREVIATIONS:

bgs = below ground surface
ft = feet
MSL = mean sea level
BWZ = buried waste zone (waste containment/sump areas outside of reservoir)
TOC = top of well casing

Source: CDM Federal Programs Corporation, Ground Water Data Evaluation Report, Waste Disposal, Inc. Site, January 14, 1999

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TABLE 3.1

WATER LEVEL MEASUREMENTS AND GROUND WATER ELEVATIONS FROM 1988 THROUGH 1998
WASTE DISPOSAL, INC. SUPERFUND SITE

WELL NO.	WELL TYPE	WELL SCREEN INTERVAL (ft bgs)	GROUND SURFACE ELEVATION (ft MSL)	TOP OF CASING ELEVATION (ft MSL)	MEASUREMENT DATE	DEPTH TO GROUND WATER (ft bgs)	WATER LEVEL ELEVATION (ft MSL)	CHANGE FROM PRIOR ELEVATION (+/- feet)
GW - 01	UG - shallow	38 - 58	153.76	153.51	02-Nov-88	46.92	106.59	--
				153.51	16-Dec-91	46.24	107.27	0.68
				153.51	12-Feb-92	45.50	108.01	0.74
				153.51	12-May-92	44.04	109.47	1.46
				153.51	11-Aug-92	43.18	110.33	0.86
				153.51	06-Jun-95	33.54	119.97	9.64
				153.51	19-Sep-95	33.30	120.21	0.24
				153.51	17-Sep-97	34.05	119.46	-0.75
				153.51	Jan-98	35.26	118.25	-1.21
				153.51	Apr-98	32.93	120.58	2.33
				153.51	Jul-98	32.06	121.45	0.87
				153.51	Oct-98	32.75	120.76	-0.69
GW - 02	UG - shallow	33 - 53	149.61	149.30	03-Nov-88	42.20	107.10	--
				149.30	17-Dec-91	41.76	107.54	0.44
				149.30	12-Feb-92	41.15	108.15	0.61
				149.30	13-May-92	39.74	109.56	1.41
				149.30	12-Aug-92	38.94	110.36	0.80
				149.30	06-Jun-95	29.40	119.90	9.54
				149.30	19-Sep-95	29.17	120.13	0.23
				149.30	17-Sep-97	29.96	119.34	-0.79
				149.30	Jan-98	30.96	118.34	-1.00
				149.30	Apr-98	28.74	120.56	2.22
				149.30	Jul-98	27.92	121.38	0.82
				149.30	Oct-98	28.61	120.69	-0.69
GW - 03	R - shallow	48 - 68	167.76	167.51	22-Oct-88	61.10	106.41	--
				167.51	19-Jan-89	61.19	106.32	-0.09
				167.51	16-Dec-91	60.22	107.29	0.88
				167.51	17-Sep-97	48.27	119.24	11.95
				167.51	Jan-98	49.32	118.19	-1.05
				167.51	Apr-98	47.10	120.41	2.22
				167.51	Jul-98	46.32	121.19	0.78
				167.51	Oct-98	46.91	120.60	-0.59
GW - 04	R - shallow	48 - 68	167.01	166.75	27-Oct-88	59.50	107.25	--
				166.75	19-Jan-89	60.21	106.54	-0.71
				166.75	17-Dec-91	59.24	107.51	0.97
				166.75	12-Feb-92	58.72	108.03	0.52
				166.75	13-May-92	57.36	109.39	1.36
				166.75	13-Aug-92	56.50	110.25	0.86

TABLE 3.1

WATER LEVEL MEASUREMENTS AND GROUND WATER ELEVATIONS FROM 1988 THROUGH 1998
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

WELL NO.	WELL TYPE	WELL SCREEN INTERVAL (ft bgs)	GROUND SURFACE ELEVATION (ft MSL)	TOP OF CASING ELEVATION (ft MSL)	MEASUREMENT DATE	DEPTH TO GROUND WATER (ft bgs)	WATER LEVEL ELEVATION (ft MSL)	CHANGE FROM PRIOR ELEVATION (+/- feet)
GW-04	R-shallow	48 - 68	167.01	166.75	06-Jun-95	47.09	119.66	9.41
				166.75	19-Sep-95	46.83	119.92	0.26
				166.75	17-Sep-97	47.51	119.24	-0.68
				166.75	Jan-98	48.53	118.22	-1.02
				166.75	Apr-98	46.26	120.49	2.27
				166.75	Jul-98	45.52	121.23	0.74
				166.75	Oct-98	46.11	120.64	-0.59
GW - 05	R - shallow	43 - 63	166.92	166.67	28-Oct-88	59.80	106.87	--
				166.67	19-Jan-89	60.47	106.20	-0.67
				166.67	17-Dec-91	59.78	106.89	0.69
				166.67	17-Sep-97	47.95	118.72	11.83
				166.67	Jan-98	48.91	117.76	-0.96
				166.67	Apr-98	46.73	119.94	2.18
				166.67	Jul-98	45.95	120.72	0.78
				166.67	Oct-98	46.53	120.14	-0.58
GW - 06	CG - shallow	43 - 63	158.63	158.38	28-Oct-88	51.70	106.68	--
				158.38	19-Jan-89	52.34	106.04	-0.64
				158.38	17-Dec-91	51.60	106.78	0.74
				158.38	17-Sep-97	39.90	118.48	11.70
				158.38	Jan-98	40.68	117.70	-0.78
				158.38	Apr-98	38.40	119.98	2.28
				158.38	Jul-98	37.75	120.63	0.65
				158.38	Oct-98	38.46	119.92	-0.71
GW - 07	CG - shallow	38 - 58	154.78	154.53	29-Oct-88	48.10	106.43	--
				154.53	19-Jan-89	48.68	105.85	-0.58
				154.53	17-Dec-91	47.98	106.55	0.70
				154.53	13-Feb-92	47.38	107.15	0.60
				154.53	13-May-92	46.07	108.46	1.31
				154.53	12-Aug-92	45.33	109.20	0.74
				154.53	06-Jun-95	35.91	118.62	9.42
				154.53	19-Sep-95	35.78	118.75	0.13
				154.53	17-Sep-97	36.32	118.21	-0.54
				154.53	Jan-98	37.05	117.48	-0.73
				154.53	Apr-98	34.83	119.70	2.22
				154.53	Jul-98	34.18	120.35	0.65
				154.53	Oct-98	34.88	119.65	-0.70

TABLE 3.1

WATER LEVEL MEASUREMENTS AND GROUND WATER ELEVATIONS FROM 1988 THROUGH 1998
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

WELL NO.	WELL TYPE	WELL SCREEN INTERVAL (ft bgs)	GROUND SURFACE ELEVATION (ft MSL)	TOP OF CASING ELEVATION (ft MSL)	MEASUREMENT DATE	DEPTH TO GROUND WATER (ft bgs)	WATER LEVEL ELEVATION (ft MSL)	CHANGE FROM PRIOR ELEVATION (+/- feet)
GW - 08	CG - shallow	43 - 63	163.63	163.38	20-Oct-88	59.30	104.08	--
				163.38	19-Jan-89	57.63	105.75	1.67
				163.38	17-Dec-91	56.64	106.74	0.99
				163.38	17-Sep-97	44.49	118.89	12.15
				163.38	Jan-98	47.63	115.75	-3.14
				163.38	Apr-98	43.50	119.88	4.13
				163.38	Jul-98	42.62	120.76	0.88
				163.38	Oct-98	46.16	117.22	-3.54
GW - 09	CG - shallow	38 - 58	153.77	153.52	01-Nov-88	47.50	106.02	--
				153.52	19-Jan-89	48.14	105.38	-0.64
				153.52	16-Dec-91	46.98	106.54	1.16
				153.52	13-Feb-92	46.36	107.16	0.62
				153.52	17-Sep-97	34.75	118.77	11.61
				153.52	Jan-98	37.97	115.55	-3.22
				153.52	Apr-98	33.85	119.67	4.12
				153.52	Jul-98	32.87	120.65	0.98
				153.52	Oct-98	33.41	120.11	-0.54
GW - 10	DG - shallow	38 - 58	154.98	154.73	03-Oct-88	49.30	105.43	--
				154.73	16-Dec-91	48.58	106.15	0.72
				154.73	12-Feb-92	47.94	106.79	0.64
				154.73	13-May-92	46.62	108.11	1.32
				154.73	12-Aug-92	45.83	108.90	0.79
				154.73	01-Jun-95	36.24	118.49	9.59
				154.73	19-Sep-95	35.86	118.87	0.38
				154.73	17-Sep-97	36.54	118.19	-0.68
				154.73	Jan-98	37.62	117.11	-1.08
				154.73	Apr-98	35.66	119.07	1.96
				154.73	Jul-98	34.68	120.05	0.98
				154.73	Oct-98	35.27	119.46	-0.59
GW - 11	DG - deep	118 - 128	154.91	154.66	03-Oct-88	49.90	104.76	--
				154.66	19-Jan-89	49.67	104.99	0.23
				154.66	16-Dec-91	48.96	105.70	0.71
				154.66	12-Feb-92	48.20	106.46	0.76
				154.66	13-May-92	46.98	107.68	1.22
				154.66	13-Aug-92	46.21	108.45	0.77
				154.66	01-Jun-95	36.52	118.14	9.69
				154.66	19-Sep-95	36.39	118.27	0.13

TABLE 3.1

WATER LEVEL MEASUREMENTS AND GROUND WATER ELEVATIONS FROM 1988 THROUGH 1998
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

WELL NO.	WELL TYPE	WELL SCREEN INTERVAL (ft bgs)	GROUND SURFACE ELEVATION (ft MSL)	TOP OF CASING ELEVATION (ft MSL)	MEASUREMENT DATE	DEPTH TO GROUND WATER (ft bgs)	WATER LEVEL ELEVATION (ft MSL)	CHANGE FROM PRIOR ELEVATION (+/- feet)
GW - 11	DG - deep	118 - 128	154.91	154.66	17-Sep-97	37.05	117.61	-0.66
				154.66	Jan-98	38.04	116.62	-0.99
				154.66	Apr-98	37.90	116.76	0.14
				154.66	Jul-98	35.03	119.63	2.87
				154.66	Oct-98	35.79	118.87	-0.76
GW - 13	DG - shallow	39 - 59	157.77	157.52	01-Nov-88	51.70	105.82	--
				157.52	19-Jan-89	52.26	105.26	-0.56
				157.52	16-Dec-91	51.38	106.14	0.88
				157.52	17-Sep-97	39.55	117.97	11.83
				157.52	Jan-98	40.61	116.91	-1.06
				157.52	Apr-98	38.72	118.80	1.89
				157.52	Jul-98	37.69	119.83	1.03
				157.52	Oct-98	38.22	119.30	-0.53
GW - 14	DG - shallow	38 - 58	157.92	157.76	01-Nov-88	51.80	105.96	--
				157.76	19-Jan-89	52.34	105.42	-0.54
				157.76	16-Dec-91	51.55	106.21	0.79
				157.76	17-Sep-97	39.82	117.94	11.73
				157.76	Jan-98	40.80	116.96	-0.98
				157.76	Apr-98	38.98	118.78	1.82
				157.76	Jul-98	37.97	119.79	1.01
				157.76	Oct-98	38.43	119.33	-0.46
GW - 15	DG - shallow	48 - 68	163.55	163.30	20-Oct-88	57.20	106.10	--
				163.30	19-Jan-89	57.67	105.63	-0.47
				163.30	17-Dec-91	56.82	106.48	0.85
				163.30	17-Sep-97	44.99	118.31	11.83
				163.30	Jan-98	46.03	117.27	-1.04
				163.30	Apr-98	44.44	118.86	1.59
				163.30	Jul-98	43.06	120.24	1.38
				163.30	Oct-98	43.66	119.64	-0.60
GW - 16	DG - intermed.	74 - 79	163.32	163.07	20-Oct-88	57.30	105.77	--
				163.07	19-Jan-89	57.90	105.17	-0.60
				163.07	17-Dec-91	57.16	105.91	0.74
				163.07	17-Sep-97	45.33	117.74	11.83
				163.07	Jan-98	46.34	116.73	-1.01
				163.07	Apr-98	44.51	118.56	1.83
				163.07	Jul-98	43.38	119.69	1.13
				163.07	Oct-98	43.95	119.12	-0.57

TABLE 3.1

WATER LEVEL MEASUREMENTS AND GROUND WATER ELEVATIONS FROM 1988 THROUGH 1998
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

WELL NO.	WELL TYPE	WELL SCREEN INTERVAL (ft bgs)	GROUND SURFACE ELEVATION (ft MSL)	TOP OF CASING ELEVATION (ft MSL)	MEASUREMENT DATE	DEPTH TO GROUND WATER (ft bgs)	WATER LEVEL ELEVATION (ft MSL)	CHANGE FROM PRIOR ELEVATION (+/- feet)
GW - 18	DG - intermed.	69 - 74	159.34	159.10	17-Oct-88	55.60	103.50	--
				159.10	16-Dec-91	53.30	105.80	2.30
				159.10	17-Sep-97	41.65	117.45	11.65
				159.10	Jan-98	42.52	116.58	-0.87
				159.10	Apr-98	40.42	118.68	2.10
				159.10	Jul-98	39.67	119.43	0.75
				159.10	Oct-98	40.30	118.80	-0.63
GW - 19	DG - shallow	39 - 59	159.16	158.89	17-Oct-88	54.50	104.39	--
				158.89	19-Jan-89	53.71	105.18	0.79
				158.89	16-Dec-91	53.15	105.74	0.56
				158.89	17-Sep-97	41.45	117.44	11.70
				158.89	Jan-98	42.29	116.60	-0.84
				158.89	Apr-98	40.30	118.59	1.99
				158.89	Jul-98	39.50	119.39	0.80
				158.89	Oct-98	39.99	118.90	-0.49
GW - 21	CG - shallow	36 - 56	155.49	155.24	29-Oct-88	49.70	105.54	--
				155.24	17-Dec-91	49.56	105.68	0.14
				155.24	17-Sep-97	37.94	117.30	11.62
				155.24	Jan-98	38.67	116.57	-0.73
				155.24	Apr-98	36.52	118.72	2.15
				155.24	Jul-98	35.91	119.33	0.61
				155.24	Oct-98	36.59	118.65	-0.68
GW - 22	DG - shallow	58 - 78	156.94	156.69	03-Oct-88	64.98	91.71	--
				156.69	16-Dec-91	64.54	92.15	0.44
				156.69	17-Sep-97	49.02	107.67	15.52
				156.69	Jan-98	50.31	106.38	-1.29
				156.69	Apr-98	49.44	107.25	0.87
				156.69	Jul-98	47.91	108.78	1.53
				156.69	Oct-98	47.82	108.87	0.09
GW - 23	DG - shallow	43 - 63	157.23	156.98	31-Oct-88	59.40	97.58	--
				156.98	16-Dec-91	58.58	98.40	0.82
				156.98	12-Feb-92	57.99	98.99	0.59
				156.98	13-May-92	57.64	99.34	0.35
				156.98	12-Aug-92	57.18	99.80	0.46
				156.98	01-Jun-95	48.59	108.39	8.59
				156.98	19-Sep-95	48.51	108.47	0.08
				156.98	17-Sep-97	47.80	109.18	0.71

TABLE 3.1

WATER LEVEL MEASUREMENTS AND GROUND WATER ELEVATIONS FROM 1988 THROUGH 1998
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

WELL NO.	WELL TYPE	WELL SCREEN INTERVAL (ft bgs)	GROUND SURFACE ELEVATION (ft MSL)	TOP OF CASING ELEVATION (ft MSL)	MEASUREMENT DATE	DEPTH TO GROUND WATER (ft bgs)	WATER LEVEL ELEVATION (ft MSL)	CHANGE FROM PRIOR ELEVATION (+/- feet)
GW - 23	DG - shallow	43 - 63	157.23	156.98	Jan-98	49.01	107.97	-1.21
				156.98	Apr-98	48.02	108.96	0.99
				156.98	Jul-98	48.63	108.35	-0.61
				156.98	Oct-98	48.67	108.31	-0.04
GW - 24	DG - deep	103 - 113	157.03	156.70	31-Oct-88	64.40	92.30	--
				156.70	16-Dec-91	64.33	92.37	0.07
				156.70	12-Feb-92	63.72	92.98	0.61
				156.70	12-May-92	62.51	94.19	1.21
				156.70	12-Aug-92	57.00	99.70	5.51
				156.70	01-Jun-95	50.43	106.27	6.57
				156.70	19-Sep-95	49.30	107.40	1.13
				156.70	17-Sep-97	49.42	107.28	-0.12
				156.70	Jan-98	50.38	106.32	-0.96
				156.70	Apr-98	49.67	107.03	0.71
				156.70	Jul-98	48.37	108.33	1.30
				156.70	Oct-98	48.31	108.39	0.06
GW - 26	DG - shallow	44 - 64	156.29	156.04	02-Oct-88	51.40	104.64	--
				156.04	19-Jan-89	52.41	103.63	-1.01
				156.04	16-Dec-91	50.60	105.44	1.81
				156.04	12-Feb-92	50.09	105.95	0.51
				156.04	12-May-92	48.88	107.16	1.21
				156.04	11-Aug-92	48.06	107.98	0.82
				156.04	01-Jun-95	39.07	116.97	8.99
				156.04	19-Sep-95	38.60	117.44	0.47
				156.04	17-Sep-97	39.09	116.95	-0.49
				156.04	Jan-98	40.03	116.01	-0.94
				156.04	Apr-98	38.28	117.76	1.75
				156.04	Jul-98	37.32	118.72	0.96
				156.04	Oct-98	37.79	118.25	-0.47
GW - 27	DG - shallow	43 - 63	157.28	157.03	02-Oct-88	51.80	105.23	--
				157.03	19-Jan-89	52.22	104.81	-0.42
				157.03	16-Dec-91	51.70	105.33	0.52
				157.03	17-Sep-97	40.31	116.72	11.39
				157.03	Jan-98	41.19	115.84	-0.88
				157.03	Apr-98	39.46	117.57	1.73
				157.03	Jul-98	38.53	118.50	0.93
				157.03	Oct-98	39.00	118.03	-0.47

TABLE 3.1

WATER LEVEL MEASUREMENTS AND GROUND WATER ELEVATIONS FROM 1988 THROUGH 1998
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

WELL NO.	WELL TYPE	WELL SCREEN INTERVAL (ft bgs)	GROUND SURFACE ELEVATION (ft MSL)	TOP OF CASING ELEVATION (ft MSL)	MEASUREMENT DATE	DEPTH TO GROUND WATER (ft bgs)	WATER LEVEL ELEVATION (ft MSL)	CHANGE FROM PRIOR ELEVATION (+/- feet)
GW - 28	DG - shallow	44 - 64	157.56	157.31	02-Oct-88	53.80	103.51	--
				157.31	19-Jan-89	52.82	104.49	0.98
				157.31	16-Dec-91	52.30	105.01	0.52
				157.31	11-Feb-92	51.81	105.50	0.49
				157.31	12-May-92	50.54	106.77	1.27
				157.31	11-Aug-92	49.80	107.51	0.74
				157.31	01-Jun-95	40.73	116.58	9.07
				157.31	19-Sep-95	40.36	116.95	0.37
				157.31	17-Sep-97	40.76	116.55	-0.40
				157.31	Jan-98	41.56	115.75	-0.80
				157.31	Apr-98	39.84	117.47	1.72
				157.31	Jul-98	38.90	118.41	0.94
				157.31	Oct-98	39.41	117.90	-0.51
GW - 29	DG - shallow	44 - 64	157.69	157.40	29-Oct-88	52.40	105.00	--
				157.40	16-Dec-91	52.55	104.85	-0.15
				157.40	17-Sep-97	40.98	116.42	11.57
				157.40	Jan-98	41.73	115.67	-0.75
				157.40	Apr-98	40.05	117.35	1.68
				157.40	Jul-98	39.13	118.27	0.92
				157.40	Oct-98	39.63	117.77	-0.50
GW - 30	DG - intermed.	74 - 94	157.01	156.80	15-Nov-88	55.40	101.40	--
				156.80	16-Dec-91	52.54	104.26	2.86
				156.80	11-Feb-92	51.90	104.90	0.64
				156.80	13-May-92	50.72	106.08	1.18
				156.80	12-Aug-92	50.00	106.80	0.72
				156.80	01-Jun-95	40.47	116.33	9.53
				156.80	19-Sep-95	40.34	116.46	0.13
				156.80	17-Sep-97	40.73	116.07	-0.39
				156.80	Jan-98	41.37	115.43	-0.64
				156.80	Apr-98	39.42	117.38	1.95
				156.80	Jul-98	38.69	118.11	0.73
				156.80	Oct-98	39.41	117.39	-0.72

TABLE 3.1

WATER LEVEL MEASUREMENTS AND GROUND WATER ELEVATIONS FROM 1988 THROUGH 1998
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

WELL NO.	WELL TYPE	WELL SCREEN INTERVAL (ft bgs)	GROUND SURFACE ELEVATION (ft MSL)	TOP OF CASING ELEVATION (ft MSL)	MEASUREMENT DATE	DEPTH TO GROUND WATER (ft bgs)	WATER LEVEL ELEVATION (ft MSL)	CHANGE FROM PRIOR ELEVATION (+/- feet)
GW - 31	R - shallow	43 - 63	167.47	167.22	27-Oct-88	60.00	107.22	--
				167.22	16-Dec-91	59.82	107.40	0.18
				167.22	17-Sep-97	47.95	119.27	11.87
				167.22	Jan-98	48.96	118.26	-1.01
				167.22	Apr-98	46.74	120.48	2.22
				167.22	Jul-98	45.98	121.24	0.76
				167.22	Oct-98	46.57	120.65	-0.59

94-256/Rpts/AnGrWaMoRe (2/23/99/rmm)

EXPLANATION:

1. Well types: UG = upgradient, R = edge of reservoir, CG = crossgradient to reservoir, DG = downgradient of reservoir & containment areas.

2. Four additional wells (GW-12, GW-17, GW-20 and GW-25) were initially proposed for the 1989 remedial investigation but were not installed.

3. Original well construction records mislabeled wells GW-10 and GW-11. EPA's 1992 sampling and 1997 well sounding confirm GW-10 is shallow well and GW-11 is deep well.

Source: CDM Federal Programs Corporation, Ground Water Data Evaluaton Report, Waste Disposal, Inc. Site, January 14, 1999.

TABLE 4.1

GROUND WATER ANALYSES AND QUALITY CONTROL OBJECTIVES
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	ANALYTICAL PROCEDURE (EPA METHOD NO.)	LABORATORY SPECIFIC MEASUREMENT QUALITY OBJECTIVES (MQOs)				TYPE OF CONTAINER	PRESERVATIVE	ANALYTICAL HOLDING TIMES	REMARKS
		Detection Limit (µg/L)	Accuracy(1) (%)	Precision(2) (%)	Completeness (%)				
METALS						One 1-Liter Bottle Unfiltered/One 1-Liter Bottle filtered	Acidified to pH <2 with Nitric Acid After Filtration	6 Months	
• Aluminum	6010A	10.0	80 - 120	± 30	90				
• Antimony	6010A	5.0	80 - 120	± 30	90				
• Arsenic	7060	5.0	80 - 120	± 30	90				
• Barium	6010A	10.0	80 - 120	± 30	90				
• Beryllium	6010A	2.0	80 - 120	± 30	90				
• Cadmium	6010A	5.0	80 - 120	± 30	90				
• Calcium	6010A	60.0	80 - 120	± 30	90				
• Cobalt	6010A	18.0	80 - 120	± 30	90				
• Chromium	6010A	10.0	80 - 120	± 30	90				
• Iron	6010A	10.0	80 - 120	± 30	90				
• Lead	6010A	40.0	80 - 120	± 30	90				
• Magnesium	7421	3.0	80 - 120	± 30	90				
• Manganese	6010A	30.0	80 - 120	± 30	90				
• Mercury	6010A	2.0	80 - 120	± 30	90				
• Nickel	7470	3.0	80 - 120	± 30	90				
• Selenium	6010A	32.0	80 - 120	± 30	90				
• Sodium	6010A	90.0	80 - 120	± 30	90				
• Thallium	7740	6.0	80 - 120	± 30	90				
• Vanadium	6010A	10.0	80 - 120	± 30	90				
• Zinc	6010A	40.0	80 - 120	± 30	90				
VOLATILE ORGANIC COMPOUNDS (VOCs)						Two 40 mL VOA Vials	Acidified to pH <2 with Hydrochloric Acid	14 Days	
• 1,1,1-Trichloroethane	8260A	0.5	71 - 132	± 30	90				
• 1,1,2,2-Tetrachloroethane	8260A	0.5	76 - 136	± 30	90				
• 1,1,2-Trichloroethane	8260A	0.5	67 - 133	± 30	90				
• 1,1-Dichloroethane	8260A	0.5	49 - 135	± 30	90				
• 1,1-Dichloroethene	8260A	0.5	48 - 146	± 30	90				
• 1,2-Dichloroethane	8260A	0.5	68 - 129	± 30	90				
• 1,2-Dichloropropane	8260A	0.5	42 - 131	± 30	90				
• 2-Butanone	8260A	0.5	50 - 153	± 30	90				
• 2-Chloroethyl Vinyl Ether	8260A	0.5	40 - 214	± 30	90				
• 2-Hexanone	8260A	0.5	20 - 149	± 30	90				
• 4-Methyl-2pentanone	8260A	0.5	40 - 125	± 30	90				
• Acetone	8260A	0.5	32 - 176	± 30	90				
• Benzene	8260A	0.5	72 - 124	± 30	90				
• Bromodichloromethane	8260A	0.5	69 - 132	± 30	90				
• Bromoform	8260A	0.5	53 - 148	± 30	90				
• Bromomethane	8260A	0.5	55 - 146	± 30	90				
• Carbon Disulfide	8260A	0.5	37 - 140	± 30	90				
• Carbon Tetrachloride	8260A	0.5	70 - 140	± 30	90				
• Chloroethane	8260A	0.5	52 - 137	± 30	90				

(1) Based on Matrix Spike Percent Recovery.
(2) Based on Duplicate Samples.

TRC

TABLE 4.1

GROUND WATER ANALYSES AND QUALITY CONTROL OBJECTIVES
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

PARAMETERS	ANALYTICAL PROCEDURE (EPA METHOD NO.)	LABORATORY SPECIFIC MEASUREMENT QUALITY OBJECTIVES (MQOs)				TYPE OF CONTAINER	PRESERVATIVE	ANALYTICAL HOLDING TIMES	REMARKS
		Detection Limit (µg/L)	Accuracy(1) (%)	Precision(2) (%)	Completeness (%)				
VOLATILE ORGANIC COMPOUNDS (VOCs) (Continued)									
• Chloroform	8260A	0.5	77 - 128	± 30	90				
• Chloromethane	8260A	0.5	37 - 129	± 30	90				
• cis-1,3-Dichloropropene	8260A	0.5	66 - 129	± 30	90				
• 1,2, Dibromoethane	8260A	0.5	56 - 142	± 30	90				
• Methylene Chloride	8260A	0.5	51 - 139	± 30	90				
• Tetrachloroethene	8260A	0.5	67 - 145	± 30	90				
• trans-1,2-Dichloroethee	8260A	0.5	48 - 134	± 30	90				
• trans-1,3-Dichloropropene	8260A	0.5	66 - 130	± 30	90				
• Trichloroethene	8260A	0.5	71 - 135	± 30	90				
• Vinyl Acetate	8260A	0.5	24 - 143	± 30	90				
• Vinyl Chloride	8260A	0.5	48 - 140	± 30	90				
SVOCs						1-Liter Amber Glass Bottle with Teflon® Seal.	None. Cool to 4° C.	7 Days to Extract. 40 Days after Extraction	
• Acenaphthene	8270	5.0	51 - 126	± 30	90				
• Acenaphylene	8270	5.0	56 - 131	± 30	90				
• Anthracene	8270	5.0	54 - 117	± 30	90				
• Benzo(a)anthracene	8270	5.0	55 - 132	± 30	90				
• Benzo(b)fluoranthene	8270	5.0	43 - 135	± 30	90				
• Benzo(k)fluoranthene	8270	5.0	57 - 137	± 30	90				
• Benzo(g,h,i)perylene	8270	5.0	36 - 157	± 30	90				
• Benzo(a)pyrene	8270	5.0	51 - 141	± 30	90				
• bis(2-Chloroethyl)ether	8270	5.0	48 - 117	± 30	90				
• bis(2-Chloroisopropyl)ether	8270	5.0	39 - 155	± 30	90				
• bis(2-Ethylhexyl)phthalate	8270	5.0	15 - 176	± 30	90				
• 4-Bromophenyl-phenylether	8270	5.0	43 - 142	± 30	90				
• Butylbenzylphthalate	8270	5.0	50 - 139	± 30	90				
• 4-Chloroaniline	8270	5.0	46 - 126	± 30	90				
• 4-Chloro-3-methylphenol	8270	5.0	49 - 133	± 30	90				
• 2-Chloronaphthalene	8270	5.0	36 - 97	± 30	90				
• 4-Chlorophenyl-phenylether	8270	5.0	49 - 134	± 30	90				
• Chrysene	8270	5.0	55 - 134	± 30	90				
• Dibenz(a,h)anthracene	8270	5.0	41 - 144	± 30	90				
• Dibenz(a,h)acridine	8270	5.0	(3)	± 30	90				
• Dibenzofuran	8270	5.0	53 - 129	± 30	90				
• Di-n-butylphthalate	8270	5.0	50 - 129	± 30	90				
• 1,2-Dichlorobenzene	8270	5.0	30 - 120	± 30	90				
• 1,3-Dichlorobenzene	8270	5.0	28 - 114	± 30	90				
• 1,4-Dichlorobenzene	8270	5.0	28 - 116	± 30	90				
• 3,3-Dichlorobenzidine	8270	5.0	1 - 262	± 30	90				
• 2,4-Dichlorophenol	8270	5.0	43 - 124	± 30	90				
• Dimethylphthalate	8270	5.0	55 - 134	± 30	90				
• 4,6-Dinitro-2-methylphenol	8270	25	38 - 147	± 30	90				
• 2,4-Dinitrophenol	8270	25	22 - 174	± 30	90				
• 2,4-Dinitrotoluene	8270	5.0	51 - 146	± 30	90				
• 2,6-Dinitrotoluene	8270	5.0	53 - 129	± 30	90				
• Di-n-octylphthalate	8270	5.0	41 - 145	± 30	90				
• Fluoranthene	8270	5.0	52 - 128	± 30	90				

(1) Based on Matrix Spike Percent Recovery.
(2) Based on Duplicate Samples.
(3) Insufficient spike data for setting accuracy limits.

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TABLE 4.1

GROUND WATER ANALYSES AND QUALITY CONTROL OBJECTIVES
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

PARAMETERS	ANALYTICAL PROCEDURE (EPA METHOD NO.)	LABORATORY SPECIFIC MEASUREMENT QUALITY OBJECTIVES (MQOs)				TYPE OF CONTAINER	PRESERVATIVE	ANALYTICAL HOLDING TIMES	REMARKS
		Detection Limit (µg/L)	Accuracy(1) (%)	Precision(2) (%)	Completeness (%)				
SVOCs (Continued)									
• Fluorene	8270	5.0	55 - 126	± 30	90				
• Indeno(1,2,3-ad)pyrene	8270	5.0	30 - 172	± 30	90				
• Isophorone	8270	5.0	39 - 126	± 30	90				
• 2-Methylnaphthalene	8270	5.0	36 - 124	± 30	90				
• 2-Methylphenol	8270	5.0	36 - 116	± 30	90				
• 4-Methylphenol	8270	10.0	46 - 109	± 30	90				
• 2-Nitroaniline	8270	5.0	54 - 133	± 30	90				
• 4-Nitroaniline	8270	5.0	40 - 166	± 30	90				
• 2-Nitrophenol	8270	5.0	43 - 122	± 30	90				
• N-Nitrosophenylamine	8270	5.0	(5)	± 30	90				
• N-Nitroso-di-n-propylanine	8270	5.0	32 - 136	± 30	90				
• Naphthalene	8270	5.0	40 - 110	± 30	90				
• Nitrobenzene	8270	5.0	44 - 118	± 30	90				
• Pentachlorophenol	8270	10.0	26 - 158	± 30	90				
• Phenanthrene	8270	5.0	54 - 128	± 30	90				
• Phenol	8270	5.0	28 - 91	± 30	90				
• Pyrene	8270	5.0	53 - 128	± 30	90				
• 1,2,4-Trichlorobenzene	8270	5.0	30 - 121	± 30	90				
• 2,4,5-Trichlorophenol	8270	5.0	49 - 143	± 30	90				
• 2,4,6-Trichlorophenol	8270	5.0	50 - 134	± 30	90				
PESTICIDES/PCBs(6)						1 Liter Amber Glass Bottle With Teflon Seam	None. Cool to 4° C.	14 Days to Extract. 40 Days after Extraction.	
• 4,4'-DDD	8080	0.03	68 - 146	± 30	90				
• 4,4'-DDE	8080	0.03	71 - 136	± 30	90				
• 4,4'-DDT	8080	0.03	64 - 142	± 30	90				
• Aldrin	8080	0.03	65 - 132	± 30	90				
• Alpha-BHC	8080	0.03	71 - 132	± 30	90				
• Beta-BHC	8080	0.03	72 - 139	± 30	90				
• Delta-BHC	8080	0.03	75 - 134	± 30	90				
• Gamma-BHC	8080	0.40	73 - 136	± 30	90				
• Chlordane	8080	0.03	(5)	± 30	90				
• Dieldrin	8080	0.03	73 - 134	± 30	90				
• Endosulfan I	8080	0.03	45 - 127	± 30	90				
• Endosulfan II	8080	0.03	50 - 126	± 30	90				
• Endosulfan Sulfate	8080	0.03	51 - 163	± 30	90				
• Endrin	8080	0.03	63 - 150	± 30	90				
• Endrin Aldehyde	8080	0.03	70 - 136	± 30	90				
• Endrin Ketone	8080	0.03	(6)	± 30	90				
• Heptachlor	8080	0.03	62 - 144	± 30	90				
• Heptachlorepoxide	8080	0.03	74 - 134	± 30	90				
• Methoxychlor	8080	0.03	47 - 147	± 30	90				
• Toxaphene	8080	1.0	(5)	± 30	90				
• PCBs	8080	0.50	54 - 146	± 30	90				

94-256/Rpt/AnGrWaMo (2/26/99/ey)

(1) Based on Matrix Spike Percent Recovery.
(2) Based on Duplicate Samples.
(3) Insufficient spike data for setting accuracy limits.
(4) Ground water samples will not be analyzed for pesticides/PCBs.
(5) Multiple peak chromatograms inhibit setting accuracy limits.
(6) Insufficient spike data available to set accuracy limits.

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TABLE 4.2

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-01 THROUGH GMW-06
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[1][3]																												
	WDI GMW 01					WDI GMW 02					WDI-GMW 03					WDI-GMW 04					WDI-GMW 05					WDI-GMW 06				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
METALS[2] (mg/L, unless noted)																														
Arsenic	0.018	<0.002	<0.005	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.005	0.01	<0.002	<0.005	<0.005	<0.005	0.0028	<0.002	<0.005	<0.005	<0.005	0.0039	0.016	0.0096	0.0081	0.0077	0.0025	<0.002	<0.005	<0.005	<0.005
Antimony	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	0.011	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01
Barium	0.60	0.021	0.022	0.021	0.025	0.028	0.032	0.024	0.027	0.028	0.31	0.034	0.026	0.03	0.028	0.043	0.025	0.025	0.023	0.024	0.033	0.034	0.029	0.034	0.03	0.06	0.023	0.016	0.018	0.017
Beryllium	0.0012	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002
Cadmium	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.005	<0.005	<0.005	0.00028	<0.001	<0.005	<0.005	<0.005
Chromium	0.042	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	0.005	0.025	<0.01	<0.005	<0.005	0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	0.01	<0.01	<0.005	<0.005	<0.005
Cobalt	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01
Copper	0.055	<0.02				<0.02	<0.02				<0.02	0.021				<0.02	<0.02				<0.02	<0.02				<0.02	<0.02			
Lead	0.014	<0.002	<0.005	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.005	0.0031	0.0028	<0.005	<0.005	<0.005	<0.002	0.0058	<0.005	<0.005	0.005	<0.002	<0.002	<0.005	0.0068	<0.005	<0.002	<0.002	<0.005	<0.005	<0.005
Magnesium			80	73	75			78	79	78			84	94	81			82	84	83			87	92	87			60	70	68
Mercury	<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	<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	<0.02	<0.02				<0.02	<0.02				<0.02	<0.02				<0.02	<0.02				<0.02	<0.02				<0.02	<0.02			
Nickel	0.053	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	0.054	<0.04	<0.01	<0.01	0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01
Selenium	0.0072	0.014	0.039	0.023	0.029	0.023	0.018	0.025	0.036	0.037	0.013	0.019	0.046	<0.005	0.034	0.023	0.015	0.039	0.038	0.04	0.014	0.0074	0.014	0.017	0.021	0.016	0.018	0.027	0.024	0.031
Silver	<0.01	<0.01				<0.01	<0.01				<0.01	<0.01				0.011	<0.01				<0.01	<0.01				<0.01	<0.01			
Thallium	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005
Vanadium	0.081	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01
Zinc	0.1	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.02	<0.02	<0.02	0.047	<0.01	<0.02	0.029	<0.02	0.035	<0.01	<0.02	0.021	0.024	<0.01	<0.01	<0.02	0.026	0.027	0.019	0.01	<0.02	<0.02	<0.02
Aluminum	0.024	<0.1	0.068	<0.05	0.1	<0.1	<0.1	0.062	0.2	<0.05	9.4	<0.1	<0.05	<0.05	<0.05	0.89	<0.1	0.1	<0.05	0.13	<0.1	<0.1	0.071	0.12	0.11	1.9	<0.1	<0.05	<0.05	0.072
Calcium		240	250	240	250	280	270	220	260	250	280	300	260	300	260	330	290	270	260	260	360	310	250	300	270	210	250	90	200	200
Iron	47	<0.04	<0.02	<0.02	<0.02	0.31	0.062	<0.02	0.037	<0.02	16	0.071	<0.02	<0.02	<0.02	0.2	<0.04	<0.02	<0.02	0.074	0.44	0.88	0.74	0.32	0.57	3.5	<0.04	<0.02	<0.02	0.57
SEMIVOLATILES (µg/L, unless noted)																														
1,2,4-Trichlorobenzene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,2-Dichlorobenzene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,2-Diphenylhydrazine	<5					<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
1,3-Dichlorobenzene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,4-Dichlorobenzene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,4,5 Trichlorophenol	<5		<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2,4,6-Trichlorophenol	<5		<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2,4-Dichlorophenol	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,4-Dimethylphenol	<5					<5	<5	<100			<5	<5	<100			<5	<5	<100			<5	<5	<100			<5	<5	<100	<100	
Benzo(k)fluoranthene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzyl Alcohol	<10					<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			
Benzoic acid	<50					<50	<50				<50	<50				<50	<50				<50	<50				<50	<50			
Butylbenzylphthalate	<5		<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Chrysene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5		<10	<10	<5	<5		<10	<10	<5	<5			<10
Di-N-butyl phthalate				<20	<20			<20	<20	<20			20	<20	<20			<20	<20	<20			<20	<20	<20			<20	<20	<20
Di n octylphthalate	<5		<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40
Dibenzo(a,h)anthracene	<5		<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Dibenzofuran	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10

[1] Well Numbers 01 and 08 were not tested for semivolatiles during the First Quarter sampling

[2] Dissolved Metals

[3] September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting However, primary site COCs are provided in the table

TABLE 4.2

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-01 THROUGH GMW-06
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[1][2][3]																													
	WDI-GMW 01					WDI-GMW 02					WDI-GMW 03					WDI-GMW 04					WDI-GMW 05					WDI-GMW 06				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
SEMIVOLATILES (µg/L, unless noted)																														
Dibutylphthalate	10		<20			10	<10				<10	<10				<10	<10				13	<10				11	<5			
Diethylphthalate	<10					<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			
Dimethylphthalate	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<10	<10	<10	<10
Fluoranthene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Fluorene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Hexachlorobenzene	<5					<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
Hexachlorobutadiene	<5					<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
Hexachlorocyclopentadiene	<10					<10	<10				<10	<10				<10	<10				<10	<10				<10	<5			
Hexachloroethane	<5					<5	<5				<5	<5				<5	<5				<5	<5				<5	<10			
Indeno(1,2,3c,d)pyrene	<5		<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Isophorone	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10			<10	<10	<10	<5	<5	<10	<10	<10
N-Nitrosodimethylamine	<5					<5	<5	<10			<5	<5	<10			<5	<5				<5	<5	<10			<5	<5	<10	<10	
N-Nitrosodiphenylamine,	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
N-Nitrosodi-n-propylamine	<5		<10	<10	<10	<5	<5		<10	<10	<5	<5		<10	<10	<5	<5	<10	<10	<10	<5	<5		<10	<10	<5	<5			<10
Nitrobenzene	<5		<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40
Naphthalene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Phenanthrene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Phenol	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Pentachlorophenol	<10		<40	<40	<40	<10	<5	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40
2,4-Dinitrophenol	<10		<100	<100	<100	<10	<10		<100	<100	<10	<10		<100	<100	<10	<10	<100	<100	<100	<10	<10		<100	<100	<10	<10			<100
2,4-Dinitrotoluene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	10	<10	<10	<5	<5	10	<10	<10	<5	<5	<10	<10	<10	<5	<5	10	10	<10
2,6-Dinitrotoluene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	10	<10	<10	<5	<5	10	<10	<10	<5	<5	<10	<10	<10	<5	<5	10	10	<10
2-Butanone			<10	<10	<10			<10	<10	<10			10	<10	<10			10	<10	<5			<10	<10	<5			10	10	<5
2-Chloronaphthalene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	10	<10	<10	<5	<5	10	<10	<10	<5	<5	<10	<10	<10	<5	<5	10	10	<10
2-Chlorophenol	<5					<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
2-Methyl-4,6-dinitrophenol	<10					<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			
2-Methylnaphthalene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Methylphenol (o-Cresol)	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Nitroaniline	<5		<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2-Nitrophenol	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
3,3'-Dichlorobenzidine	<10		<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40
3-Nitroaniline	<5					<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
4,6-Dinitro-2-methylphenol			<40	<40	<40			<40	<40	<40			<40	<40	<40			<40	<40	<40			<40	<40	<40			<40	<40	<40
4-Bromophenylphenylether	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Chloro-3-methylphenol	<5		<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
4-Chloroaniline	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Chlorophenylphenylether	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Methylphenol (p-Cresol)	<10		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Nitroaniline	<5		<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100
4-Nitrophenol	<10					<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			

(1) Well Numbers 01 and 08 were not tested for semivolatiles during the First Quarter sampling.

(2) Dissolved Metals.

(3) September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TPC

TABLE 4.2

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-01 THROUGH GMW-06
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[1][3]																														
	WDI-GMW 01					WDI GMW 02					WDI-GMW 03					WDI-GMW 04					WDI-GMW 05					WDI GMW 06				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
SEMIVOLATILES (Continued) (µg/L, unless noted)																															
Acenaphthene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Acenaphthylene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Aniline	<5					<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
Anthracene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzidine	<100					<100	<100				<100	<100				<100	<100				<100	<100				<100	<100			
Benzo(a)anthracene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(a)pyrene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	< 10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(b)fluoranthene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(g h i)perylene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Pyrene	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Pyridine	<10					<10	<10				<10	<10				<10	<10				<10	<10				<10	<5			
Bis(2-chloroethox)methane	<5					<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
Bis(2-chloroethyl) ether	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Bis(2 chloroisopropyl)ether	<5		<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Bis(2-ethylhexyl)phthalate	<10		<100	<100	<100	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100	3 3	<10	<100	<100	<100
1,1,1-Trichloroethane	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2
1,1 2 2 Tetrachloroethane	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2
1,1,2-Trichloroethane	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2
1,1-Dichloroethane	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0.5	<0 5	<2	<2	<2	<0 5	<0.5	<2	<2	<2	<0 5	<0 5	<2	<2	<2
1,1-Dichloroethene	<0 5	<0 5	<5	<2	<2	<0 5	<0 5	<5	<2	<2	<0 5	<0 5	<5	<2	<2	<0 5	<0 5	<5	<2	<5	<0 5	<0 5	<5	<2	<5	<0 5	<0 5	<5	<5	<5
1 2-Dibromoethane	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2
1,2 Dichloroethane	0 9	<0 5	<2	<2	<2	0 9	<0 5	<2	<2	<2	0 9	<0 5	<2	<2	<2	0 9	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2
1,2-Dichloropropane	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0.5	<2	<2	<2	<0 5	<0 5	<2	<2	<2
2-Chloroethylvinylether	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5
2-Hexanone	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4 Methyl 2-pentanone			<5	<5	<5			<5	<5	<5			<5	<5	<5			<5	<5	<5			<5	<5	<5			<5	<5	<5
VOLATILES (µg/L, unless noted)																															
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0.5	<0 5	<2	<2		<0 5	<0 5	<2	<2		<0 5	<0 5	<2	<2	
Bromomethane	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5
Benzene	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0.5	<2	<2	<2	<0 5	<0 5	<2	<2	<2
Bromoform	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<2	<0 5	<0 5	<5	<5	<2	<0 5	<0 5	<5	<5	<2
Carbon Tetrachloride	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5
Chloroethane	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5	<0 5	<0 5	<5	<5	<5
Chloroform	<0.5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0 5	<0 5	<2	<2	<5	<0 5	<0 5	<2	<2	<5	1 4	1 5	<2	<2	<5
Chloromethane	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5	<1	<1	<5	<5	<2	<1	<1	<5	<5	<2	<1	<1	<5	<5	<2
Carbon Disulfide	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5	<2	<2	<5	<5	<10	<2	<2	<5	<5	<10	<2	<2	<5	<5	<10
Dibromochloromethane	<0 5	<0 5				<0 5	<0 5				<0 5	<0 5				<0 5	<0 5				<0 5	<0 5				<0 5	<0 5			
Ethylbenzene			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2
Methyl ethyl ketone	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			

(1) Well Numbers 01 and 08 were not tested for semivolatiles during the First Quarter sampling

(2) Dissolved Metals

(3) September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale California The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting However, primary site COCs are provided in the table

TABLE 4.2

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-01 THROUGH GMW-06
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[1][3]																													
	WDI-GMW 01					WDI-GMW 02					WDI-GMW 03					WDI-GMW 04					WDI-GMW 05					WDI-GMW 06				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
VOLATILES (Continued) (µg/L, unless noted)																														
Methyl isobutyl ketone	<4	<4				<4	<4				<4	<4				<4	<4				<4	<4				<4	<4			
Methylene chloride	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20
Trichloroethene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Tetrachloroethene	<0.5	5.9	5.6	6	<2	<0.5	<0.5	<2	6	4.4	<0.5	<0.5	<2	6	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Toluene			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
cis-1,2-Dichloroethene	<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5			
cis-1,3-Dichloropropene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
trans-1,2-Dichloroethene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
trans-1,3-Dichloropropene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2

94-256/Rpt-VAnGrWaMo/Tbls&Figs (2/26/99/cy)

[1] Well Numbers 01 and 08 were not tested for semivolatiles during the First Quarter sampling.

[2] Dissolved Metals.

[3] September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TABLE 4.3

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-07 THROUGH GMW-13
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[1,3]																													
	WDI GMW 07					WDI GMW 08					WDI GMW 09					WDI-GMW 10					WDI GMW 11					WDI GMW 13				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	9/97[1]	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
METALS [2] (mg/L, unless noted)																														
Arsenic	<0.002	<0.002	<0.005	<0.005	<0.005	0.093	0.027	0.019	0.025	0.018		<0.002	<0.005	<0.005	<0.005	0.0056	<0.002	<0.005	<0.005	<0.005	0.01	<0.002	<0.005	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.005
Antimony	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01		<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01
Barium	0.028	0.02	0.019	0.016	0.017	0.29	0.026	0.032	0.03	0.029		0.017	0.019	0.021	0.021	0.087	0.05	0.039	0.044	0.042	0.17	0.036	0.028	0.033	0.028	0.025	0.023	0.02	0.023	0.021
Beryllium	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002		<0.001	<0.002	<0.002	<0.002	0.0001	<0.001	<0.002	<0.002	<0.002	0.0001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002
Cadmium	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005		<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.005	<0.005	<0.005
Chromium	0.012	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005		<0.01	<0.005	<0.005	0.0056	0.01	<0.01	<0.005	<0.005	<0.005	0.018	<0.01	<0.005	<0.005	<0.005	<0.01*	0.012	<0.005	<0.005	<0.005
Cobalt	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01		<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01
Copper	<0.02	<0.02				<0.02	<0.02					<0.02				<0.02	<0.02				0.021	<0.02				<0.02	<0.02			
Lead	<0.002	<0.002	<0.005	<0.005	<0.005	0.0031	<0.002	<0.005	<0.005	<0.005		<0.002	<0.005	<0.005	<0.005	<0.007	0.0029	<0.005	<0.005	<0.005	0.0025	0.0025	<0.005	0.0051	0.006	<0.002	0.0063	<0.005	0.0056	<0.005
Magnesium			110	82	75			78	77	79			75	81	78			61	61	55			74	85	81			70	74	70
Mercury	<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	0.0006	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	<0.0002	0.00022	<0.0002	<0.0002
Molybdenum	<0.02	<0.02				<0.02	<0.02					<0.02				<0.02	<0.02				<0.02	<0.02				<0.02	<0.02			
Nickel	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01		<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01
Selenium	0.027	0.023	0.024	0.034	0.045	0.0095	0.0099	0.03	0.021	0.017		0.019	0.074	0.033	0.037	0.0046	0.0064	0.011	0.013	0.02	0.013	0.023	<0.005	0.04	0.046	0.0065	0.0049	0.015	0.011	0.017
Silver	0.01	0.011				<0.01	<0.01					<0.01				<0.01	<0.01				<0.01	0.011				<0.01	<0.01			
Thallium	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005		<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	0.0076	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005
Vanadium	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01		<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01
Zinc	<0.01	<0.01	<0.02	<0.02	<0.02	0.039	<0.01	<0.02	<0.02	<0.02		<0.01	<0.02	<0.02	<0.02	0.022	<0.01	<0.02	<0.02	<0.02	0.06	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.02	0.021	0.029
Aluminum	0.33	<0.1	<0.05	<0.05	0.082	6.8	<0.1	0.072	<0.05	<0.05		<0.1	<0.05	0.086	0.13	1.9	<0.1	<0.05	<0.05	0.13	12	<0.1	<0.05	0.095	0.12	<0.1	<0.1	<0.05	0.098	0.11
Calcium	260	220	330	240	220		240	240	250	250		240	250	270	290	180	210	160	190	200	270	310	270	290	310	280	270	250	260	240
Iron	0.089	<0.04	<0.02	<0.02	<0.02	23	1.7	1.6	1.7	0.97		<0.04	<0.02	<0.02	<0.02	3.1	<0.04	<0.02	<0.02	<0.02	18	0.084	<0.02	<0.02	<0.02	0.36	<0.04	<0.02	<0.02	<0.02
SEMIVOLATILES (µg/L, unless noted)																														
1,2,4-Trichlorobenzene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,2-Dichlorobenzene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,2 Diphenylhydrazine	<5	<5				<5										<5	<5				<5	<5				<5	<5			
1,3-Dichlorobenzene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,4-Dichlorobenzene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,4,5-Trichlorophenol	<5	<5	<20	<20	<20	<5		<20	<20				<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2,4,6-Trichlorophenol	<5	<5	<20	<20	<20	<5		<20	<20				<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2,4-Dichlorophenol	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,4 Dimethylphenol	<5	<5	<100	<100		<5		<100					<100			<5	<5	<100			<5	<5	<100			<5	<5	<100		
Benzo(k)fluoranthene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzyl Alcohol	<10	<10				<10										<10	<10				<10	<10				<10	<10			
Benzoic acid	<50	<50				<50										<50	<50				<50	<50				<50	<50			
Butylbenzylphthalate,	<5	<5	<20	<20	<20	<5		<20	<20				<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Chrysene	<5	<5			<10	<5		<10	<10					<10	<10	<5	<5		<10	<10	<5	<5		<10	<10	<5	<5		<10	<10
Di-N-butyl phthalate			<20	<20	<20			<20	<20				<20	<20	<20			<20	<20	<20			<20	<20	<20			<20	<20	<20
Di n-octylphthalate	<5	<5	<40	<40	<40	<5		<40	<40				<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40
Dibenzo(a,h)anthracene	<5	<5	<20	<20	<20	<5		<20	<20				<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Dibenzofuran	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10

[1] Well Numbers 01 and 08 were not tested for semivolatiles during the First Quarter sampling

[2] Dissolved Metals

[3] September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale California The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting However, primary site COCs are provided in the table

TABLE 4.3

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-07 THROUGH GMW-13
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[1][3]																														
	WDI-GMW 07					WDI-GMW 08					WDI-GMW 09					WDI-GMW 10					WDI-GMW 11					WDI-GMW 13				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
SEMIVOLATILES (µg/L, unless noted)																															
Dibutylphthalate	<10	<10				<10										<10	<10				<10	<10				<10	<10			
Diethylphthalate	<10	<10				<10										<10	<10				<10	<10				<10	<10			
Dimethylphthalate	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Fluoranthene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Fluorene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Hexachlorobenzene	<5	<5				<5										<5	<5				<5	<5				<5	<5			
Hexachlorobutadiene	<5	<5				<5										<5	<5				<5	<5				<5	<5			
Hexachlorocyclopentadiene	<10	<10				<10										<10	<10				<10	<10				<10	<10			
Hexachloroethane	<5	<5				<5										<5	<5				<5	<5				<5	<5			
Indeno(1,2,3c,d)pyrene	<5	<5	<20	<20	<20	<5		<20	<20				<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Isophorone	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
N-Nitrosodimethylamine	<5	<5	<10	<10		<5		<10	<10				<10			<5	<5	<10			<5	<5	<10			<5	<5	<10		
N-Nitrosodiphenylamine,	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
N-Nitrosodi-n-propylamine	<5	<5			<10	<5								<10	<10	<5	<5		<10	<10	<5	<5		<10	<10	<5	<5		<10	<10
Nitrobenzene	<5	<5	<40	<40	<40	<5		<40	<40				<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40
Naphthalene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Phenanthrene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Phenol	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Pentachlorophenol	<10	<10	<40	<40	<40	<10		<40	<40				<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40
2,4-Dinitrophenol	<10	<10			<100	<10			<100					<100	<100	<10	<10		<100	<100	<10	<10		<100	<100	<10	<10		<100	<100
2,4-Dinitrotoluene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,6-Dinitrotoluene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Butanone			<10	<10	<10			<10					<10	<10	<10			<10	<10	<10			<10	<10	<10			<10	<10	<10
2-Chloronaphthalene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Chlorophenol	<5	<5				<5										<5	<5				<5	<5				<5	<5			
2-Methyl-4,6-dinitrophenol	<10	<10				<10										<10	<10				<10	<10				<10	<10			
2-Methylnaphthalene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Methylphenol (o-Cresol)	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Nitroaniline	<5	<5	<20	<20	<20	<5		<20	<20				<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2-Nitrophenol	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
3,3'-Dichlorobenzidine	<10	<10	<40	<40	<40	<10		<40	<40				<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40
3-Nitroaniline	<5	<5				<5										<5	<5				<5	<5				<5	<5			
4,6-Dinitro-2-methylphenol			<40	<40	<40			<40	<40				<40	<40	<40			<40	<40	<40			<40	<40	<40			<40	<40	<40
4-Bromophenylphenylether	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Chloro-3-methylphenol	<5	<5	<20	<20	<20	<5		<20	<20				<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
4-Chloroaniline	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Chlorophenylphenylether	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Methylphenol (p-Cresol)	<10	<10	<10	<10	<10	<10		<10	<10				<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Nitroaniline	<5	<5	<100	<100	<100	<5		<100	<100				<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100
4-Nitrophenol	<10	<10				<10			<10							<10	<10				<10	<10				<10	<10			

[1] Well Numbers 01 and 08 were not tested for semivolatiles during the First Quarter sampling.

[2] Dissolved Metals.

[3] September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TABLE 4.3

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-07 THROUGH GMW-13
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[1][3]																														
	WDI-GMW 07					WDI-GMW 08					WDI-GMW 09					WDI-GMW 10					WDI-GMW 11					WDI-GMW 13				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
SEMIVOLATILES (Continued) (µg/L, unless noted)																															
Acenaphthene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Acenaphthylene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Aniline	<5	<5				<5										<5	<5				<5	<5				<5	<5			
Anthracene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzidine	<100	<100				<100										<100	<100				<100	<100				<100	<100			
Benzo(a)anthracene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(a)pyrene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(b)fluoranthene	<5	<5	<10	<10		<5		<10	<10				<10	<10		<5	<5	<10	<10		<5	<5	<10	<10		<5	<5	<10	<10	
Benzo(g h i)perylene	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Pyrene	<5	<5	<10	<10	<10	<5		<10	<10					<10	<10	<5	<5		<10	<10	<5	<5		<10	<10	<5	<5		<10	<10
Pyridine	<10	<10				<10										<10	<10				<10	<10				<10	<10			
Bis(2-chloroethox~)methane	<5	<5				<5										<5	<5				<5	<5				<5	<5			
Bis(2-chloroethyl) ether	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Bis(2-chloroisopropyl)ether	<5	<5	<10	<10	<10	<5		<10	<10				<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Bis(2-ethylhexyl)phthalate	3.3	<10	<100	<100	<100	3.3		<100	<100	<100			<100	<100	<100	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100
1,1,1-Trichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1,2-Trichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1-Dichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1-Dichloroethene	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<2	<5		<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
1,2-Dibromoethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,2-Dichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,2-Dichloropropane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
2-Chloroethylvinylether	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5		<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5
2-Hexanone	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10		<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Methyl-2-pentanone			<5	<5	<5			<5	<5	<5			<5	<5	<5			<5	<5	<5			<5	<5	<5			<5	<5	<5
VOLATILES (µg/L, unless noted)																															
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Bromomethane	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5		<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Benzene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Bromoform	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5		<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Carbon Tetrachloride	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5		<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Chloroethane	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5		<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Chloroform	3.5	2.9	<2	4.4	3.6	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Chloromethane	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5		<1	<5	<5	<5	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5
Carbon Disulfide	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5		<2	<5	<5	<5	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5
Dibromochloromethane	<0.5	<0.5				<0.5	<0.5					<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5			
Ethylbenzene			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2
Methyl ethyl ketone	<10	<10				<10	<10					<10				<10	<10				<10	<10				<10	<10			

[1] Well Numbers 01 and 08 were not tested for semivolatiles during the First Quarter sampling.

[2] Dissolved Metals.

[3] September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TABLE 4.3

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-07 THROUGH GMW-13
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[1][3]																													
	WDI-GMW 07					WDI-GMW 08					WDI-GMW 09					WDI-GMW 10					WDI-GMW 11					WDI-GMW 13				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
VOLATILES (Continued) (µg/L, unless noted)																														
Methyl isobutyl ketone	<4	<4				<4	<4					<4				<4	<4				<4	<4				<4	<4			
Methylene chloride	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20		<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20
Trichloroethene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	4.8	6.8	7.6	9.5	9.2	<0.5	<0.5	<2	2.4	<2
Tetrachloroethene	<0.5	<0.5	<2	<2	3.8	1.7	2.0	2.1	<2	<2		4.7	6.5	6.5	3.8	1.0	1.2	<2	<2	<2	40.0	74	77	86	91	<0.5	<0.5	<2	6.8	<2
Toluene			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5		<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
cis-1,2-Dichloroethene	<0.5	<0.5				<0.5	<0.5					<0.5				<0.5	<0.5				0.9	0.71				<0.5	<0.5			
cis-1,3-Dichloropropene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
trans-1,2-Dichloroethene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
trans-1,3-Dichloropropene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2		<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2

94-256/Rpt/AnGrWaMtr/Tbls&Figs (2/26/99/ey)

(1) Well Numbers 01 and 08 were not tested for semivolatiles during the First Quarter sampling.

(2) Dissolved Metals.

(3) September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TABLE 4.4

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-14 THROUGH GMW-21
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[2]																													
	WDI GWM 14					WDI-GWM 15					WDI GWM 16					WDI-GMW 18					WDI GMW 19					WDI-GMW 21				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
METALS [1] (mg/L, unless noted)																														
Arsenic	0.0064	<0.002	<0.005	<0.005	<0.005	0.0021	<0.002	<0.005	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.005	0.0021	<0.002	<0.005	<0.005	<0.005	<0.002	0.002	<0.005	<0.005	<0.005
Antimony	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01
Barium	0.14	0.026	0.023	0.027	0.023	0.028	0.025	0.02	0.023	0.023	0.027	0.022	0.021	0.02	0.02	0.022	0.023	0.017	0.02	0.02	0.017	0.019	0.017	0.018	0.015	0.024	0.027	0.023	0.025	0.031
Beryllium	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002
Cadmium	0.0052	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.005	<0.005	<0.005	0.01	<0.001	<0.005	<0.005	<0.005	0.0094	<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005
Chromium	0.016	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005
Cobalt	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01
Copper	0.922	<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			
Lead	0.0038	0.0066	<0.005	<0.005	<0.005	<0.002	0.0027	<0.005	<0.005	<0.005	<0.002	0.004	<0.005	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.005	<0.002	0.0041	<0.005	<0.005	<0.005
Magnesium			74	80	78			82	87	83			83	91	88			74	67	82			75	72	78			72	69	73
Mercury	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	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	<0.02	<0.02				<0.02	0.0001				<0.02	<0.02				<0.02	<0.02				<0.02	<0.02				<0.02	<0.02			
Nickel	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01
Selenium	<0.004	<0.004	0.011	0.023	0.024	0.031	0.024	0.06	0.048	0.052	0.037	0.023	0.059	0.054	0.064	0.025	0.028	0.053	0.047	0.047	0.020	0.017	0.031	0.031	0.04	0.012	0.014	0.016	0.019	0.011
Silver	<0.01	<0.01				<0.01	<0.01				<0.01	<0.01				<0.01	<0.01				<0.01	<0.01				<0.01	<0.01			
Thallium	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005
Vanadium	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01
Zinc	0.039	0.037	<0.02	<0.02	<0.02	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.02	<0.02	0.029	<0.01	<0.01	<0.02	<0.02	<0.02	0.12	<0.01	<0.02	<0.02	<0.02	<0.01	0.049	<0.02	<0.02	<0.02
Aluminum	7.2	<0.1	<0.05	0.14	0.12	0.44	<0.1	<0.05	0.056	0.11	0.77	<0.1	<0.05	<0.05	0.096	<0.1	<0.1	0.081	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	0.079	<0.1	<0.1	<0.05	<0.005	<0.005
Calcium		270	270	290	250	280	300	270	270	260	260	290	270	260	250	270	260	220	230	240	270	260	240	250	240	200	220	230	220	210
Iron	13	<0.04	<0.02	<0.02	<0.02	0.67	0.045	<0.02	<0.02	<0.02	0.75	<0.04	<0.02	<0.02	<0.02	<0.04	0.049	<0.02	<0.02	<0.02	<0.04	<0.04	<0.02	<0.02	<0.02	0.25	<0.04	<0.02	<0.02	<0.02
SEMIVOLATILES (µg/L, unless noted)																														
1,2,4-Trichlorobenzene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,2-Dichlorobenzene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,2-Diphenylhydrazine	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
1,3-Dichlorobenzene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,4-Dichlorobenzene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,4,5-Trichlorophenol	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2,4,6-Trichlorophenol	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2,4-Dichlorophenol	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,4-Dimethylphenol	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100		<100
Benzo(k)fluoranthene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzyl Alcohol	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			
Benzoic acid	<50	<50				<50	<50				<50	<50				<50	<50				<50	<50				<50	<50			
Butylbenzylphthalate,	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Chrysene	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5		<10	
Di-N-butyl phthalate			<20	<20	<20			<20	<20	<20			<20	<20	<20			<20	<20	<20			<20	<20	<20			<20	<20	<20
Di-n-octylphthalate	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40
Dibenzo(a,h)anthracene	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Dibenzofuran	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10

[1] Dissolved Metals

[2] September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting However, primary site COCs are provided in the table

TABLE 4.4

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-14 THROUGH GMW-21
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[2]																														
	WDI-GWM 14					WDI-GWM 15					WDI-GWM 16					WDI-GMW 18					WDI-GMW 19					WDI-GMW 21				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
SEMIVOLATILES (µg/L, unless noted)																															
Dibutylphthalate	<10	<10				14	<10				15	<10				<10	<10				<10	<10				<10	<10				
Diethylphthalate	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				
Dimethylphthalate	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Fluoranthene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Fluorene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Hexachlorobenzene	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				
Hexachlorobutadiene	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				
Hexachlorocyclopentadiene	*<10*	*<10*				*<10*	*<10*				<10	*<10*				*<10*	*<10*				<10	*<10*				*<10*	*<10*				
Hexachloroethane	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				
Indeno(1,2,3c,d)pyrene	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Isophorone	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
N-Nitrosodimethylamine	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10		<10
N-Nitrosodiphenylamine,	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
N-Nitrosodi-n-propylamine	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5		<10	
Nitrobenzene	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40
Naphthalene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Phenanthrene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Phenol	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Pentachlorophenol	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40
2,4-Dinitrophenol	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10		<100	
2,4-Dinitrotoluene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,6-Dinitrotoluene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Butanone			<10	<10	<10			<10	<10	<10			<10	<10	<10			<10	<10	<10			<10	<10	<10			<10	<10	<10
2-Chloronaphthalene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Chlorophenol	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
2-Methyl-4,6-dinitrophenol	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			
2-Methylnaphthalene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Methylphenol (o-Cresol)	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Nitroaniline	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2-Nitrophenol	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
3,3'-Dichlorobenzidine	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40
3-Nitroaniline	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
4,6-Dinitro-2-methylphenol			<40	<40	<40			<40	<40	<40			<40	<40	<40			<40	<40	<40			<40	<40	<40			<40	<40	<40
4-Bromophenylphenylether	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Chloro-3-methylphenol	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
4-Chloroaniline	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Chlorophenylphenylether	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Methylphenol (p-Cresol)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Nitroaniline	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100
4-Nitrophenol	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			

(1) Dissolved Metals.

(2) September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TABLE 4.4

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-14 THROUGH GMW-21
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[2]																														
	WDI-GWM 14					WDI-GWM 15					WDI-GWM 16					WDI-GMW 18					WDI-GMW 19					WDI-GMW 21				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
SEMIVOLATILES (Continued) (µg/L, unless noted)																															
Acenaphthene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Acenaphthylene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Aniline	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
Anthracene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzidine	<100	<100				<100	<100				<100	<100				<100	<100				<100	<100				<100	<100			
Benzo(a)anthracene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(a)pyrene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(b)fluoranthene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(g h i)perylene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Pyrene	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5	<10	<10		<5	<5	<10	<10	
Pyridine	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			
Bis(2-chloroethox~)methane	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
Bis(2-chloroethyl) ether	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Bis(2-chloroisopropyl)ether	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Bis(2-ethylhexyl)phthalate	<10	<10	<100	<100	<100	15	<10	<100	<100	<100	15	15	<100	<100	<100	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100
1,1,1-Trichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1,2-Trichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1-Dichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1-Dichloroethene	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
1,2-Dibromoethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,2-Dichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,2-Dichloropropane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
2-Chloroethylvinylether	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5
2-Hexanone	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Methyl-2-pentanone			<5	<5	<5			<5	<5	<5			<5	<5	<5			<5	<5	<5			<5	<5	<5			<5	<5	<5
VOLATILES (µg/L, unless noted)																															
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Bromomethane	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Benzene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Bromoform	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Carbon Tetrachloride	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Chloroethane	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Chloroform	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Chloromethane	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5
Carbon Disulfide	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5
Dibromochloromethane	<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5			
Ethylbenzene			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2
Methyl ethyl ketone	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			

(1) Dissolved Metals.

(2) September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TABLE 4.4

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-14 THROUGH GMW-21
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[2]																														
	WDI-GWM 14					WDI-GWM 15					WDI-GWM 16					WDI-GMW 18					WDI-GMW 19					WDI-GMW 21				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
VOLATILES (Continued) (µg/L, unless noted)																															
Methyl isobutyl ketone	<4	<4				<4	<4				<4	<4				<4	<4				<4	<4				<4	<4			
Methylene chloride	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20
Trichloroethene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Tetrachloroethene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Toluene			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
cis-1,2-Dichloroethene	<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5			
cis-1,3-Dichloropropene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
trans-1,2-Dichloroethene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
trans-1,3-Dichloropropene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2

94-256/Rpts/AnGrWaMo/Tbls&Figs (2/26/99/ey)

(1) Dissolved Metals.

(2) September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TABLE 4.5

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-22 THROUGH GMW-28
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[2]																													
	WDI GWM 22					WDI GWM 23					WDI GWM 24					WDI GMW 26					WDI-GMW 27					WDI GMW 28				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
METALS [1] (mg/L, unless noted)																														
Arsenic	0.0047	<0.002	<0.005	<0.005	<0.005	0.0038	<0.002	<0.005	<0.005	<0.005	0.0022	<0.002	<0.005	<0.005	<0.005	0.0043	<0.002	<0.005	<0.005	<0.005	0.0084	<0.002	<0.005	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.005
Antimony	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	0.012	<0.1	<0.1	<0.01	<0.01	<0.01
Barium	0.09	0.051	0.038	0.044	0.042	0.11	0.024	0.017	0.02	0.019	0.044	0.028	0.021	0.024	0.023	0.13	0.028	0.023	0.025	0.024	0.22	0.022	0.018	0.021	0.019	0.029	0.03	0.024	0.026	0.026
Beryllium	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	0.0011	<0.001	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002
Cadmium	<0.005	<0.001	<0.005	<0.005	<0.005	0.0084	<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0082	<0.001	<0.005	<0.005	<0.005	0.0061	<0.001	<0.005	<0.005	<0.005	<0.005	<0-001	<0.005	<0.005	<0.005
Chromium	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	0.027	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005
Cobalt	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01
Copper	<0.02	<0.02				<0.02	<0.02				<0.02	0.025				<0.02	<0.02				0.028	<0.02				<0.02	<0.02			
Lead	<0.002	<0.002	<0.005	<0.005	<0.005	<0.002	0.002	<0.005	<0.005	<0.005	<0.002	0.0099	<0.005	0.0057	<0.005	0.0034	<0.002	<0.005	<0.005	<0.005	0.0088	0.0028	<0.005	<0.005	0.0067	<0.002	0.0025	<0.005	<0.005	<0.005
Magnesium			64	62	60			82	82	83			85	83	82			78	83	78			71	68	72			72	73	80
Mercury	0.0023	0.0017	<0.0002	0.0016	0.0017	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0007	0.0016	0.00043	0.00039	0.00058	0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	<0.02	<0.02				<0.02	<0.02				<0.02	<0.02				<0.02	<0.02				<0.02	<0.02				<0.02	<0.02			
Nickel	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.02	<0.02	<0.01
Selenium	<0.004	<0.004	0.0099	0.0064	0.016	0.012	0.016	0.026	0.035	0.036	0.024	0.026	0.042	0.052	0.05	0.019	0.021	0.044	0.047	0.052	0.012	0.02	0.027	0.037	0.0512	0.021	0.026	0.038	0.038	0.038
Silver	<0.01	<0.01				0.01	0.01				<0.01	<0.01				<0.01	<0.01				<0.01	<0.01				<0.01	<0.01			
Thallium	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005	<0.07	<0.07	0.0075	<0.005	<0.005	0.074	<0.07	0.0069	<0.005	<0.005	<0.07	<0.07	<0.005	<0.005	<0.005
Vanadium	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01	<0.04	<0.04	<0.01	<0.01	<0.01
Zinc	0.015	<0.01	<0.02	0.042	<0.02	0.024	<0.01	<0.02	0.028	<0.02	0.016	0.016	<0.02	0.032	0.028	0.036	0.018	<0.02	<0.02	<0.02	0.063	0.017	<0.02	<0.02	<0.02	0.011	0.012	<0.02	<0.02	<0.02
Aluminum	2.3	<0.1	0.059	0.087	0.1	3.5	<0.1	0.052	0.13	0.12	1.3	<0.1	0.063	0.11	0.089	4.5	<0.1	<0.05	0.094	0.13	10	<0.1	0.057	0.091	0.16	<0.1	<0.1	<0.05	<0.05	<0.05
Calcium	230	260	200	240	250		280	240	290	260	310	290	240	300	270	290	250	260	280	290	250	230	190	240	260	260	250	240	240	240
Iron	3.9	<0.04	<0.02	<0.02	<0.02	5.8	<0.04	<0.02	<0.02	<0.02	2.4	<0.04	<0.02	<0.02	<0.02	9	<0.04	<0.02	<0.02	<0.02	22	<0.04	<0.02	<0.02	<0.02	<0.04	<0.04	<0.02	<0.02	<0.02
SEMIVOLATILES (µg/L, unless noted)																														
1,2,4-Trichlorobenzene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,2-Dichlorobenzene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,2-Diphenylhydrazine	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
1,3-Dichlorobenzene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,4-Dichlorobenzene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,4,5-Trichlorophenol	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2,4,6-Trichlorophenol	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2,4-Dichlorophenol	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,4-Dimethylphenol	<5	<5	<100	<100		<5	<5	<100	<100		<5	<5	<100	<100		<5	<5	<100	<100		<5	<5	<100	<100		<5	<5	<100	<100	
Benzo(k)fluoranthene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzyl Alcohol	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			
Benzoic acid	<50	<50				<50	<50				<50	<50				<50	<50				<50	<50				<50	<50			
Butylbenzylphthalate,	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Chrysene	<5	<5			<10	<5	<5			<10	<5	<5			<10	<5	<5			<10	<5	<5			<10	<5	<5			<10
Di-N-butyl phthalate			<20	<20	<20			<20	<20	<20			<20	<20	<20			<20	<20	<20			<20	<20	<20			<20	<20	<20
Di-n-octylphthalate	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40
Dibenzo(a,h)anthracene	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Dibenzofuran	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10

[1] Dissolved Metals

[2] September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting However, primary site COCs are provided in the table

TABLE 4.5

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-22 THROUGH GMW-28
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[2]																														
	WDI-GWM 22					WDI-GWM 23					WDI-GWM 24					WDI-GMW 26					WDI-GMW 27					WDI-GMW 28				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
SEMIVOLATILES (µg/L, unless noted)																															
Dibutylphthalate	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			
Diethylphthalate	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			
Dimethylphthalate	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Fluoranthene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Fluorene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Hexachlorobenzene	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
Hexachlorobutadiene	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
Hexachlorocyclopentadiene	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			
Hexachloroethane	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
Indeno(1,2,3c,d)pyrene	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Isophorone	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
N-Nitrosodimethylamine	<5	<5	<10	<10		<5	<5	<10	<10		<5	<5	<10	<10		<5	<5	<10	<10		<5	<5	<10	<10		<5	<5	<10	<10	
N-Nitrosodiphenylamine,	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
N-Nitrosodi-n-propylamine	<5	<5			<10	<5	<5			<10	<5	<5			<10	<5	<5			<10	<5	<5			<10	<5	<5			<10
Nitrobenzene	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40
Naphthalene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Phenanthrene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Phenol	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Pentachlorophenol	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40
2,4-Dinitrophenol	<10	<10			<100	<10	<10			<100	<10	<10			<100	<10	<10			<100	<10	<10			<100	<10	<10			<100
2,4-Dinitrotoluene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,6-Dinitrotoluene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Butanone			<10	<10	<10			<10	<10	<10			<10	<10	<10			<10	<10	<10			<10	<10	<10			<10	<10	<10
2-Chloronaphthalene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Chlorophenol	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
2-Methyl-4,6-dinitrophenol	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			
2-Methylnaphthalene	<5	<5	<10	<10		<5	<5	<10	<10		<5	<5	<10	<10		<5	<5	<10	<10		<5	<5	<10	<10		<5	<5	<10	<10	
2-Methylphenol (o-Cresol)	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Nitroaniline	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2-Nitrophenol	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
3,3'-Dichlorobenzidine	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40
3-Nitroaniline	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
4,6-Dinitro-2-methylphenol			<40	<40	<40			<40	<40	<40.			<40	<40	<40			<40	<40	<40			<40	<40	<40			<40	<40	<40
4-Bromophenylphenylether	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Chloro-3-methylphenol	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
4-Chloroaniline	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Chlorophenylphenylether	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Methylphenol (p-Cresol)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Nitroaniline	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100
4-Nitrophenol	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			

(1) Dissolved Metals.

(2) September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TABLE 4.5

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-22 THROUGH GMW-28
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[1]																													
	WDI-GWM 22					WDI-GWM 23					WDI-GWM 24					WDI-GMW 26					WDI-GMW 27					WDI-GMW 28				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
SEMIVOLATILES (Continued) (µg/L, unless noted)																														
Acenaphthene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Acenaphthylene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Aniline	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
Anthracene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzidine	<100	<100				<100	<100				<100	<100				<100	<100				<100	<100				<100	<100			
Benzo(a)anthracene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(a)pyrene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(b)fluoranthene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(g h i)perylene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Pyrene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Pyridine	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			
Bis(2-chloroethox-)methane	<5	<5				<5	<5				<5	<5				<5	<5				<5	<5				<5	<5			
Bis(2-chloroethyl) ether	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Bis(2-chloroisopropyl)ether	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Bis(2-ethylhexyl)phthalate	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100
1,1,1-Trichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1,2-Trichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1-Dichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1-Dichloroethene	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
1,2-Dibromoethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,2-Dichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,2-Dichloropropane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
2-Chloroethylvinylether	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5
2-Hexanone	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Methyl-2-pentanone			<5	<5	<5			<5	<5	<5			<5	<5	<5			<5	<5	<5			<5	<5	<5			<5	<5	<5
VOLATILES (µg/L, unless noted)																														
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Bromomethane	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Benzene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Bromoform	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Carbon Tetrachloride	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Chloroethane	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Chloroform	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Chloromethane	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5	<1	<1	<5	<5	<5
Carbon Disulfide	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5	<2	<2	<5	<5	<5
Dibromochloromethane	<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5			
Ethylbenzene			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2
Methyl ethyl ketone	<10	<10				<10	<10				<10	<10				<10	<10				<10	<10				<10	<10			

(1) Dissolved Metals.

(2) September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TABLE 4.5

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-22 THROUGH GMW-28
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[2]																													
	WDI-GWM 22					WDI-GWM 23					WDI-GWM 24					WDI-GMW 26					WDI-GMW 27					WDI-GMW 28				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
VOLATILES (Continued) (µg/L, unless noted)																														
Methyl isobutyl ketone	<4	<4				<4	<4				<4	<4				<4	<4				<4	<4				<4	<4			
Methylene chloride	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20
Trichloroethene	3.3	<0.5	<2	2.3	2.7	0.65	<0.5	<2	<2	<2	1.3	<0.5	3.4	3.8	2.6	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Tetrachloroethene	4.3	5.3	5.1	4.3	2.6	0.56	<0.5	<2	<2	<2	13	30	38	35	22	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Toluene			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2			<2	<2	<2
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
cis-1,2-Dichloroethene	0.59	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5				<0.5	<0.5			
cis-1,3-Dichloropropene	<0-5	<0.5	<2	<2	<2	<0-5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
trans-1,2-Dichloroethene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
trans-1,3-Dichloropropene	<0.5	<0.5	<2	<2	<2	<0 5	<0 5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2

94-256/Rpts/AnGrWaMo/Tbls&Figs (2/26/99/cy)

(1) Dissolved Metals.

(2) September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TABLE 4.6

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-29 THROUGH GMW-31
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[3]														
	WDI-GWM 29					WDI-GWM 30					WDI-GWM 31				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
METALS [2] (mg/L, unless noted)															
Arsenic	0 006	<0 002	<0 005	<0 005	<0 005	<0 002	<0 002	<0 005	<0 005	<0 005	<0 002	<0 002	<0 005	<0 005	<0 005
Antimony	<0 1	<0 1	<0 01	<0 01	<0 01	<0 1	<0 1	<0 01	<0 01	<0 01	<0 1	<0 1	<0 01	<0 01	<0 01
Barium	0 053	0 024	0 021	0 023	0 023	0 037	0 034	0 032	0 033	0 034	0 033	0 032	0 03	0 028	0 03
Beryllium	<0 001	<0 001	<0 002	<0 002	<0 002	<0 001	<0 001	<0 002	<0 002	<0 002	<0 001	<0 001	<0 002	<0 002	<0 002
Cadmium	0 012	<0 001	<0 005	<0 005	<0 005	<0 001	<0 001	<0 005	<0 005	<0 005	<0 001	<0 001	<0 005	<0 005	<0 005
Chromium	0 018	<0 01	<0 005	<0 005	<0 005	<0 01	<0 01	<0 005	<0 005	<0 005	<0 01	<0 01	<0 005	<0 005	<0 005
Cobalt	<0 04	<0 04	<0 01	<0 01	<0 01	<0 04	<0 04	<0 01	<0 01	<0 01	<0 04	<0 04	<0 01	<0 01	<0 01
Copper	0 02	<0 02				<0 02	<0 02				<0 02	<0 02			
Lead	0 0051	0 009	<0 005	<0 005	<0 005	<0 002	0 0021	<0 005	<0 005	<0 005	<0 002	0 0046	<0 005	<0 005	<0 005
Magnesium			70	71	84			25	28	28			78	76	77
Mercury	<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	<0 02	<0 02				<0 02	<0 02				<0 02	<0 02			
Nickel	<0 04	<0 04	<0 02	<0 02	<0 01	<0 04	<0 04	<0 02	<0 02	<0 01	<0 04	<0 04	<0 02	<0 01	<0 01
Selenium	0 022	0 02	<0 005	0 038	0 043	0 023	0 021	0 027	0 028	0 029	0 026	0 014	0 039	0 036	0 041
Silver	<0 01	<0 01				<0 01	<0 01				<0 01	<0 01			
Thallium	<0 07	<0 07	<0 005	<0 005	<0 005	<0 07	<0 07	<0 005	<0 005	<0 005	<0 07	<0 07	<0 005	<0 005	<0 005
Vanadium	<0 04	<0 04	<0 01	<0 01	<0 01	<0 04	<0 04	<0 01	<0 01	<0 01	<0 04	<0 04	<0 01	<0 01	<0 01
Zinc	0 021	<0 01	<0 02	0 037	<0 02	0 017	<0 01	<0 02	<0 02	<0 02	<0 01	<0 01	<0 02	<0 02	0 033
Aluminum	2 5	<0 1	<0 05	<0 05	0 07	<0 1	<0 1	<0 05	<0 05	<0 05	0 17	<0 1	0 11	<0 05	0 11
Calcium	260	250	230	230	230	94	97	93	91	90	270	290	270	250	260
Iron	3 5	0 092	<0 02	<0 02	<0 02	<0 04	<0 04	<0 02	<0 02	<0 02	0 53	<0 04	<0 02	<0 02	0 062
SEMIVOLATILES (µg/L, unless noted)															
1,2,4-Trichlorobenzene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,2-Dichlorobenzene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,2 Diphenylhydrazine	<5	<5				<5	<5				<5	<5			
1,3-Dichlorobenzene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
1,4 Dichlorobenzene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,4 5-Trichlorophenol	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2,4,6-Trichlorophenol	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2,4-Dichlorophenol	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,4-Dimethylphenol	<5	<5	<100	<100		<5	<5	<100	<100		<5	<5	<100	<100	
Benzo(k)fluoranthene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzyl Alcohol	<10	<10				<10	<10				<10	<10			
Benzoic acid	<50	<50				<50	<50				<50	<50			
Butylbenzylphthalate,	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Chrysene	<5	<5			<10	<5	<5			<10	<5	<5			<10
Di N butyl phthalate			<20	<20	<20			<20	<20	<20			<20	<20	<20
Di-n-octylphthalate	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40
Dibenzo(a,h)anthracene	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Dibenzofuran	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10

(1) Dissolved Metals

(2) September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting However, primary site COCs are provided in the table

TABLE 4.6

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-29 THROUGH GMW-31
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[2]														
	WDI-GWM 29					WDI-GWM 30					WDI-GWM 31				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
SEMIVOLATILES (µg/L, unless noted)															
Dibutylphthalate	<10	<10				<10	<10				13	<10			
Diethylphthalate	<10	<10				<10	<10				<10	<10			
Dimethylphthalate	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Fluoranthene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Fluorene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Hexachlorobenzene	<5	<5				<5	<5				<5	<5			
Hexachlorobutadiene	<5	<5				<5	<5				<5	<5			
Hexachlorocyclopentadiene	<10	<10				<10	<10				<10	<10			
Hexachloroethane	<5	<5				<5	<5				<5	<5			
Indeno(1,2,3c,d)pyrene	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
Isophorone	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
N-Nitrosodimethylamine	<5	<5	<10	<10		<5	<5	<10	<10		<5	<5	<10	<10	
N-Nitrosodiphenylamine,	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
N-Nitrosodi-n-propylamine	<5	<5			<10	<5	<5			<10	<5	<5			<10
Nitrobenzene	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40	<5	<5	<40	<40	<40
Naphthalene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Phenanthrene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Phenol			<10	<10	<10		<5	<10	<10	<10	<5	<5	<10	<10	<10
Pentachlorophenol			<40	<40	<40		<10	<40	<40	<40	<10	<10	<40	<40	<40
2,4-Dinitrophenol	<10	<10			<100	<10	<10			<100	<10	<10			<100
2,4-Dinitrotoluene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2,6-Dinitrotoluene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Butanone			<10	<10	<5			<10	<10	<5			<10	<10	<5
2-Chloronaphthalene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Chlorophenol	<5	<5				<5	<5				<5	<5			
2-Methyl-4,6-dinitrophenol	<10	<10				<10	<10				<10	<10			
2-Methylnaphthalene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Methylphenol (o-Cresol)	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
2-Nitroaniline	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
2-Nitrophenol	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
3,3'-Dichlorobenzidine	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40	<10	<10	<40	<40	<40
3-Nitroaniline	<5	<5				<5	<5				<5	<5			
4,6-Dinitro-2-methylphenol			<40	<40	<40			<40	<40	<40			<40	<40	<40
4-Bromophenylphenylether	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Chloro-3-methylphenol	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20	<5	<5	<20	<20	<20
4-Chloroaniline	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Chlorophenylphenylether	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Methylphenol (p-Cresol)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Nitroaniline	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100	<5	<5	<100	<100	<100
4-Nitrophenol	<10	<10				<10	<10				<10	<10			

[1] Dissolved Metals.

[2] September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

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TABLE 4.6

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-29 THROUGH GMW-31
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[1,2]														
	WDI-GWM 29					WDI-GWM 30					WDI-GWM 31				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
SEMIVOLATILES (Continued) (µg/L, unless noted)															
Acenaphthene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Acenaphthylene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Aniline	<5	<5				<5	<5				<5	<5			
Anthracene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzidine	<100	<100				<100	<100				<100	<100			
Benzo(a)anthracene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(a)pyrene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(b)fluoranthene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Benzo(g h i)perylene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Pyrene	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Pyridine	<10	<10				<10	<10				<10	<10			
Bis(2-chloroethox)methane	<5	<5				<5	<5				<5	<5			
Bis(2-chloroethyl) ether	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Bis(2-chloroisopropyl)ether	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
Bis(2-ethylhexyl)phthalate	<10	<10	<100	<100	<100	<10	<10	<100	<100	<100	10	<10	<100	<100	<100
1,1,1-Trichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1,2-Trichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1-Dichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,1-Dichloroethene	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
1,2-Dibromoethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,2-Dichloroethane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
1,2-Dichloropropane	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
2-Chloroethylvinylether	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5	<4	<4	<5	<5	<5
2-Hexanone	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10	<5	<5	<10	<10	<10
4-Methyl-2-pentanone			<5	<5	<5			<5	<5	<5			<5	<5	<5
VOLATILES (µg/L, unless noted)															
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	<0.5	<0.5	<2	<2		<0.5	<0.5	<2	<2		<0.5	<0.5	<2	<2	
Bromomethane	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Benzene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Bromoform	<0.5	<0.5	<5	<5	<2	<0.5	<0.5	<5	<5	<2	<0.5	<0.5	<5	<5	<2
Carbon Tetrachloride	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Chloroethane	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
Chloroform	<0.5	<0.5	<2	<2	<5	<0.5	<0.5	<2	<2	<5	<0.5	<0.5	<2	<2	<5
Chloromethane	<1	<1	<5	<5	<2	<1	<1	<5	<5	<2	<1	<1	<5	<5	<2
Carbon Disulfide	<2	<2	<5	<5	<10	<2	<2	<5	<5	<10	<2	<2	<5	<5	<10
Dibromochloromethane	<0.5	<0.5				<0.5	<0.5				<0.5	<0.5			
Ethylbenzene			<2	<2	<2			<2	<2	<2			<2	<2	<2
Methyl ethyl ketone	<10	<10				<10	<10				<10	<10			

(1) Dissolved Metals.

(2) September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TABLE 4.6

GROUND WATER LABORATORY ANALYTICAL RESULTS FOR GMW-29 THROUGH GMW-31
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETERS	WELL IDENTIFICATION, SAMPLING DATES AND ANALYTICAL RESULTS[2]														
	WDI-GWM 29					WDI-GWM 30					WDI-GWM 31				
	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98	09/97	02/98	04/98	07/98	10/98
VOLATILES (Continued) (µg/L, unless noted)															
Methyl isobutyl ketone	<4	<4				<4	<4				<4	<4			
Methylene chloride	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20	<2	<2	<20	<20	<20
Trichloroethene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Tetrachloroethene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
Toluene			<2	<2	<2			<2	<2	<2			<2	<2	<2
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5
cis-1,2-Dichloroethene	<0.5	<0.5				<0.5	<0.5				<0.5	<0.5			
cis-1,3-Dichloropropene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
trans-1,2-Dichloroethene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2
trans-1,3-Dichloropropene	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2	<0.5	<0.5	<2	<2	<2

94-256/Rpts/AnGrWaMo/Tbls&Figs (2/26/99/ey)

(1) Dissolved Metals.

(2) September 1997 and February 1998 laboratory analysis were performed by VOC Analytical located in Glendale, California. The remaining sampling episodes were performed by Del Mar Analytical located in Irvine, California.

☐ = Parameter not analyzed during quarterly monitoring due to specific laboratory reporting. However, primary site COCs are provided in the table.

TABLE 5.1

DATA QUALITY OBJECTIVE DEVELOPMENT PROCESS WASTE DISPOSAL, INC. SUPERFUND SITE

ACTIVITY	GROUND WATER MONITORING
Objectives	See Workplan Section 3.2.3
Intended Data Use	Confirm that the site has significantly impacted ground water
Required Analytical Methods of DQO Levels	VOCs (8260) Total and Dissolved Metals (6010/7000) SVOCs (8270)
	DQO Level 3
Contaminants of Concern	VOCs Metals SVOCs Pesticides
Required Detection Levels	VOCs(1) Metals(1) SVOCs(1) Pesticides
Action Levels/ Regulatory Standards	Maximum Contaminant Levels (MCL)
Sampling Points	• Existing ground water wells • New upgradient wells • Northwest corner of site (offsite)
Critical Sampling	• New upgradient well to be installed

94-256/Rpt/AnGrWaMo (2/26/99/ey)

(1) Required detection limits are provided in Table B.4 of the Revised QAPP.

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TABLE 5.2

FIELD COLLECTION QUALITY ASSURANCE REQUIREMENTS
WASTE DISPOSAL, INC. SUPERFUND SITE

ANALYSIS	TRIP BLANK	FIELD BLANK(1)	FIELD DUPLICATE(2)	MATRIX SPIKE AND MATRIX SPIKE DUPLICATES(3)
Ground Water Samples				
Organics(4)	1 per 20 samples or 1 per sample shipment, whichever is greater	1 per 20 samples or 1 per sample shipment, whichever is greater	1 per 10 samples or 1 per sample shipment, whichever is greater	1 per 20 samples or 1 per sample shipment, whichever is greater
Inorganics(5)	None	1 per 20 samples or 1 per sample shipment, whichever is greater	1 per 10 samples or 1 per sample shipment, whichever is greater	1 per 20 samples or 1 per sample shipment, whichever is greater

94-256/Rpts/AnGrWaMo (2/26/99/ey)

(1) Field blanks will be collected during ground water and surface water sampling procedures only when nondedicated sampling equipment is used. Field blanks require an additional sample volume (see Tables B.3 and B.4 of the QAPP). Note that field blanks will be labeled so the laboratory cannot determine that the sample is a field blank.
(2) Field duplicates require an additional sample volume (see Tables B.3 and B.4 of the QAPP). Note that field duplicates will be labeled so the laboratory cannot determine that the sample is a field duplicate. Field duplicates will be collected as split samples from the actual sample collected.
(3) MS/MSD samples require two additional sample volumes for organic analysis. Matrix spike samples require an additional sample volume for inorganic analyses (see Table B.3 of the QAPP).
(4) Includes VOCs, SVOCs and pesticides/PCBs.
(5) Includes metals.

TABLE 5.3

LABORATORY QUALITY ASSURANCE REQUIREMENTS
GROUND WATER ANALYSIS
WASTE DISPOSAL, INC. SUPERFUND SITE

PARAMETER GROUP	CALIBRATION METHOD	CALIBRATION/QC SAMPLING FREQUENCY	ACCEPTANCE CRITERIA
Metals (Method 6010A, 7062, 7421, 7470, 7740)	Calibration Curve	At start of analysis or when continuing calibration verification standard is out of control.	Per instrument operating manual
	Initial Calibration Verification Standard	After calibration and before sample analysis	±10 percent of true value
	Calibration Blank	Every 10 samples	<Method reporting limit
	Continuing Calibration Verification Standard	Every 10 samples	±10 percent of expected value
	Instrument Blank	1 every 10 samples	<Method reporting limit
	Method Blank	1 every 20 samples	<Method reporting limit
	Laboratory Duplicate	1 every 20 samples	Precision (%) See Table B.3 Accuracy (%) See Table B.3 Completeness (%) See Table B.3
	MS/MSD	1 every 20 samples	80 to 120 percent recovery
	Laboratory Control Sample	1 every 20 samples	80 to 120 percent recovery
Volatile Organic Compounds (Method 8260)	Calibration Curve	At start of analysis or when continuing calibration verification standard is out of control	20 percent relative standard deviation if average response factor is used.
	Initial Calibration Verification Standard	After calibration and before sample analysis	±15 percent of true value
	Calibration Blank	Every 10 samples	<Method reporting limit
	Continuing Calibration Verification Standard	Every 10 samples	±15 percent of true value
	Instrument Blank	1 every 10 samples	<Method reporting limit
	Method Blank	1 every 20 samples	<Method reporting limit
	MS/MSD and LCS	1 every 20 samples	Precision (%) 30 RPD Accuracy (%) 50 to 125 percent recovery Completeness (%) 90 percent recovery
	Surrogate Compound	Every sample	4-bromofluorobenzene 86 to 115 percent recovery α, α, α-trifluorotoluene 86 to 115 percent recovery Dibromofluoromethane 86 to 115 percent recovery

NOTE: MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample.
RPD = Relative Percent Difference.

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TABLE 5.3

LABORATORY QUALITY ASSURANCE REQUIREMENTS
GROUND WATER ANALYSIS
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

PARAMETER GROUP	CALIBRATION METHOD	CALIBRATION/QC SAMPLING FREQUENCY	ACCEPTANCE CRITERIA
Semivolatile Organic Compounds (Method 8270)	Calibration Curve (5 point)	At start of analysis or when continuing calibration verification standard is out of control	Per method
	Initial Calibration Verification Standard	After preparation of new calibration verification standards. Standard is from an independent.	±15 percent of expected value or within limits set by method
	Calibration Blank	Every 10 samples	<Method reporting limit
	Continuing Calibration Verification Standard	Every 10 samples	±15 percent of expected value or within limits set by method
	Method Blank	1 every 20 samples	<Method reporting limit
	MS/MSD and LCS	1 every 20 samples	Precision (%) 30 RPD Accuracy (%) 50 to 125 percent recovery Completeness (%) 90 percent recovery
	Surrogate Compound	Every sample	p-Terphenyl 33 to 141 percent recovery 2,4,6-Tribromophenol 10 to 123 percent recovery Nitrobenzene-d_5 35 to 114 percent recovery 2-Fluorobiphenyl 43 to 116 percent recovery Phenol-d_6 10 to 94 percent recovery 2-Fluorophenol 21 to 100 percent recovery
Pesticides/PCBs (Method 8080)	Calibration Curve (5 point)	At start of analysis or when continuing calibration verification standard is out of control	Per method
	Initial Calibration Verification Standard	After preparation of new calibration verification standards. Standard is from an independent.	±15 percent of expected value or within limits set by method
	Calibration Blank	Every 10 samples	<Method reporting limit
	Continuing Calibration Verification Standard	Every 10 samples	±15 percent of expected value or within limits set by method
	Method Blank	1 every 20 samples	<Method reporting limit
	MS/MSD and LCS	1 every 20 samples	Precision (%) 30 RPD Accuracy (%) 50 to 125 percent recovery Completeness (%) 90 percent recovery
	Surrogate Compound	Every sample	Tetrachloro-m-xylene or decachlorobiphenyl 26 to 121 percent recovery

94-2%/Rpt/AnGrWaMo (2/26/99/cy)

NOTE: MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample.
RPD = Relative Percent Difference.

TRC

TABLE 6.1

PROPOSED MODIFICATIONS TO THE GROUND WATER MONITORING PROGRAM WASTE DISPOSAL, INC. SUPERFUND SITE

WELL I.D.(1)	CURRENT SAMPLING REQUIREMENTS		PROPOSED SAMPLING REQUIREMENTS		RATIONALE FOR MODIFICATIONS(4)
	Sampling Frequency(2)	Laboratory Analysis	Sampling Frequency(2)	Laboratory Analysis(3)	
GW-01, -02	Quarterly (1, 2, 3, 4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Quarterly (1, 2, 3, 4)	EPA Method 8260A (Volatiles) Metals (Dissolved)	• GW-01 and -02 are considered to be upgradient wells; VOCs and metals should be analyzed quarterly. • PCE has been detected in GW-01 since February 1998. • PCE has been detected in GW-02 since July 1998.
			Semiannually (2, 4)	EPA Method 8270	• No significant changes in GW-01 and GW-02 since September 1997.
GW-03, -04, -31	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Semiannually (2, 4)	EPA Method 8260A (Volatiles) EPA Method 8270 Metals (Dissolved)	• GW-03, -04 and -31 are considered to be located upgradient and outside of the reservoir boundary; VOCs and metals should be analyzed semiannually. • No significant changes in concentrations since September 1997.
GW-05, -06	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Quarterly (1, 2, 3, 4)	EPA Method 8260A (Volatiles) Metals (Dissolved)	• GW-05 and -06 are considered to be located crossgradient to the reservoir boundary; VOCs and metals should be analyzed quarterly.
			Semiannually (2, 4)	EPA Method 8270	• No significant changes in concentration since September 1997.

(1) Deep Well Numbers 12, 17, 20 and 25 were not drilled because deep penetration at ground water was not expected.
(2) Number within ( ) identifies the quarter during the year. First Quarter (1): January, February, March; Second Quarter (2): April, May, June; Third Quarter (3): July, August, September; Fourth Quarter (4): October, November, December.
(3) Chloro vinyl ether (CVE) has historically been below detection limit at all monitoring wells. Therefore, it will no longer be analyzed during quarterly monitoring.
(4) Metals (total) will no longer be analyzed during quarterly monitoring.

TRC

TABLE 6.1

PROPOSED MODIFICATIONS TO THE GROUND WATER MONITORING PROGRAM WASTE DISPOSAL, INC. SUPERFUND SITE (Continued)

WELL I.D.[1]	CURRENT SAMPLING REQUIREMENTS		PROPOSED SAMPLING REQUIREMENTS		RATIONALE FOR MODIFICATIONS[4]
	Sampling Frequency[2]	Laboratory Analysis	Sampling Frequency[2]	Laboratory Analysis[3]	
GW-07	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Semiannually (2, 4)	EPA Method 8260A (Volatiles) EPA Method 8270 Metals (Dissolved)	• GW-07 is considered to be located crossgradient to the reservoir boundary and to GW-06. Ground water detections would be identified in GW-06 during quarterly monitoring and therefore should be sampled semiannually. • No significant changes in concentrations since September 1997.
GW-08	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Quarterly (1, 2, 3, 4)	EPA Method 8260A (Volatiles) Metals (Dissolved)	• GW-08 is considered to be located crossgradient and outside the reservoir boundary; VOCs and metals should be sampled quarterly.
			Semiannually (2, 4)	EPA Method 8270	• No significant changes in concentration since September 1997.
GW-09	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Quarterly (1, 2, 3, 4)	EPA Method 8260A (Volatiles) Metals (Dissolved)	• GW-09 is considered to be located crossgradient to the reservoir boundary; VOCs and metals should be analyzed quarterly. • PCE has been detected since February 1998.
			Semiannually (2, 4)	EPA Method 8270	• No significant changes in concentrations since September 1997.

(1) Deep Well Numbers 12, 17, 20 and 25 were not drilled because deep penetration at ground water was not expected.
(2) Number within ( ) identifies the quarter during the year. First Quarter (1): January, February, March; Second Quarter (2): April, May, June; Third Quarter (3): July, August, September; Fourth Quarter (4): October, November, December.
(3) Chloro vinyl ether (CVE) has historically been below detection limit at all monitoring wells. Therefore, it will no longer be analyzed during quarterly monitoring.
(4) Metals (Total) will no longer be analyzed during quarterly monitoring.

TRC

TABLE 6.1

PROPOSED MODIFICATIONS TO THE GROUND WATER MONITORING PROGRAM WASTE DISPOSAL, INC. SUPERFUND SITE (Continued)

WELL I.D.(1)	CURRENT SAMPLING REQUIREMENTS		PROPOSED SAMPLING REQUIREMENTS		RATIONALE FOR MODIFICATIONS(4)
	Sampling Frequency(2)	Laboratory Analysis	Sampling Frequency(2)	Laboratory Analysis(3)	
GW-10	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Semiannually (2, 4)	EPA Method 8260A (Volatiles) EPA Method 8270 Metals (Dissolved)	• GW-10 is considered to be downgradient of the reservoir boundary, however it is a deep ground water monitoring well. VOCs, metals and semivolatiles should be analyzed semiannually. • No significant changes in concentrations since September 1997. • GW-11 is located adjacent to GW-10 and is a shallow ground water monitoring well.
GW-11	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Quarterly (1, 2, 3, 4)	EPA Method 8260A (Volatiles) Metals (Dissolved)	• GW-11 is considered to be downgradient of the reservoir boundary and is shallow ground water monitoring well; VOCs and metals should be analyzed quarterly. • Elevated concentrations of PCE and TCE have been detected since September 1997.
			Semiannually (2, 4)	EPA Method 8270	• No significant changes in concentrations since September 1997.
GW-13, -14, -15, -19, -22	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Quarterly (1, 2, 3, 4)	EPA Method 8260A (Volatiles) Metals (Dissolved)	• GW-13, -14, -15, -19 and -22 are considered to be located downgradient of the reservoir boundary and are shallow ground water monitoring wells; VOCs and metals should be analyzed quarterly. • GW-22 has had PCE and TCE concentrations.
			Semiannually (2, 4)	EPA Method 8270 Metals (Dissolved)	• No significant changes in concentration since September 1997.

(1) Deep Well Numbers 12, 17, 20 and 25 were not drilled because deep penetration at ground water was not expected.
(2) Number within ( ) identifies the quarter during the year. First Quarter (1): January, February, March; Second Quarter (2): April, May, June; Third Quarter (3): July, August, September; Fourth Quarter (4): October, November, December.
(3) Chloro vinyl ether (CVE) has historically been below detection limit at all monitoring wells. Therefore, it will no longer be analyzed during quarterly monitoring.
(4) Metals (Total) will no longer be analyzed during quarterly monitoring.

TRC

TABLE 6.1

PROPOSED MODIFICATIONS TO THE GROUND WATER MONITORING PROGRAM WASTE DISPOSAL, INC. SUPERFUND SITE (Continued)

WELL I.D.(1)	CURRENT SAMPLING REQUIREMENTS		PROPOSED SAMPLING REQUIREMENTS		RATIONALE FOR MODIFICATIONS(4)
	Sampling Frequency(2)	Laboratory Analysis	Sampling Frequency(2)	Laboratory Analysis(3)	
GW-16	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Semiannually (2, 4)	EPA Method 8260A (Volatiles) EPA Method 8270 Metals (Dissolved)	• GW-16 is located adjacent to GW-15 and is our intermediate ground water monitoring well. • No significant changes in concentrations since September 1997.
GW-18	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Semiannually (2, 4)	EPA Method 8260A (Volatiles) EPA Method 8270 Metals (Dissolved)	• GW-18 is considered to be downgradient of the reservoir boundary, however it is an intermediate ground water monitoring well. VOCs, metals and semi-volatiles should be analyzed semiannually. • No significant changes in concentrations since September 1997.
GW-21	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Quarterly (1, 2, 3, 4)	EPA Method 8260A (Volatiles) Metals (Dissolved)	• GW-21 is considered to be located crossgradient from the reservoir boundary and adjacent to the Brothers building; VOCs and metals should be analyzed quarterly.
			Semiannually (2, 4)	EPA Method 8270	• No significant changes in concentrations since September 1997.

(1) Deep Well Numbers 12, 17, 20 and 25 were not drilled because deep penetration at ground water was not expected.
(2) Number within ( ) identifies the quarter during the year. First Quarter (1): January, February, March; Second Quarter (2): April, May, June; Third Quarter (3): July, August, September; Fourth Quarter (4): October, November, December.
(3) Chloro vinyl ether (CVE) has historically been below detection limit at all monitoring wells. Therefore, it will no longer be analyzed during quarterly monitoring.
(4) Metals (Total) will no longer be analyzed during quarterly monitoring.

TRC

TABLE 6.1

PROPOSED MODIFICATIONS TO THE GROUND WATER MONITORING PROGRAM WASTE DISPOSAL, INC. SUPERFUND SITE (Continued)

WELL I.D.(1)	CURRENT SAMPLING REQUIREMENTS		PROPOSED SAMPLING REQUIREMENTS		RATIONALE FOR MODIFICATIONS(4)
	Sampling Frequency(2)	Laboratory Analysis	Sampling Frequency(2)	Laboratory Analysis(3)	
GW-23	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Semiannually (2, 4)	EPA Method 8260A (Volatiles) EPA Method 8270 Metals (Dissolved)	• GW-13 is upgradient and a shallow ground water monitoring well, therefore it would detect elevated concentrations prior to GW-23 and -24. • No significant changes in concentrations since September 1987.
GW-24	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Quarterly (1, 2, 3, 4)	EPA Method 8260A (Volatiles) Metals (Dissolved)	• GW-24 is considered to be downgradient of the reservoir boundary, however it is an intermediate ground water monitoring well. VOCs and metals should be anzlyed quarterly.
			Semiannually (2, 4)	EPA Method 8270	• No significant changes in concentrations since September 1997.

(1) Deep Well Numbers 12, 17, 20 and 25 were not drilled because deep penetration at ground water was not expected.
(2) Number within ( ) identifies the quarter during the year. First Quarter (1): January, February, March; Second Quarter (2): April, May, June; Third Quarter (3): July, August, September; Fourth Quarter (4): October, November, December.
(3) Chloro vinyl ether (CVE) has historically been below detection limit at all monitoring wells. Therefore, it will no longer be analyzed during quarterly monitoring.
(4) Metals (Total) will no longer be analyzed during quarterly monitoring.

TRC

TABLE 6.1

PROPOSED MODIFICATIONS TO THE GROUND WATER MONITORING PROGRAM WASTE DISPOSAL, INC. SUPERFUND SITE (Continued)

WELL I.D.(1)	CURRENT SAMPLING REQUIREMENTS		PROPOSED SAMPLING REQUIREMENTS		RATIONALE FOR MODIFICATIONS(4)
	Sampling Frequency(2)	Laboratory Analysis	Sampling Frequency(2)	Laboratory Analysis(3)	
GW-26, -27	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Semiannually (2, 4)	EPA Method 8260A (Volatiles) EPA Method 8270 Metals (Dissolved)	• GW-26, -27 are considered to be downgradient monitoring wells. GW-14, -15 and -19 would detect elevated concentrations prior to GW-26 and -27. • No significant changes in concentrations since September 1997.
GW-28	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Quarterly (1, 2, 3, 4)	EPA Method 8260A (Volatiles) Metals (Dissolved)	• GW-28 is considered to be downgradient of the reservoir boundary. VOCs and metals should be analyzed quarterly.
			Semiannually (2, 4)	EPA Method 8270	• No significant changes in concentrations since September 1997.
GW-29, -30	Quarterly (1,2,3,4)	EPA Method 8260A (Volatiles) EPA Method 8260A (CVE) EPA Method 8270 (Semivolatiles) Metals (Total and Dissolved)	Semiannually (2, 4)	EPA Method 8260A (Volatiles) EPA Method 8270 Metals (Dissolved)	• GW-29 and -30 are considered to be located downgradient of the reservoir boundary and intermediate deep ground water monitoring wells. GW-18 would detect elevated concentrations prior to GW-29 and -30. • No significant changes in concentrations since September 1997.

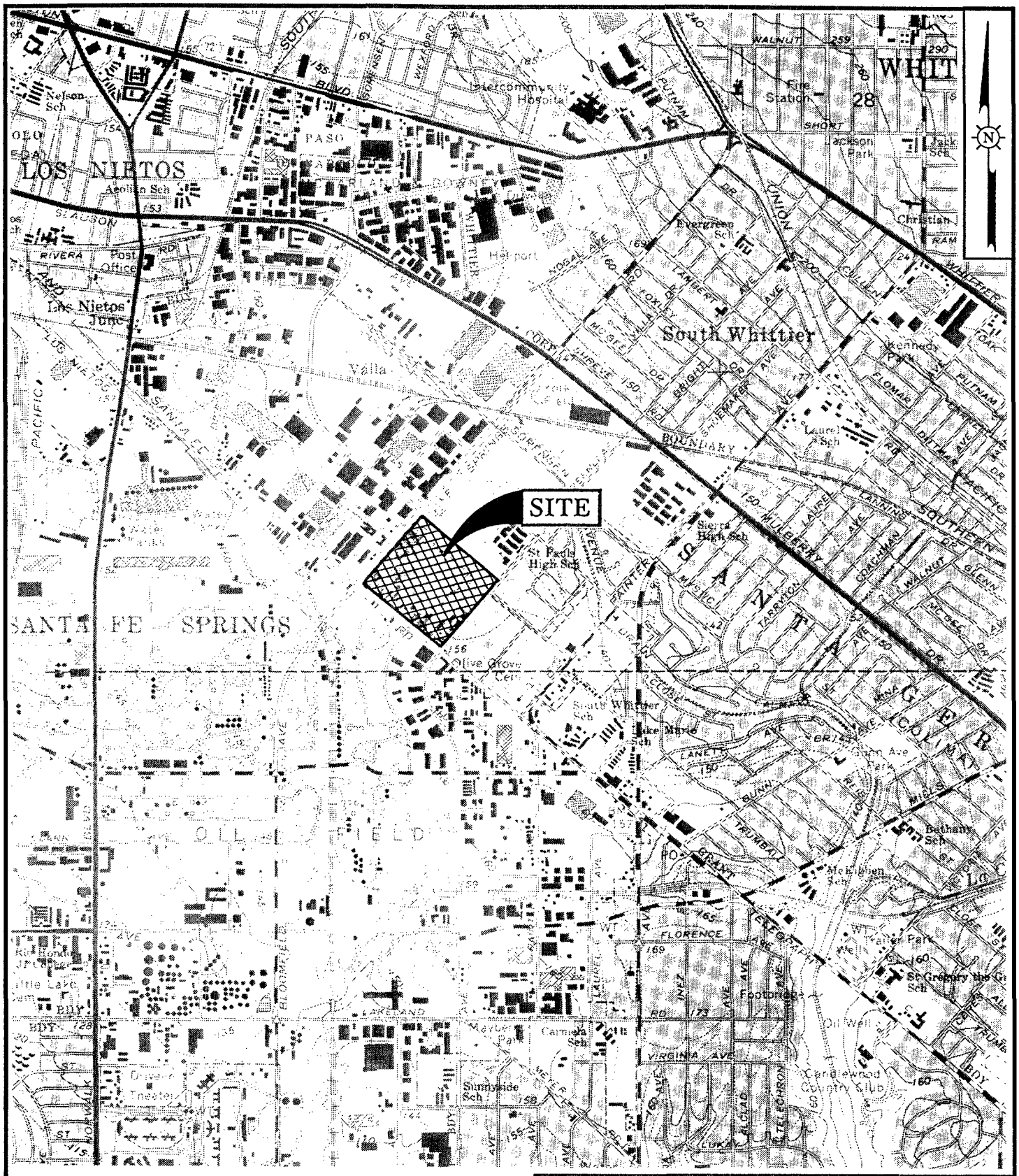
94-256/Rpts/AnGrWaMo (2/26/99/ey)

(1) Deep Well Numbers 12, 17, 20 and 25 were not drilled because deep penetration at ground water was not expected.
(2) Number within ( ) identifies the quarter during the year. First Quarter (1): January, February, March; Second Quarter (2): April, May, June; Third Quarter (3): July, August, September; Fourth Quarter (4): October, November, December.
(3) Chloro vinyl ether (CVE) has historically been below detection limit at all monitoring wells. Therefore, it will no longer be analyzed during quarterly monitoring.
(4) Metals (Total) will no longer be analyzed during quarterly monitoring.

TRC

Figures

94-256AGWR98 REV. 2/16/99



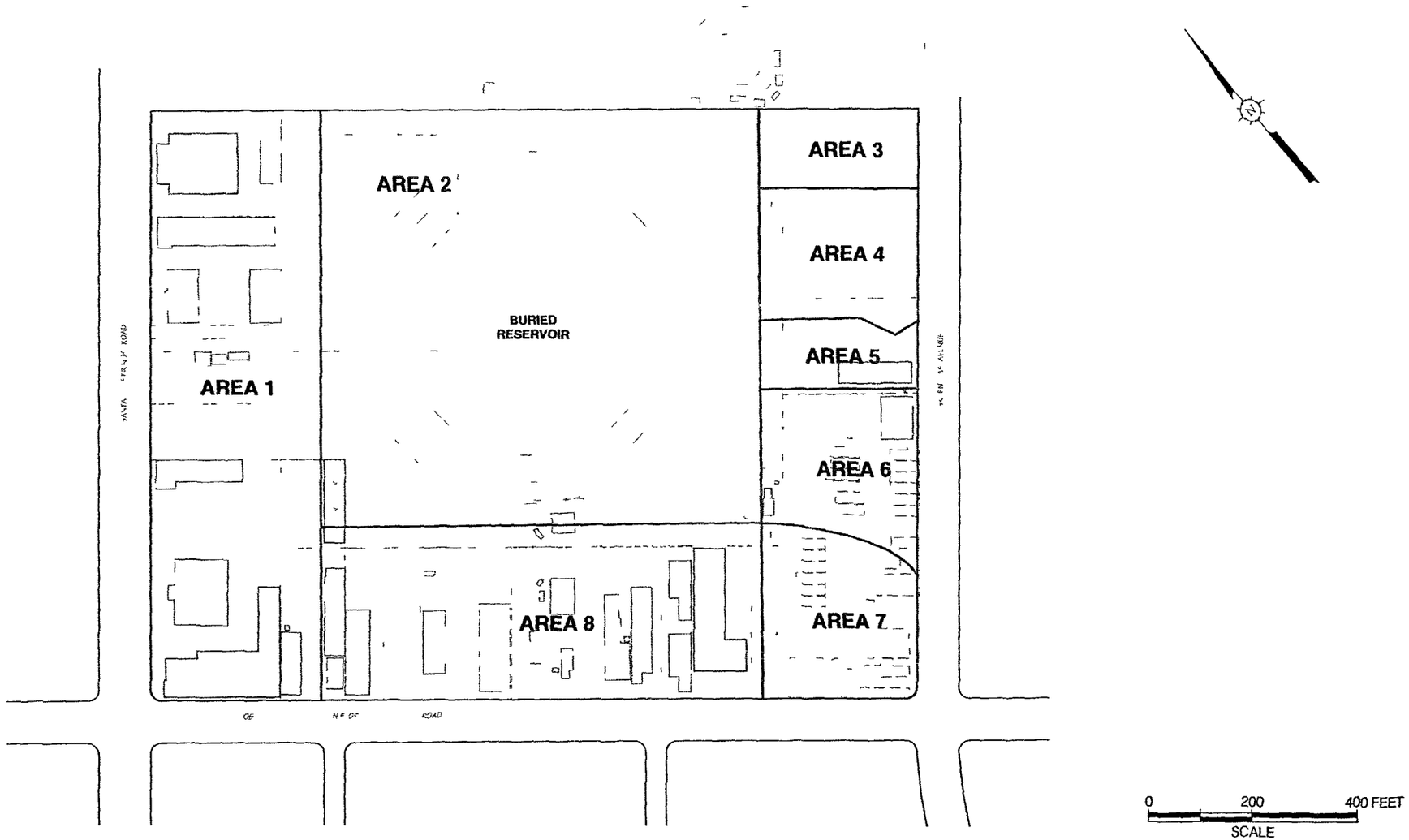
REFERENCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP OF WHITTIER, CALIFORNIA, DATED 1981.

SITE LOCATION MAP

WASTE DISPOSAL, INC.
SANTA FE SPRINGS, CALIFORNIA

TRC

FIGURE 2.1



LEGEND

SITE BOUNDARY

SITE AREA BOUNDARY

FENCE

EXISTING BUILDING/STRUCTURE

PROPERTY BOUNDARY

REFERENCE NUNEZ ENGINEERING SURVEY DRAWING NE 97187 OCT 31 1997

SITE FEATURES

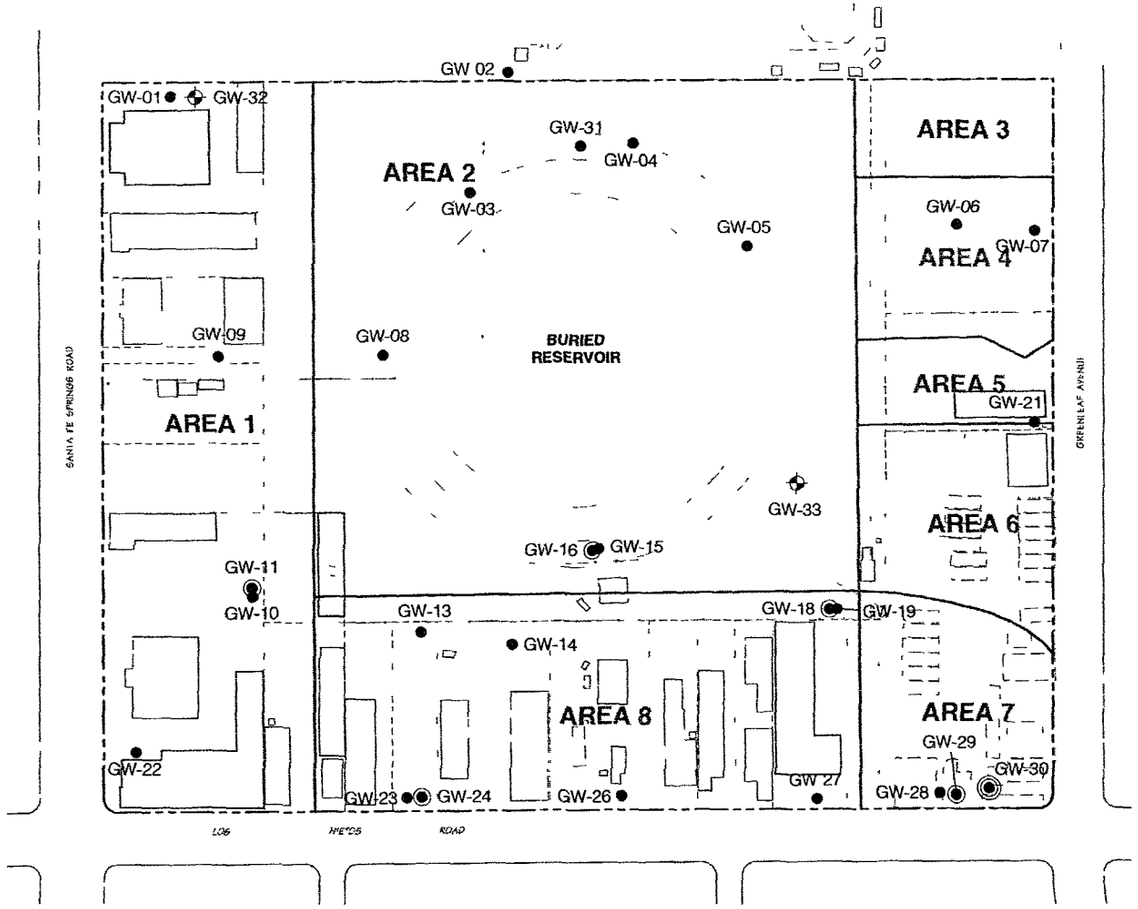
WASTE DISPOSAL INC
SANTA FE SPRINGS CALIFORNIA

TRC

FIGURE 2.2

94 256AGWR98 01 REV 02/19/99

94-256AGWR98-02 REV 02/19/99



LEGEND

- ● GW-01 SHALLOW GROUND WATER MONITORING WELL
- ◉ GW-16 INTERMEDIATE GROUND WATER MONITORING WELL
- ◎ GW-30 DEEP GROUND WATER MONITORING WELL
- ⌖ GW-32 PROPOSED MONITORING WELL
- SITE BOUNDARY
- AREA BOUNDARY
- FENCE
- EXISTING BUILDING

0 200 400 FEET
SCALE

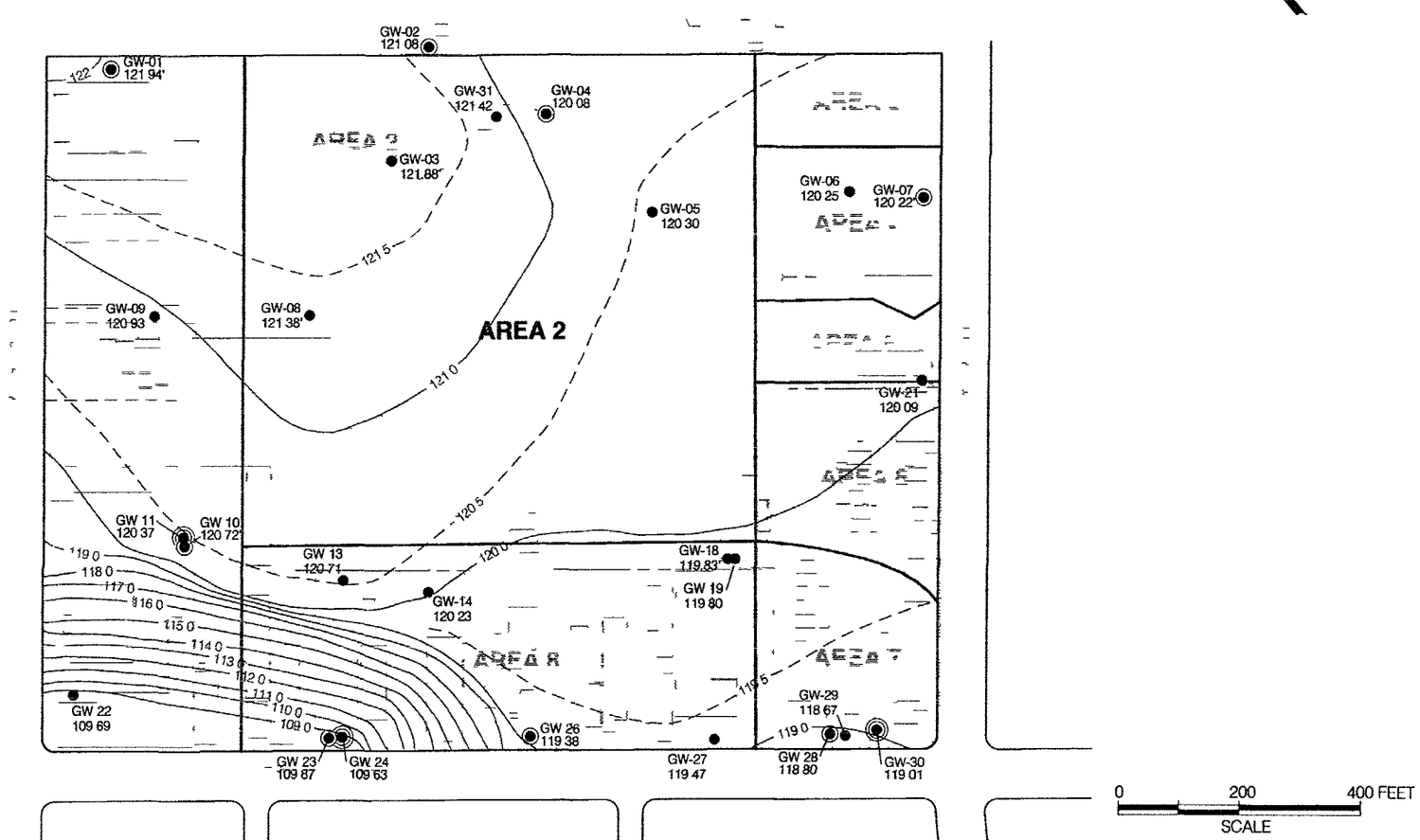
GROUND WATER MONITORING WELL LOCATIONS

WASTE DISPOSAL, INC
SANTA FE SPRINGS, CALIFORNIA

TRC

FIGURE 2.3

94-256AGWR98 03 REV 02/26/99



LEGEND

- GW-08 121 38 — GROUND WATER MONITORING WELL AND GROUND WATER ELEVATION
- GW-01 — SHALLOW GROUND WATER MONITORING WELL
- GW 11 — DEEP GROUND WATER MONITORING WELL
- SITE BOUNDARY
- AREA BOUNDARY
- FENCE
- EXISTING BUILDING
- 119 0 — GROUND WATER ELEVATION CONTOUR (JUNE 1998) (FEET ABOVE MSL)

NOTE TYPICAL GROUND WATER CONTOURS FOR GROUND WATER MONITORING PERFORMED AT THE SITE FROM SEPTEMBER 1997 THROUGH OCTOBER 1998

0 200 400 FEET
SCALE

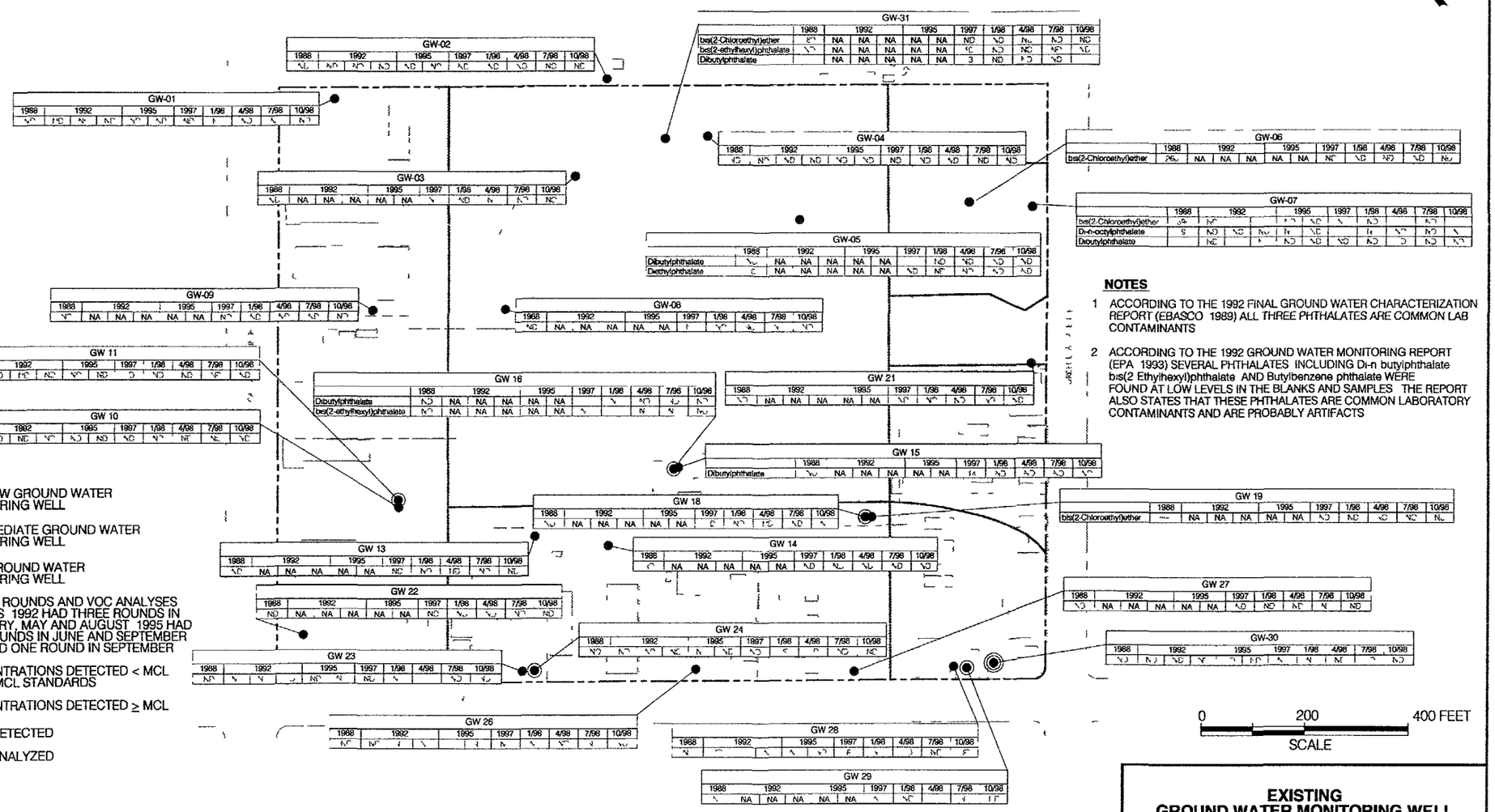
GROUND WATER SITE CONTOUR MAP
JUNE 1998

WASTE DISPOSAL INC
SANTA FE SPRINGS CALIFORNIA

TRC

FIGURE 3.1

94-256A GWR99-06 REV 02/26/99



LEGEND

- ● GW-01 SHALLOW GROUND WATER MONITORING WELL
- ◉ GW 16 INTERMEDIATE GROUND WATER MONITORING WELL
- ◉ GW-30 DEEP GROUND WATER MONITORING WELL

11/88 1992 ND 2J/ND/ND — SAMPLE ROUNDS AND VOC ANALYSES RESULTS 1992 HAD THREE ROUNDS IN FEBRUARY, MAY AND AUGUST 1995 HAD TWO ROUNDS IN JUNE AND SEPTEMBER 1997 HAD ONE ROUND IN SEPTEMBER

CONCENTRATIONS DETECTED < MCL OR NO MCL STANDARDS

15 — CONCENTRATIONS DETECTED ≥ MCL

ND = NOT DETECTED

NA = NOT ANALYZED

NOTES

1. ACCORDING TO THE 1992 FINAL GROUND WATER CHARACTERIZATION REPORT (EBASCO 1989) ALL THREE PHTHALATES ARE COMMON LAB CONTAMINANTS
2. ACCORDING TO THE 1992 GROUND WATER MONITORING REPORT (EPA 1993) SEVERAL PHTHALATES INCLUDING Di-n butylphthalate bis(2 Ethylhexyl)phthalate AND Butylbenzene phthalate WERE FOUND AT LOW LEVELS IN THE BLANKS AND SAMPLES THE REPORT ALSO STATES THAT THESE PHTHALATES ARE COMMON LABORATORY CONTAMINANTS AND ARE PROBABLY ARTIFACTS

REFERENCE BASED ON FIGURE 2 3, FINAL REMEDIAL INVESTIGATION REPORT EBASCO 1989d AND FIGURE 2 7 EPA 1992 GROUND WATER MONITORING REPORT

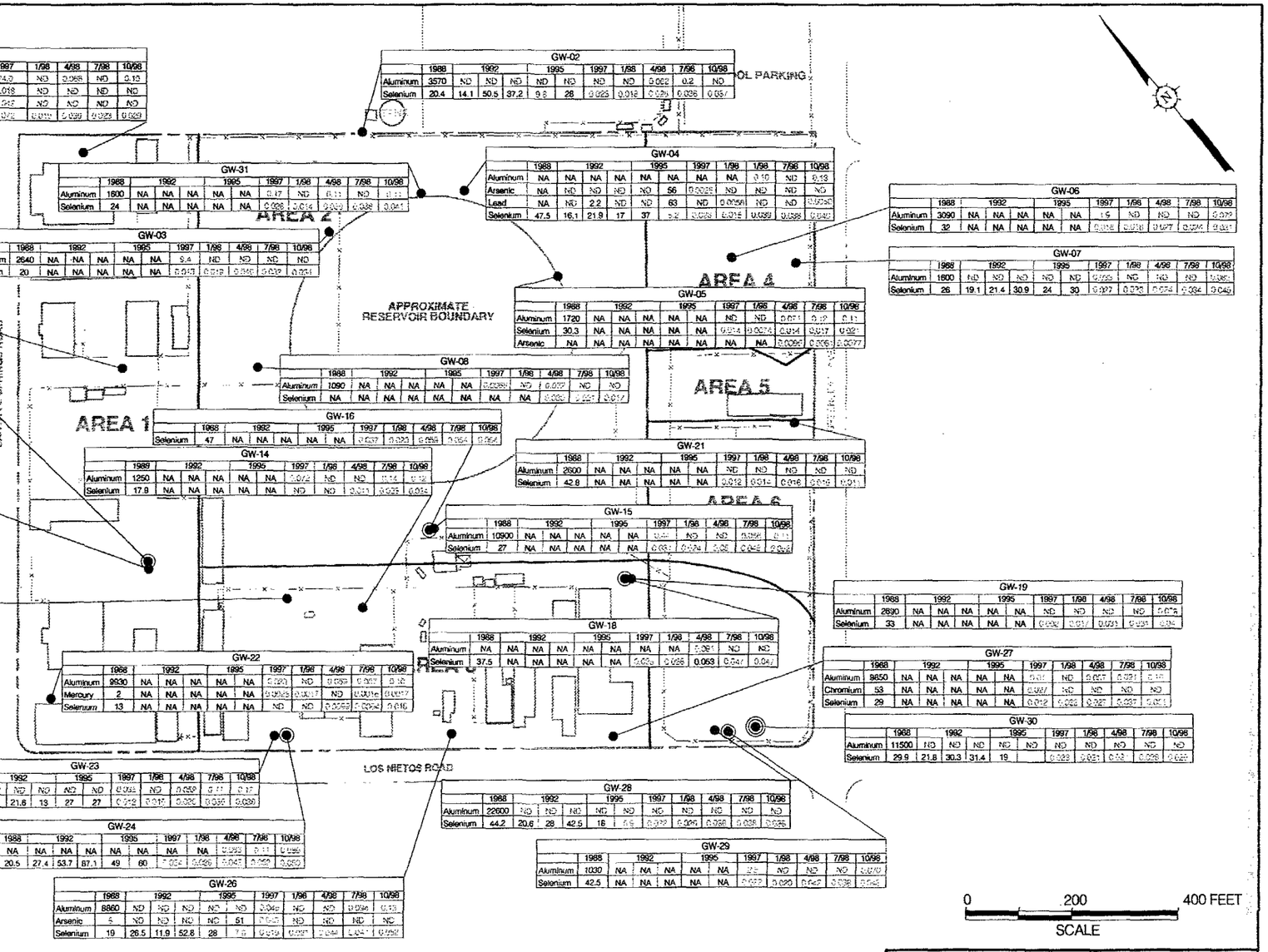
EXISTING GROUND WATER MONITORING WELL LOCATIONS AND SVOC ANALYSES RESULTS

WASTE DISPOSAL INC
SANTA FE SPRINGS CALIFORNIA

TRC

FIGURE 4 1

94-258AGWR99-05 REV. 02/26/99



GW-01	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	48400	ND	ND	ND	ND	ND	24.0	ND	0.068	ND	0.13
Arsenic	25	ND	ND	ND	ND	57	0.018	ND	ND	ND	ND
Chromium	91.3	ND	7.1	4.6	ND	ND	0.042	ND	ND	ND	ND
Selenium	80.1	33.2	46.4	67.7	12	7.3	0.026	0.031	0.039	0.023	0.029

GW-02	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	3570	ND	ND	ND	ND	ND	ND	ND	0.062	0.2	ND
Selenium	20.4	14.1	50.5	37.2	9.8	28	0.025	0.012	0.029	0.036	0.057

GW-31	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	1600	NA	NA	NA	NA	NA	0.47	ND	0.11	ND	0.11
Selenium	24	NA	NA	NA	NA	NA	0.026	0.014	0.022	0.038	0.041

GW-04	1988	1992			1995		1997	1/98	1/98	7/98	10/98
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	0.10	ND	0.13
Arsenic	NA	ND	ND	ND	ND	56	0.0025	ND	ND	ND	ND
Lead	NA	ND	2.2	ND	ND	63	ND	0.0056	ND	ND	0.0250
Selenium	47.5	16.1	21.9	17	37	9.8	0.026	0.015	0.039	0.038	0.040

GW-06	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	3090	NA	NA	NA	NA	NA	1.5	ND	ND	ND	0.072
Selenium	32	NA	NA	NA	NA	NA	0.016	0.018	0.027	0.024	0.041

GW-07	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	1600	ND	ND	ND	ND	ND	0.055	ND	ND	ND	0.061
Selenium	26	19.1	21.4	30.9	24	30	0.027	0.023	0.024	0.034	0.040

GW-03	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	2640	NA	NA	NA	NA	NA	9.4	ND	ND	ND	ND
Selenium	20	NA	NA	NA	NA	NA	0.043	0.018	0.046	0.039	0.034

GW-05	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	1720	NA	NA	NA	NA	NA	ND	ND	0.071	0.12	0.11
Selenium	30.3	NA	NA	NA	NA	NA	0.014	0.0074	0.014	0.017	0.021
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	0.0090	0.0061	0.0077

GW-09	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	15200	NA	NA	NA	NA	NA	NA	ND	ND	0.096	0.13
Selenium	62.8	NA	NA	NA	NA	NA	NA	0.018	0.024	0.032	0.027

GW-08	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	1090	NA	NA	NA	NA	NA	0.0089	ND	0.072	ND	ND
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	0.020	0.027	0.017

GW-11	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	2350	ND	ND	ND	ND	ND	17.0	ND	ND	0.095	0.10
Selenium	66.6	37.8	47.6	89.7	4.3	39	0.019	0.023	0.030	0.04	0.046

GW-16	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Selenium	47	NA	NA	NA	NA	NA	0.037	0.023	0.056	0.064	0.064

GW-14	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	1250	NA	NA	NA	NA	NA	0.042	ND	ND	0.14	0.12
Selenium	17.8	NA	NA	NA	NA	NA	ND	ND	0.017	0.035	0.014

GW-21	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	2600	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Selenium	42.8	NA	NA	NA	NA	NA	0.012	0.014	0.016	0.016	0.011

GW-10	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	8040	ND	ND	ND	ND	ND	0.018	ND	ND	ND	0.13
Selenium	24	11.9	46	52.9	ND	ND	0.0045	0.0064	0.011	0.017	0.023

GW-15	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	10900	NA	NA	NA	NA	NA	0.11	ND	ND	0.056	0.11
Selenium	27	NA	NA	NA	NA	NA	0.031	0.024	0.05	0.045	0.028

GW-13	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	1380	NA	NA	NA	NA	NA	ND	ND	ND	0.086	0.12
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	0.015	0.011	0.017

GW-19	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	2690	NA	NA	NA	NA	NA	ND	ND	ND	ND	0.078
Selenium	33	NA	NA	NA	NA	NA	0.006	0.012	0.023	0.031	0.04

GW-18	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	0.081	ND	ND
Selenium	37.5	NA	NA	NA	NA	NA	0.026	0.026	0.053	0.047	0.042

GW-22	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	9930	NA	NA	NA	NA	NA	0.120	ND	0.059	0.097	0.10
Mercury	2	NA	NA	NA	NA	NA	0.0025	0.0017	ND	0.0016	0.0017
Selenium	13	NA	NA	NA	NA	NA	ND	ND	0.0052	0.0024	0.016

GW-27	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	9850	NA	NA	NA	NA	NA	0.11	ND	0.057	0.091	0.10
Chromium	53	NA	NA	NA	NA	NA	0.007	ND	ND	ND	ND
Selenium	29	NA	NA	NA	NA	NA	0.012	0.029	0.027	0.037	0.041

GW-30	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	11500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	29.9	21.8	30.3	31.4	19		0.023	0.031	0.03	0.028	0.027

GW-23	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	14600	ND	ND	ND	ND	ND	0.061	ND	0.059	0.11	0.17
Selenium	44.7	27	21.6	13	27	27	0.012	0.016	0.035	0.035	0.039

GW-28	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	22600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	44.2	20.6	28	42.5	18	6.6	0.022	0.009	0.038	0.038	0.036

GW-24	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	0.092	0.11	0.150
Selenium	20.5	27.4	53.7	87.1	49	60	0.024	0.026	0.043	0.060	0.050

GW-29	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	1030	NA	NA	NA	NA	NA	0.5	ND	ND	ND	0.070
Selenium	42.5	NA	NA	NA	NA	NA	0.022	0.020	0.042	0.038	0.043

GW-26	1988	1992			1995		1997	1/98	4/98	7/98	10/98
Aluminum	8860	ND	ND	ND	ND	ND	0.046	ND	ND	0.096	0.13
Arsenic	5	ND	ND	ND	ND	51	0.0[illegible]	ND	ND	ND	ND
Selenium	19	26.5	11.9	52.8	28	7.6	0.019	0.021	0.044	0.041	0.058

LEGEND

- ● GW-01 SHALLOW GROUND WATER MONITORING WELL
- ◉ GW-16 INTERMEDIATE GROUND WATER MONITORING WELL
- ◎ GW-30 DEEP GROUND WATER MONITORING WELL

11/88 1992 1995
ND 2J/ND/ND ND/ND SAMPLE ROUNDS AND METALS ANALYSES RESULTS. 1992 HAD THREE ROUNDS IN FEBRUARY, MAY AND AUGUST. 1995 HAD TWO ROUNDS IN JUNE AND SEPTEMBER. 1997 HAD ONE ROUND IN SEPTEMBER.

CONCENTRATIONS DETECTED < MCL OR NO MCL STANDARDS

15 CONCENTRATIONS DETECTED ≥ MCL

ND = NOT DETECTED

NA = NOT ANALYZED

NOTES

1. THE NOVEMBER 1988 MONITORING RESULTS ARE REPORTED AS TOTAL METALS. THE 1992 AND 1995 MONITORING RESULTS ARE REPORTED AS DISSOLVED METALS.

REFERENCE: BASED ON FIGURE 2.3, FINAL REMEDIAL INVESTIGATION REPORT, EBASCO, 1989d AND FIGURE 2.7, EPA 1992 GROUND WATER MONITORING REPORT.

0 200 400 FEET
SCALE

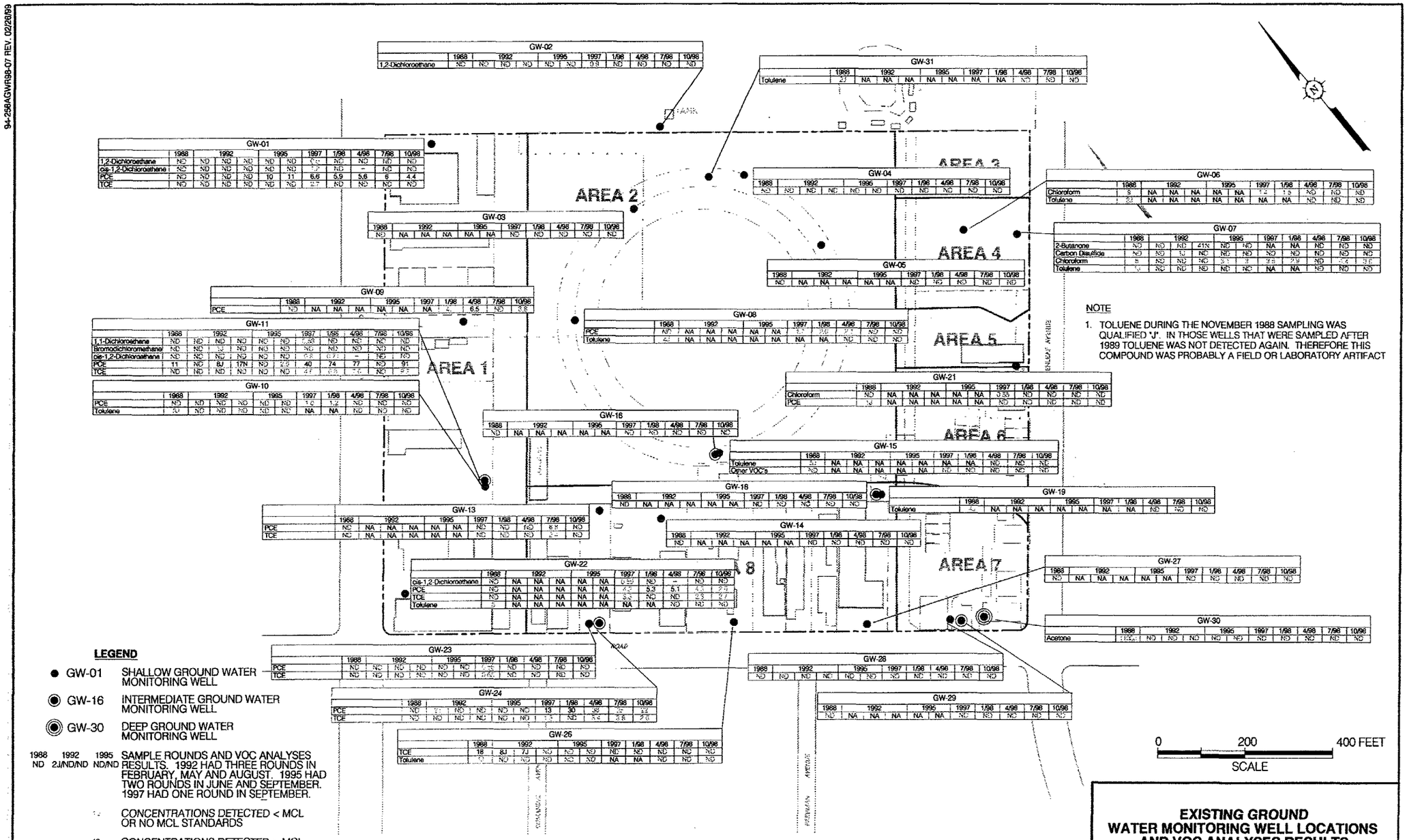
EXISTING GROUND WATER MONITORING WELL LOCATIONS AND METALS ANALYSES RESULTS

WASTE DISPOSAL, INC.
SANTA FE SPRINGS, CALIFORNIA

TRC

FIGURE 4.2

94-298AGWR98-07 REV. 02/28/99



GW-02	1988		1992		1995		1997	1/98	4/98	7/98	10/98
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	0.9	ND	ND	ND	ND

GW-31	1988		1992		1995		1997	1/98	4/98	7/98	10/98
Toluene	2J	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND

GW-01	1988		1992		1995		1997	1/98	4/98	7/98	10/98
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	[illegible]	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	[illegible]	ND	–	ND	ND
PCE	ND	ND	ND	ND	10	11	6.6	5.9	5.6	6	4.4
TCE	ND	ND	ND	ND	ND	ND	2.7	ND	ND	ND	ND

GW-04	1988		1992		1995		1997	1/98	4/98	7/98	10/98
	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

GW-06	1988		1992		1995		1997	1/98	4/98	7/98	10/98
Chloroform	5	NA	NA	NA	NA	NA	[illegible]	[illegible]	ND	ND	ND
Toluene	2J	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND

GW-03	1988		1992		1995		1997	1/98	4/98	7/98	10/98
	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND

GW-07	1988		1992		1995		1997	1/98	4/98	7/98	10/98
2-Butanone	ND	ND	ND	41N	ND	ND	NA	NA	ND	ND	ND
Carbon Disulfide	ND	ND	1J	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	5	ND	ND	ND	[illegible]	[illegible]	[illegible]	[illegible]	ND	[illegible]	[illegible]
Toluene	1J	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND

GW-05	1988		1992		1995		1997	1/98	4/98	7/98	10/98
	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND

GW-09	1988		1992		1995		1997	1/98	4/98	7/98	10/98
PCE	ND	NA	NA	NA	NA	NA	[illegible]	6.5	ND	[illegible]	

GW-08	1988		1992		1995		1997	1/98	4/98	7/98	10/98
PCE	ND	NA	NA	NA	NA	NA	[illegible]	[illegible]	[illegible]	ND	ND
Toluene	2J	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND

GW-11	1988		1992		1995		1997	1/98	4/98	7/98	10/98
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	[illegible]	ND	ND	ND	ND
Bromodichloromethane	ND	ND	1J	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	[illegible]	[illegible]	–	ND	ND
PCE	11	ND	8J	17N	ND	[illegible]	40	74	77	ND	91
TCE	ND	ND	ND	ND	ND	ND	[illegible]	[illegible]	[illegible]	ND	[illegible]

GW-10	1988		1992		1995		1997	1/98	4/98	7/98	10/98
PCE	ND	ND	ND	ND	ND	ND	[illegible]	[illegible]	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND

GW-21	1988		1992		1995		1997	1/98	4/98	7/98	10/98
Chloroform	ND	NA	NA	NA	NA	NA	0.55	ND	ND	ND	ND
PCE	3J	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND

GW-16	1988		1992		1995		1997	1/98	4/98	7/98	10/98
	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND

GW-15	1988		1992		1995		1997	1/98	4/98	7/98	10/98
Toluene	2J	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND
Other VOC's	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND

GW-18	1988		1992		1995		1997	1/98	4/98	7/98	10/98
	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND

GW-19	1988		1992		1995		1997	1/98	4/98	7/98	10/98
Toluene	2J	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND

GW-13	1988		1992		1995		1997	1/98	4/98	7/98	10/98
PCE	ND	NA	NA	NA	NA	NA	ND	ND	ND	6.8	ND
TCE	ND	NA	NA	NA	NA	NA	ND	ND	ND	[illegible]	ND

GW-14	1988		1992		1995		1997	1/98	4/98	7/98	10/98
	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND

GW-22	1988		1992		1995		1997	1/98	4/98	7/98	10/98
cis-1,2-Dichloroethene	ND	NA	NA	NA	NA	NA	0.50	ND	–	ND	ND
PCE	ND	NA	NA	NA	NA	NA	[illegible]	5.3	5.1	[illegible]	[illegible]
TCE	ND	NA	NA	NA	NA	NA	3.3	ND	ND	[illegible]	[illegible]
Toluene	2	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND

GW-27	1988		1992		1995		1997	1/98	4/98	7/98	10/98
	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND

GW-30	1988		1992		1995		1997	1/98	4/98	7/98	10/98
Acetone	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

GW-23	1988		1992		1995		1997	1/98	4/98	7/98	10/98
PCE	ND	ND	ND	ND	ND	ND	[illegible]	ND	ND	ND	ND
TCE	ND	ND	ND	ND	ND	ND	[illegible]	ND	ND	ND	ND

GW-28	1988		1992		1995		1997	1/98	4/98	7/98	10/98
	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

GW-24	1988		1992		1995		1997	1/98	4/98	7/98	10/98
PCE	ND	[illegible]	ND	ND	ND	ND	13	20	[illegible]	[illegible]	[illegible]
TCE	ND	ND	ND	ND	ND	ND	[illegible]	ND	[illegible]	[illegible]	[illegible]

GW-29	1988		1992		1995		1997	1/98	4/98	7/98	10/98
	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND

GW-26	1988		1992		1995		1997	1/98	4/98	7/98	10/98
TCE	18	8J	7J	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1J	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND

NOTE

1. TOLUENE DURING THE NOVEMBER 1988 SAMPLING WAS QUALIFIED 'J'. IN THOSE WELLS THAT WERE SAMPLED AFTER 1989 TOLUENE WAS NOT DETECTED AGAIN. THEREFORE THIS COMPOUND WAS PROBABLY A FIELD OR LABORATORY ARTIFACT

LEGEND

- ● GW-01 SHALLOW GROUND WATER MONITORING WELL
- ◉ GW-16 INTERMEDIATE GROUND WATER MONITORING WELL
- ◎ GW-30 DEEP GROUND WATER MONITORING WELL

1988 1992 1995 SAMPLE ROUNDS AND VOC ANALYSES
ND 2J/ND/ND ND/ND RESULTS. 1992 HAD THREE ROUNDS IN FEBRUARY, MAY AND AUGUST. 1995 HAD TWO ROUNDS IN JUNE AND SEPTEMBER. 1997 HAD ONE ROUND IN SEPTEMBER.

1.2 CONCENTRATIONS DETECTED < MCL OR NO MCL STANDARDS

13 CONCENTRATIONS DETECTED > MCL

– = NOT ANALYZED
ND = NOT DETECTED
NA = NOT APPLICABLE
PCE = TETRACHLOROETHENE
TCE = TRICHLOROETHENE

REFERENCE: BASED ON FIGURE 2.3, FINAL REMEDIAL INVESTIGATION REPORT, EBASCO, 1989d AND FIGURE 2.7, EPA 1992 GROUND WATER MONITORING REPORT.

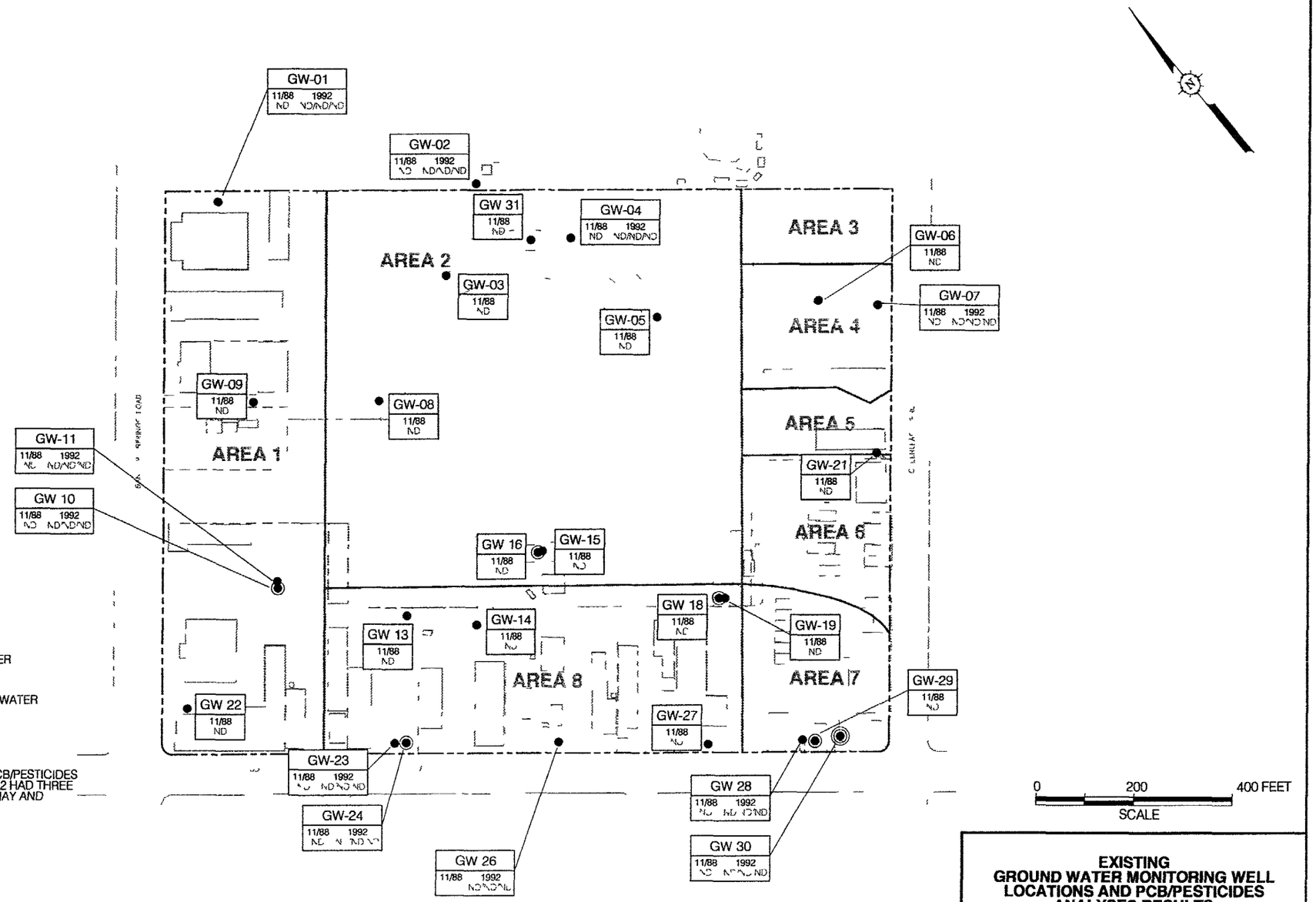
EXISTING GROUND WATER MONITORING WELL LOCATIONS AND VOC ANALYSES RESULTS

WASTE DISPOSAL, INC.
SANTA FE SPRINGS, CALIFORNIA

TRC

FIGURE 4.3

94 256A\GWR98-08 REV 02/28/99



LEGEND

- ● GW-01 SHALLOW GROUND WATER MONITORING WELL
- ◉ GW-16 INTERMEDIATE GROUND WATER MONITORING WELL
- ◉ GW 30 DEEP GROUND WATER MONITORING WELL
- 11/88 1992 ND ND/ND/ND SAMPLE ROUNDS AND PCB/PESTICIDES ANALYSES RESULTS 1992 HAD THREE ROUNDS IN FEBRUARY, MAY AND AUGUST
- ND = NOT DETECTED
- SITE BOUNDARY
- AREA BOUNDARY
- FENCE
- EXISTING BUILDING

REFERENCE BASED ON FIGURE 2 3 FINAL REMEDIAL INVESTIGATION REPORT EBASCO 1989d AND FIGURE 2 7 EPA 1992 GROUND WATER MONITORING REPORT

EXISTING GROUND WATER MONITORING WELL LOCATIONS AND PCB/PESTICIDES ANALYSES RESULTS

WASTE DISPOSAL INC
SANTA FE SPRINGS CALIFORNIA

TRC

FIGURE 4.4

APPENDIX A

CDM FEDERAL PROGRAM CORPORATION
GROUND WATER EVALUATION DATA

TRC

Table 4-4: Summary of Groundwater Sampling Results -- Detected VOCs
Waste Disposal, Inc. Site

				Groundwater Sample VOC Analyses -- Concentrations in Micrograms per Liter (ug/L)									
Well No.	Well Screen Interval (ft BGS)	Sample Date	Source	TCE		PCE		cis 1,2-DCE		Toluene		Other VOCs Detected	
GW - 01	38 - 58	Nov-88	EPA		ND		ND		ND		ND		
		Feb-92	EPA		ND		ND		ND		ND		
		May-92	EPA		ND		ND		ND		ND		
		Aug-92	EPA		ND		ND		ND		ND		
		Jun-95	WDIG		ND	13.0			ND	3.0		Methylene Chloride	1.0
		Sep-95	WDIG		ND	11.0			ND		ND		
		Sep-97	EPA	2.0		6.0		1.0		3.0			
		Sep-97	WDIG	2.7		6.6		1.2			--	1,2-Dichloroethane	0.5
		Jan-98	WDIG		ND	5.9			ND		--		
		Apr-98	WDIG		ND	5.6			ND		ND		
GW - 02	33 - 53	Nov-88	EPA		ND		ND		ND		ND		
		Feb-92	EPA		ND		ND		ND		ND		
		May-92	EPA		ND		ND		ND		ND		
		Aug-92	EPA		ND		ND		ND		ND		
		Jun-95	WDIG		ND		ND		ND	1.2		Methylene Chloride	1.2
		Sep-95	WDIG		ND		ND		ND		ND		
		Sep-97	EPA		ND		ND		ND	1.0		1,2-Dichloroethane	1.0
		Sep-97	WDIG		ND		ND		ND		--	1,2-Dichloroethane	0.9
		Jan-98	WDIG		ND		ND		ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 03	48 - 68	Nov-88	EPA		ND		ND		ND		ND		
		Sep-97	EPA		ND		ND		ND	2.0			
		Sep-97	WDIG		ND		ND		ND		--		
		Jan-98	WDIG		ND		ND		ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 04	48 - 68	Nov-88	EPA		ND		ND		ND		ND		
		Feb-92	EPA		ND		ND		ND		ND		
		May-92	EPA		ND		ND		ND		ND		
		Aug-92	EPA		ND		ND		ND		ND		
		Jun-95	WDIG		ND		ND		ND		ND	Methylene Chloride	1.4
		Sep-95	WDIG		ND		ND		ND		ND		
		Sep-97	EPA		ND		ND		ND	64.0			
		Sep-97	WDIG		ND		ND		ND		--		
		Jan-98	WDIG		ND		ND		ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 05	43 - 63	Nov-88	EPA		ND		ND		ND		ND		
		Sep-97	EPA		ND		ND		ND	2.0		2-Hexanone	4.0
		Sep-97	EPA									4-Methyl-2-Pentanone	4.0
		Sep-97	WDIG		ND		ND		ND		--		
		Jan-98	WDIG		ND		ND		ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 06	43 - 63	Nov-88	EPA		ND		ND		ND	2.0		Chloroform	9.0
		Sep-97	EPA		ND		ND		ND	3.0		Chloroform	0.9
		Sep-97	WDIG		ND		ND		ND		--	Chloroform	1.4
		Jan-98	WDIG		ND		ND		ND		--	Chloroform	1.5
		Apr-98	WDIG		ND		ND		ND		ND		

Table 4-4: Summary of Groundwater Sampling Results -- Detected VOCs
Waste Disposal, Inc. Site

				Groundwater Sample VOC Analyses -- Concentrations in Micrograms per Liter (ug/L)									
Well No.	Well Screen Interval (ft BGS)	Sample Date	Source	TCE		PCE		cis 1,2-DCE		Toluene		Other VOCs Detected	
GW - 07	38 - 58	Nov-88	EPA		ND		ND		ND	1.0		Chloroform	8.0
		Feb-92	EPA		ND		ND		ND		ND		
		May-92	EPA		ND		ND		ND		ND		
		Aug-92	EPA		ND		ND		ND		ND	2-Butanone	41.0
		Jun-95	WDIG		ND		ND		ND		ND	Chloroform	3.1
		Sep-95	WDIG		ND		ND		ND		ND	Chloroform	3.0
		Sep-97	EPA		ND		ND		ND	7.0		Chloroform	3.0
		Sep-97	WDIG		ND		ND		ND		--	Chloroform	3.5
		Jan-98	WDIG		ND		ND		ND		--	Chloroform	2.9
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 08	43 - 63	Nov-88	EPA		ND		ND		ND	4.0			
		Sep-97	EPA		ND	1.0			ND	2.0			
		Sep-97	WDIG		ND	1.7			ND		--		
		Jan-98	WDIG		ND	2.0			ND		--		
		Apr-98	WDIG		ND	2.1			ND		ND		
GW - 09	38 - 58	Nov-88	EPA		ND		ND		ND		ND		
		Jan-98	WDIG		ND	4.7			ND		--		
		Apr-98	WDIG		ND	6.5			ND		ND		
GW - 10	38 - 58	Nov-88	EPA		ND		ND		ND	3.0			
		Feb-92	EPA		ND		ND		ND		ND		
		May-92	EPA		ND		ND		ND		ND		
		Aug-92	EPA		ND		ND		ND		ND		
		Jun-95	WDIG		ND		ND		ND	4.1			
		Sep-95	WDIG		ND		ND		ND		ND		
		Sep-97	EPA		ND	0.6			ND	3.0			
		Sep-97	WDIG		ND	1.0			ND		--		
		Jan-98	WDIG		ND	1.2			ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 11	118 - 128	Nov-88	EPA		ND	11.0			ND		ND		
		Feb-92	EPA		ND		ND		ND		ND		
		May-92	EPA		ND	8.0			ND		ND		
		Aug-92	EPA		ND	17.0			ND		ND		
		Jun-95	WDIG		ND		ND		ND	3.7			
		Sep-95	WDIG		ND	2.9			ND		ND		
		Sep-97	EPA	4.0		30.0		0.6		1.0			
		Sep-97	WDIG	4.6		40.0		0.8			--	1,1-Dichloroethene	0.63
		Jan-98	WDIG	6.8		74.0		0.71			--		
		Apr-98	WDIG	7.6		77.0			ND		ND		
GW - 13	39 - 59	Nov-88	EPA		ND		ND		ND		ND		
		Sep-97	EPA		ND		ND		ND	1.0			
		Sep-97	WDIG		ND		ND		ND		--		
		Jan-98	WDIG		ND		ND		ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 14	38 - 58	Nov-88	EPA		ND		ND		ND		ND		
		Sep-97	EPA		ND		ND		ND	3.0			
		Sep-97	WDIG		ND		ND		ND		--		
		Jan-98	WDIG		ND		ND		ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		

Table 4-4: Summary of Groundwater Sampling Results -- Detected VOCs
Waste Disposal, Inc. Site

				Groundwater Sample VOC Analyses -- Concentrations in Micrograms per Liter (ug/L)									
Well No.	Well Screen Interval (ft BGS)	Sample Date	Source	TCE		PCE		cis 1,2-DCE		Toluene		Other VOCs Detected	
GW - 15	48 - 68	Nov-88	EPA		ND		ND		ND	5.0			
		Sep-97	EPA		ND		ND		ND	2.0			
		Sep-97	WDIG		ND		ND		ND		--		
		Jan-98	WDIG		ND		ND		ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 16	74 - 79	Nov-88	EPA		ND		ND		ND		ND		
		Sep-97	EPA		ND		ND		ND	20.0			
		Sep-97	WDIG		ND		ND		ND		--		
		Jan-98	WDIG		ND		ND		ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 18	69 - 74	Nov-88	EPA		ND		ND		ND		ND		
		Sep-97	EPA		ND		ND		ND	23.0			
		Sep-97	WDIG		ND		ND		ND		--		
		Jan-98	WDIG		ND		ND		ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 19	39 - 59	Nov-88	EPA		ND		ND		ND	4.0			
		Sep-97	EPA		ND		ND		ND	18.0			
		Sep-97	WDIG		ND		ND		ND		--		
		Jan-98	WDIG		ND		ND		ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 21	36 - 56	Nov-88	EPA		ND	1.0			ND		ND		
		Sep-97	EPA		ND		ND*		ND	4.0			
		Sep-97	WDIG		ND		ND		ND		--	Chloroform	0.6
		Jan-98	WDIG		ND		ND		ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 22	58 - 78	Nov-88	EPA		ND		ND		ND	5.0			
		Sep-97	EPA	2.0		3.0		0.6		2.0			
		Sep-97	WDIG	3.3		4.3		0.59			--		
		Jan-98	WDIG		ND	5.3			ND		--		
		Apr-98	WDIG		ND	5.1			ND		ND		
GW - 23	43 - 63	Nov-88	EPA		ND		ND		ND		ND		
		Feb-92	EPA		ND		ND		ND		ND		
		May-92	EPA		ND		ND		ND		ND		
		Aug-92	EPA		ND		ND		ND		ND		
		Jun-95	WDIG		ND		ND		ND	2.6			
		Sep-95	WDIG		ND		ND		ND		ND	2-Butanone	5.5
		Sep-97	EPA		ND		ND		ND	2.0			
		Sep-97	WDIG	0.65		0.56			ND		--		
		Jan-98	WDIG		ND		ND		ND		--		
		Apr-98	WDIG		ND		ND		ND		ND		
GW - 24	103 - 113	Nov-88	EPA		ND		ND		ND		ND		
		Feb-92	EPA		ND	2.0			ND		ND		
		May-92	EPA		ND		ND		ND		ND		
		Aug-92	EPA		ND		ND		ND		ND		
		Jun-95	WDIG		ND		ND	1.1		5.9		Xylenes	4.6
		Sep-95	WDIG		ND		ND		ND		ND		
		Sep-97	EPA	1.0		9.0			ND	2.0		Xylenes	0.6
		Sep-97	WDIG	1.3		13.0			ND		--		
		Jan-98	WDIG		ND	30.0			ND		--		
		Apr-98	WDIG	3.4		38.0			ND		ND		

Table 4-4: Summary of Groundwater Sampling Results -- Detected VOCs
Waste Disposal, Inc. Site

				Groundwater Sample VOC Analyses -- Concentrations in Micrograms per Liter (ug/L)							
Well No.	Well Screen Interval (ft BGS)	Sample Date	Source	TCE		PCE		cis 1,2-DCE		Toluene		Other VOCs Detected	
GW - 26	44 - 64	Nov-88	EPA	18.0		ND		ND		4.0			
		Feb-92	EPA	8.0		ND		ND			ND		
		May-92	EPA	7.0		ND		ND			ND		
		Aug-92	EPA		ND	ND		ND			ND		
		Jun-95	WDIG		ND	ND		ND		1.8			
		Sep-95	WDIG		ND	ND		ND			ND		
		Sep-97	EPA		ND	ND		ND		2.0			
		Sep-97	WDIG		ND	ND		ND			--		
		Jan-98	WDIG		ND	ND		ND			--		
		Apr-98	WDIG		ND	ND		ND			ND		
GW - 27	43 - 63	Nov-88	EPA		ND	ND		ND			ND		
		Sep-97	EPA		ND	ND		ND		13.0			
		Sep-97	WDIG		ND	ND		ND			--		
		Jan-98	WDIG		ND	ND		ND			--		
		Apr-98	WDIG		ND	ND		ND			ND		
GW - 28	44 - 64	Nov-88	EPA		ND	ND		ND			ND		
		Feb-92	EPA		ND	ND		ND			ND		
		May-92	EPA		ND	ND		ND			ND		
		Aug-92	EPA		ND	ND		ND			ND		
		Jun-95	WDIG		ND	ND	1.9			9.4		Xylenes	7.1
		Sep-95	WDIG		ND	ND		ND			ND		
		Sep-97	EPA		ND	ND		ND		8.0			
		Sep-97	WDIG		ND	ND		ND			--		
		Jan-98	WDIG		ND	ND		ND			--		
		Apr-98	WDIG		ND	ND		ND			ND		
GW - 29	44 - 64	Nov-88	EPA		ND	ND		ND			ND		
		Sep-97	EPA		ND	ND		ND		64.0			
		Sep-97	WDIG		ND	ND		ND			--		
		Jan-98	WDIG		ND	ND		ND			--		
		Apr-98	WDIG		ND	ND		ND			ND		
GW - 30	74 - 94	Nov-88	EPA		ND	ND		ND			ND	Acetone	1,100
		Feb-92	EPA		ND	ND		ND			ND		
		May-92	EPA		ND	ND		ND			ND		
		Aug-92	EPA		ND	ND		ND			ND		
		Jun-95	WDIG		ND	ND		ND			ND		
		Sep-95	WDIG		ND	ND		ND			ND		
		Sep-97	EPA		ND	ND		ND		52.0			
		Sep-97	WDIG		ND	ND		ND			--		
		Jan-98	WDIG		ND	ND		ND			--		
		Apr-98	WDIG		ND	ND		ND			ND		
GW - 31	43 - 63	Nov-88	EPA		ND	ND		ND		2.0			
		Sep-97	EPA		ND	ND		ND		2.0			
		Sep-97	WDIG		ND	ND		ND			--		
		Jan-98	WDIG		ND	ND		ND			--		
		Apr-98	WDIG		ND	ND		ND			ND		

Abbreviations: TCE = Trichloroethene; PCE = Tetrachloroethene; DCE = Dichloroethene; ND = not detected; (--) = not analyzed
Maximum Contaminant Levels (MCLs): Trichloroethene = 5 ug/L, Tetrachloroethene = 5 ug/L, cis 1,2-DCE = 6 ug/L, Toluene = 150 ug/L
Shading denotes exceedance of MCL.

Table 4-5: Groundwater Analyses of Selected Metals Present in WDI Waste
Waste Disposal, Inc. Site

Well No.	Location Relative to WDI Waste Sources	Sample Date	Metals Analysis	Selected Metals (Concentrations in ug/L)					
				Arsenic		Chromium		Lead	
GW - 01	upgradient	Nov-88	tm	25.0		91.3		34.0	
		Feb-92	tm	12.7		81.6		26.8	
		May-92	tm		ND	9.3		2.2	
		Aug-92	tm	4.7		19.9		2.4	
		Jun-95	dm		ND		ND		ND
		Sep-95	dm	57.0			ND	47.0	
		Sep-97	dm		ND	2.1			ND
		Jan-98	dm		ND		ND		ND
GW - 02	upgradient	Nov-88	tm	3.4		26.8		3.6	
		Feb-92	tm	2.3		13.8		2.4	
		May-92	tm		ND	10.8		3.4	
		Aug-92	tm		ND	7.9		1.8	
		Jun-95	dm		ND	12.0			ND
		Sep-95	dm	16.0			ND	15.0	
		Sep-97	dm		ND	5.8			ND
		Jan-98	dm		ND		ND		ND
GW - 03	north perimeter of Reservoir	Nov-88	tm	4.0		13.0		6.0	
		Sep-97	dm		ND	3.3			ND
		Jan-98	dm		ND		ND	2.8	
GW - 04	north perimeter of Reservoir	Nov-88	tm		ND	10.0			ND
		Feb-92	tm	2.0		16.5		3.7	
		May-92	tm		ND	18.9		7.2	
		Aug-92	tm	5.8		39.6		17.7	
		Jun-95	dm		ND	9.7			ND
		Sep-95	dm	56.0			ND	63.0	
		Sep-97	dm		ND	4.1			ND
		Jan-98	dm		ND		ND	5.8	
GW - 05	east perimeter of Reservoir	Nov-88	tm	2.9			ND		ND
		Sep-97	dm	10.4		1.9		1.2	
		Jan-98	dm	16.0			ND		ND
GW - 06	underlies BWZ (east area)	Nov-88	tm	3.0		16.0		5.0	
		Sep-97	dm	4.5		14.1		2.4	
		Jan-98	dm		ND		ND		ND
GW - 07	cross-gradient to BWZ (east area)	Nov-88	tm		ND		ND	3.0	
		Feb-92	tm		ND		ND		ND
		May-92	tm		ND	3.9		1.3	
		Aug-92	tm		ND	6.5			ND
		Jun-95	dm		ND	9.4			ND
		Sep-95	dm		ND		ND		ND
		Sep-97	dm		ND	4.6		4.5	
		Jan-98	dm		ND		ND		ND
GW - 08	west perimeter of Reservoir	Nov-88	tm	12.0		8.0		3.0	
		Sep-97	dm	31.1		1.2			ND
		Jan-98	dm	27.0			ND		ND
GW - 09	cross-gradient to BWZ (west area)	Nov-88	tm	13.1		25.4		3.7	
		Jan-98	dm		ND		ND		ND

Table 4-5: Groundwater Analyses of Selected Metals Present in WDI Waste
Waste Disposal, Inc. Site

Well No.	Location Relative to WDI Waste Sources	Sample Date	Metals Analysis	Selected Metals (Concentrations in ug/L)					
				Arsenic		Chromium		Lead	
GW - 10	cross-gradient to BWZ (west area)	Nov-88	tm	8.0		13.0		4.0	
		Feb-92	tm	15.6		41.6		17.4	
		May-92	tm	9.5		18.1		8.7	
		Aug-92	tm		ND	5.3		2.1	
		Jun-95	dm	3.4			ND		ND
		Sep-95	dm	19.0			ND	3.3	
		Sep-97	dm		ND	1.2			ND
		Jan-98	dm		ND		ND	2.9	
GW - 11	cross-gradient to BWZ (west area)	Nov-88	tm		ND		ND		ND
		Feb-92	tm		ND	4.9		5.1	
		May-92	tm		ND	5.9			ND
		Aug-92	tm		ND	3.1			ND
		Jun-95	dm		ND		ND		ND
		Sep-95	dm	7.5			ND	5.3	
		Sep-97	dm		ND	3.0			ND
		Jan-98	dm		ND		ND	2.5	
GW - 13	downgradient of BWZ (west area)	Nov-88	tm		ND	11.9		2.2	
		Sep-97	dm		ND	1.3		2.1	
		Jan-98	dm		ND	12.0		6.3	
GW - 14	downgradient of Reservoir	Nov-88	tm		ND		ND		ND
		Sep-97	dm		ND	1.3		2.7	
		Jan-98	dm		ND		ND	6.6	
GW - 15	downgradient of Reservoir	Nov-88	tm	11.0		25.0		13.0	
		Sep-97	dm	12.0		1.0			ND
		Jan-98	dm		ND		ND	2.7	
GW - 16	downgradient of Reservoir	Nov-88	tm		ND		ND	1.7	
		Sep-97	dm		ND	5.1			ND
		Jan-98	dm		ND		ND	4.0	
GW - 18	downgradient of Reservoir	Nov-88	tm		ND		ND	1.8	
		Sep-97	dm		ND	4.6			ND
		Jan-98	dm		ND		ND		ND
GW - 19	downgradient of Reservoir	Nov-88	tm	3.0		18.0		4.0	
		Sep-97	dm		ND	1.3			ND
		Jan-98	dm		ND		ND		ND
GW - 21	downgradient of BWZ (east area)	Nov-88	tm	6.6		8.8			ND
		Sep-97	dm		ND		ND		ND
		Jan-98	dm	2.0			ND	4.1	
GW - 22	cross-gradient to BWZ (west area)	Nov-88	tm	11.0		17.0		12.0	
		Sep-97	dm		ND		ND	2.1	
		Jan-98	dm		ND		ND		ND
GW - 23	downgradient of BWZ (west area)	Nov-88	tm	9.5		33.1		4.3	
		Feb-92	tm	2.2		15.2		2.1	
		May-92	tm		ND	5.6		1.7	
		Aug-92	tm		ND	6.4			ND
		Jun-95	dm		ND		ND		ND
		Sep-95	dm	19.0			ND	18.0	
		Sep-97	dm		ND	1.8			ND
		Jan-98	dm		ND		ND	2.0	

Table 4-5: Groundwater Analyses of Selected Metals Present in WDI Waste
Waste Disposal, Inc. Site

Well No.	Location Relative to WDI Waste Sources	Sample Date	Metals Analysis	Selected Metals (Concentrations in ug/L)					
				Arsenic		Chromium		Lead	
GW - 24	downgradient of BWZ (west area)	Nov-88	tm		ND		ND	1.5	
		Feb-92	tm		ND	5.5			ND
		May-92	tm		ND	3.1		1.3	
		Aug-92	tm		ND	3.9			ND
		Jun-95	dm		ND	11.0			ND
		Sep-95	dm		ND		ND	4.2	
		Sep-97	dm		ND	2.8			ND
		Jan-98	dm		ND		ND	9.9	
GW - 26	downgradient of BWZ (east area)	Nov-88	tm	8.0		33.0		12.0	
		Feb-92	tm	9.9		33.4		17.8	
		May-92	tm		ND	6.6		2.8	
		Aug-92	tm	2.6		11.5		3.9	
		Jun-95	dm		ND	12.0			ND
		Sep-95	dm	51.0			ND	49.0	
		Sep-97	dm		ND	2.6			ND
		Jan-98	dm		ND		ND		ND
GW - 27	downgradient of BWZ (east area)	Nov-88	tm	7.0		53.0		10.0	
		Sep-97	dm	4.5		1.3			ND
		Jan-98	dm		ND		ND	2.8	
GW - 28	downgradient of BWZ (east area)	Nov-88	tm	7.0		24.4		16.3	
		Feb-92	tm	11.8		55.1		13.7	
		May-92	tm	6.5		21.6		11.1	
		Aug-92	tm	6.9		49.1		6.6	
		Jun-95	dm		ND	9 9			ND
		Sep-95	dm	32.0			ND	37.0	
		Sep-97	dm		ND	1.3			ND
		Jan-98	dm		ND		ND	2.5	
GW - 29	downgradient of BWZ (east area)	Nov-88	tm		ND		ND	7.8	
		Sep-97	dm		ND	4.4			ND
		Jan-98	dm		ND		ND	9.0	
GW - 30	downgradient of BWZ (east area)	Nov-88	tm	7.0		33.3		11.3	
		Feb-92	tm		ND	4.1		1.0	
		May-92	tm		ND	5.2		3.6	
		Aug-92	tm		ND		ND	2.2	
		Jun-95	dm		ND		ND	3.7	
		Sep-95	dm	46.0			ND	39.0	
		Sep-97	dm		ND	2.1			ND
		Jan-98	dm		ND		ND	2.1	
GW - 31	north perimeter of Reservoir	Nov-88	tm		ND	17.0		3.0	
		Sep-97	dm		ND	5.5		1.1	
		Jan-98	dm		ND		ND	4.6	

EXPLANATION

1. Abbreviations: ND = not detected; BWZ = buried waste zone (waste containment/sump areas outside reservoir); see Figure 4-1
   ug/L = micrograms per liter; tm = total metals analysis; dm = dissolved metals analysis
2. Maximum contaminant levels (MCLs): Arsenic = 50 ug/L; Chromium = 50 ug/L
   Lead has an action level of 15 ug/L
   Shading denotes MCL or action level exceedance

APPENDIX B

WDIG'S LABORATORY REPORTS AND QA/QC DOCUMENTATION
(SEPTEMBER 1997-OCTOBER 1998)
AND
LABORATORY DATA VALIDATION REPORTS
(SEPTEMBER 1997-OCTOBER 1998)
(PROVIDED ON CD-ROM)

TRC

APPENDIX C

WDIG MONITORING WELL PURGE AND SAMPLE FORMS
(SEPTEMBER 1997-OCTOBER 1998)

TRC

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDZ PROJECT NO.: 94.256

WELL NO.: mw-01 TESTED BY: A.O. DATE: 9/22/97

Measuring Point Description: Top of Casing

Static Water Level (ft): 34.05 Sample Method: Red-Flo 2, low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 1220

Purge Method: 3½" SS Bailer Sample Depth (ft): 34.08

Time Start Purge: 1123 Field Filtering: for metals only

Time End Purge: 1146 Field Preservation: HCl + HNO3

Comments: 1-3 mph SW winds Sunny clear 85°F

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	57.74		34.05		23.69		0.60	1.09	1.91		26

TIME	1124	1129	1140	1143			
Volume Purged (Gallons)	10	30	55	75			
Purge Rate (gpm)	—	—	—	—			
Temperature (F°) or (C°)	75.9	72.7	73.5	72.9			
pH	7.16	6.99	6.95	7.13			
Specific Conductivity (uncorrected) (micromhos/cm)	2310	2300	2290	2320			
Dissolved Oxygen (mg/L)	—	—	—	—			
eH(mV) Pt-AgCl ref.	—	—	—	—			
Turbidity/Color	moderate	cloudy	cloudy	trace			
Odor	none	none	none	none			
Depth to Water During Purge (ft)	—	—	—	—			
Number of Casing Volumes Removed	0.4	1.1	2.1	2.9			
Dewatered?	No	No	No	No			

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WD1 PROJECT NO.: 94-256

WELL NO.: MW-2 TESTED BY: M.G DATE: 9/24/97

Measuring Point Description: Top of casing

Static Water Level (ft): 29.96 Sample Method: Redi Flo 2, low flow pump

Water Level Measurement Method: Electric sounder Time Sampled: 1240

Purge Method: Redi Flo 2 pump Sample Depth (ft): 29.98

Time Start Purge: 1151 Field Filtering: For metals only

Time End Purge: 1215 Field Preservation: HCl & HNO3

Comments: 95°F Cloudy 1-3mph SW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	52.75		29.96		22.79		0.60	1.09	1.91		25

TIME	1153	1156	1203	1209			
Volume Purged (Gallons)	10	MG 9/24 ~~25~~ 15	40	55			
Purge Rate (gpm)	—	—	—	—			
Temperature (F°) or (C°)	75.7	74.1	73.8	73.7			
pH	7.69	7.41	7.26	7.22			
Specific Conductivity (uncorrected) (micromhos/cm)	2380	2350	2380	2390			
Dissolved Oxygen (mg/L)	—	—	—	—			
eH(mV) Pt-AgCl ref.	—	—	—	—			
Turbidity/Color	Clear	clear	clear	clear			
Odor	none	none	none	none			
Depth to Water During Purge (ft)	—	—	—	—			
Number of Casing Volumes Removed	0.4	0.6	1.6	2.2			
Dewatered?	No	No	No	No			

A-Field/Forms (4/2/92/mm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WOI PROJECT NO.: 94.256

WELL NO.: mw-3 TESTED BY: HA DATE: 9/23/97

Measuring Point Description: Top of casing

Static Water Level (ft): 48.27 Sample Method: Redi Flo 2, low flow pump.

Water Level Measurement Method: Electric Sounder Time Sampled: 0845'

Purge Method: 3½" S.S. Bailer Sample Depth (ft): 48.38

Time Start Purge: 0739 Field Filtering: for metals only

Time End Purge: 0757 Field Preservation: HCl & HNO3

Comments: Clear, no winds 74°F Calibrated Hydac SN 9311

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	67.92		48.27		19.65		0.60	1.09	1.91		21

TIME	0741	0744	0752				
Volume Purged (Gallons)	15	30	60				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	72.2	71.2	70.7				
pH	6.91	6.83	6.79				
Specific Conductivity (uncorrected) (micromhos/cm)	2240	2220	2210				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	Cloudy, brn	lt. brn	trace				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.7	1.4	2.9				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94.256

WELL NO.: mw-4 TESTED BY: H.A DATE: 9/25/97

Measuring Point Description: Top of Casing

Static Water Level (ft): 47.51 Sample Method: Redi Flo2, low flow pump

Water Level Measurement Method: Electric sounder Time Sampled: 1115

Purge Method: 3½" SS. Bailer Sample Depth (ft): 47.68

Time Start Purge: 1028 Field Filtering: for metals only

Time End Purge: 1047 Field Preservation: HCl & HNO3

Comments: Lite rain no wind 74°F

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	68.33		47.51		20.82		0.60	(1.09)	1.91		23

TIME	1030	1038	1044				
Volume Purged (Gallons)	10	50	65				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	71.2	70.3	69.8				
pH	8.46	7.87	7.71				
Specific Conductivity (uncorrected) (micromhos/cm)	2180	2130	2120				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	Cloudy	cloudy	cloudy				
Odor	none.	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.4	2.2	2.8				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WOI PROJECT NO.: 94-256

WELL NO.: MW-5 TESTED BY: HA. DATE: 9/30/97

Measuring Point Description: Top of casing

Static Water Level (ft): 47.95 Sample Method: Red: Flo 2, low flow pump

Water Level Measurement Method: Electric sounder Time Sampled: 0955

Purge Method: 3½" SS Bailer Sample Depth (ft): 48.24

Time Start Purge: 0912 Field Filtering: for metals only

Time End Purge: 0929 Field Preservation: HCl + HNO3

Comments: 74°F Overcast no winds. Cement slab around the well is tilting to one side. It appears to have been run over by discs during weed removal

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.93		47.95		15.98		0.60	1.09	1.91		17

TIME	0914	0919	0925				
Volume Purged (Gallons)	10	25	50				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	70.2	69.9	70.1				
pH	7.03	6.94	6.90				
Specific Conductivity (uncorrected) (micromhos/cm)	2210	2400	2400				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	cloudy, dark brn	trace	trace				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—					
Number of Casing Volumes Removed	0.6	1.5	2.9				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-256

WELL NO.: MW-6 TESTED BY: H.A DATE: 9/24/97

Measuring Point Description: Top of casing

Static Water Level (ft): 39.90 Sample Method: Red; Flo 2. low flow pump.

Water Level Measurement Method: Electric Sounder Time Sampled: 0840

Purge Method: 3½" S.S. Bailer Sample Depth (ft): 39.94

Time Start Purge: 0735 Field Filtering: for metals only

Time End Purge: 0800 Field Preservation: HCl & HNO3

Comments: Clear no wind, 74°F, Calibrated Hydac SN 9311

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.95		39.90		23.05		0.60	1.09	1.91		25

TIME	0739	0747	0755				
Volume Purged (Gallons)	15	35	60				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	70.7	70.2	70.4				
pH	7.15	7.02	6.99				
Specific Conductivity (uncorrected) (micromhos/cm)	1906	1897	1940				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	trace	trace	trace				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.6	1.4	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-256

WELL NO.: MW-07 TESTED BY: HA DATE: 9/25/97

Measuring Point Description: Top of Casing

Static Water Level (ft): 36.32 Sample Method: Red: Flo 2 low flow pump

Water Level Measurement Method: Electric sounder Time Sampled: 0915

Purge Method: 3½" SS. Bailer Sample Depth (ft): 36.49

Time Start Purge: 0825 Field Filtering: for metals only

Time End Purge: 0850 Field Preservation: HCl & HNO3

Comments: Calibrated Hydac SN 9311 78° Lite rain, no winds Slab broken around wellhead. Duplicate sample taken

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.1		36.32		21.78		0.60	1.09	1.91		24

TIME	0836	0848					
Volume Purged (Gallons)	40	56					
Purge Rate (gpm)	—	—					
Temperature (F°) or (C°)	74.0	72.9					
pH	7.01	7.02					
Specific Conductivity (uncorrected) (micromhos/cm)	2240	2240					
Dissolved Oxygen (mg/L)	—	—					
eH(mV) Pt-AgCl ref.	—	—					
Turbidity/Color	trace	clear					
Odor	none	none					
Depth to Water During Purge (ft)	—	—					
Number of Casing Volumes Removed	1.6	2.3					
Dewatered?	No	No					

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-256

WELL NO.: mw-08 TESTED BY: B.A DATE: 9/22/97

Measuring Point Description: Top of casing

Static Water Level (ft): 44.49 Sample Method: Redi Flo 2; low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 1410

Purge Method: 3½" S.S. Bailer Sample Depth (ft): 44.53

Time Start Purge: 1306 Field Filtering: for metals only

Time End Purge: 1325 Field Preservation: HCl & HNO3

Comments: SW wind 1-3 mph Clear 95°F Field Rinsate sample after steam cleaning the pump (1350)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.87		44.49		18.38		0.60	1.09	1.91		20

TIME	1310	1313	1322				
Volume Purged (Gallons)	20	40	55				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	75.1	73.5	73.4				
pH	7.14	6.81	6.79				
Specific Conductivity (uncorrected) (micromhos/cm)	2220	2190	2200				
Dissolved Oxygen (mg/L)	–	–	–				
eH(mV) Pt-AgCl ref.	–	–	–				
Turbidity/Color	Clear	trace	Clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	–	–	–				
Number of Casing Volumes Removed	1.0	2.0	2.8				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDZ PROJECT NO.: 94-256

WELL NO.: MW-10 TESTED BY: G.A DATE: 9/23/97

Measuring Point Description: Top of casing

Static Water Level (ft): 36.54 Sample Method: Redi Flo 2, low flow pump

Water Level Measurement Method: Electric sounder Time Sampled: 1010

Purge Method: 3½" SS Bailer Sample Depth (ft): 36.63

Time Start Purge: 0924 Field Filtering: for metals only

Time End Purge: 0938 Field Preservation: HCl & HNO3

Comments: Clear SW wind a 1-3 mph 80°F

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.10		36.54		21.56		0.60	1.09	1.91		24

TIME	0927	0931	0936				
Volume Purged (Gallons)	15	45	70				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	74.1	73.4	73.4				
pH	6.84	6.85	6.93				
Specific Conductivity (uncorrected) (micromhos/cm)	1780	1790	1790				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	trace	trace	cloudy				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.6	1.9	2.9				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WD7 PROJECT NO. 94-256

WELL NO.: MW-11 TESTED BY: HQ DATE: 9/23/97

Measuring Point Description: Top of casing

Static Water Level (ft): 37.05 Sample Method: Red; Flo 2, low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 1215

Purge Method: 3½" S.S. bailer Sample Depth (ft): 37.27

Time Start Purge: 1053 Field Filtering: For metals only

Time End Purge: 1142 Field Preservation: HCl + HNO3

Comments: Recalibrated Hydac SN 9311 Clear 1-3mph SW wind, 86°F Well casing is too high for a locking well cover, surface cover only. Purged ~~two~~ well volumes before ~~sampling~~ sampling

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size			=	Volume (gal)
							2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole		(one well)
	128.15		37.05		91		0.60	1.09	1.91		99

TIME	1059	1106	1112	1134			
Volume Purged (Gallons)	35	55	90	165			
Purge Rate (gpm)	—	—	—	—			
Temperature (F°) or (C°)	73.6	72.4	72.4	73.7			
pH	6.84	6.80	6.82	7.12			
Specific Conductivity (uncorrected) (micromhos/cm)	2140	2130	2170	2270			
Dissolved Oxygen (mg/L)	—	—	—	—			
eH(mV) Pt-AgCl ref.	—	—	—	—			
Turbidity/Color	trace	trace	cloudy	cloudy			
Odor	none	none	none	none			
Depth to Water During Purge (ft)	—	—	—	—			
Number of Casing Volumes Removed	0.4	0.6	0.9	1.7			
Dewatered?	No	No	No	No			

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WD1 PROJECT NO.: 94-256

WELL NO.: MW-13 TESTED BY: H.A DATE: 9/30/97

Measuring Point Description: Top of casing

Static Water Level (ft): 39.55 Sample Method: Redi flo 2, low flow pump

Water Level Measurement Method: Electric sounder Time Sampled: 1450

Purge Method: Redi Flo 2, submersible pump Sample Depth (ft): NM

Time Start Purge: 1424 Field Filtering: for metals only

Time End Purge: 1440 Field Preservation: HCl & HNO3

Comments: 2-5mph SW winds, 87° & Clear Field rinsate sample after cleaning pump.

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole (1.09)	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	58.35		39.55		18.8						20

TIME	~~24~~ 1425	1429	1436				
Volume Purged (Gallons)	5	25	50				
Purge Rate (gpm)	5	5	4.2				
Temperature (F°) or (C°)	76.4	74.3	74.8				
pH	6.69	6.65	6.55				
Specific Conductivity (uncorrected) (micromhos/cm)	2850	2560	2500				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	Clear	Clear	Clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.25	1.25	2.5				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WO1 PROJECT NO.: 94-256

WELL NO.: mw-14 TESTED BY: HG DATE: 9/22/97

Measuring Point Description: Top of casing

Static Water Level (ft): 39.82 Sample Method: Redi Flo 2, low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 0915

Purge Method: 3½" SS. Bailer Sample Depth (ft): 39.87

Time Start Purge: 0808 Field Filtering: for metals only

Time End Purge: 0825 Field Preservation: HCl + HNO_3

Comments: Calibrated Hydac SN 9311, 73°F Sunny no winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	57.50		39.82		17.68		0.60	1.09	1.91		19

TIME	0810	0818	0824				
Volume Purged (Gallons)	15	40	60				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	70.9	70.8	70.2				
pH	7.14	7.00	7.04				
Specific Conductivity (uncorrected) (micromhos/cm)	2120	2130	2110				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	trace	trace	trace				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.8	2.1	3.2				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-250

WELL NO.: mw-15 TESTED BY: H.G DATE: 9/30/97

Measuring Point Description: Top of casing

Static Water Level (ft): 44.99 Sample Method: RediFlo2, low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 13:35

Purge Method: 3½" SS Bailer Sample Depth (ft): 44.18

Time Start Purge: 1240 Field Filtering: for metals only

Time End Purge: 1257 Field Preservation: HCl and HNO3

Comments: Sunny, hot 1-2 mph SW winds 86°F, Decon pump using Liquinox and 2 DI water rinses - (steam cleaner will not start after cleaning boiler)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	68.35		44.99		23.34		0.60	1.09	1.91		25

TIME	1244	1250	1255				
Volume Purged (Gallons)	15	45	65				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	74.1	72.1	72.1				
pH	6.98	7.02	7.07				
Specific Conductivity (uncorrected) (micromhos/cm)	2270	2220	2240				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	cloudy	cloudy	cloudy				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.4	1.8	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94.256

WELL NO.: MW-16 TESTED BY: B.A DATE: 9/30/93

Measuring Point Description: Top of Casing

Static Water Level (ft): 45.33 Sample Method: Red: Flo 2, low flow pump

Water Level Measurement Method: Electric sounder Time Sampled: 1150

Purge Method: 3½" SS Bailer Sample Depth (ft): 45.48

Time Start Purge: 1100 Field Filtering: for metals only

Time End Purge: 1120 Field Preservation: HCl + HNO3

Comments: Cement slab broken. Hazy sun 1-3mph SW wind. 81°F

Duplicate sample taken

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	78.70		45.33		33.47		0.60	1.09	1.91		36

TIME	1102	1108	1115				
Volume Purged (Gallons)	10	40	75				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	74.2	71.9	71.5				
pH	6.73	7.23	7.35				
Specific Conductivity (uncorrected) (micromhos/cm)	2090	2200	2210				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	Clear	Cloudy	Cloudy				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.3	1.1	2.1				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/mm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WD1 PROJECT NO. 94-256

WELL NO.: mw-18 TESTED BY: H.Q DATE: 9/18/97

Measuring Point Description: Top of casing

Static Water Level (ft): 41.65 Sample Method: Redi Flo 2, low flow pump

Water Level Measurement Method: Electric sounder Time Sampled: 1525

Purge Method: 3½" SS. Baile. Sample Depth (ft): 41.58

Time Start Purge: 14.09 Field Filtering: for metals only

Time End Purge: 1432 Field Preservation: HCl & HNO3

Comments: 93°F Clear 1-3 mph SW winds Field Rinsate sample taken after steam cleaning pump

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	71.00		41.65		29.35		0.60	1.09	1.91		32

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TIME	1411	1415	1425				
Volume Purged (Gallons)	10	35	75				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	73.3	72.2	72.8				
pH	7.33	7.25	7.28				
Specific Conductivity (uncorrected) (micromhos/cm)	2120	2110	2100				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	trace/brn	trace/brn	trace				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.3	1.1	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDZ PROJECT NO.: 94-256

WELL NO.: MW-19 TESTED BY: HA DATE: 9/18/97

Measuring Point Description: Top of casing

Static Water Level (ft): 41.45 Sample Method: Redi Flo2, low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 1345

Purge Method: 3½" S.S. Bailer Sample Depth (ft): 41.30

Time Start Purge: 1250 Field Filtering: metals only

Time End Purge: 1308 Field Preservation: HCl

Comments: 86°F Clear 1-3 mph SW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole (1.09)	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	58.80		41.45		17.35						19 x3 = 57

TIME	1252	1255	1259				
Volume Purged (Gallons)	20	35	50				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	75.0	72.7	72.8				
pH	7.80	7.47	7.29				
Specific Conductivity (uncorrected) (micromhos/cm)	2130	2130	2140				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	trace/cloudy	trace	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	1.0	1.8	2.6				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WD2 PROJECT NO. 94-256

WELL NO.: MW-21 TESTED BY: H.A DATE: 9/24/94

Measuring Point Description: Top of Casing

Static Water Level (ft): 37.94 Sample Method: Redi flo 2, low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 1025

Purge Method: Redi flo 2 pump Sample Depth (ft): 38.08

Time Start Purge: 0949 Field Filtering: for metals only

Time End Purge: 1008 Field Preservation: HCl & HNO3

Comments: 88°F Cloudy No wind

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	56.65		37.94		18.71						20

TIME	0950	0954	1003	1006			
Volume Purged (Gallons)	5	20	45	60			
Purge Rate (gpm)	—	—	—	—			
Temperature (F°) or (C°)	74.9	74.7	73.6	73.9			
pH	7.09	6.90	6.90	6.86			
Specific Conductivity (uncorrected) (micromhos/cm)	2870	2680	2300	2270			
Dissolved Oxygen (mg/L)	—	—	—	—			
eH(mV) Pt-AgCl ref.	—	—	—	—			
Turbidity/Color	Clear	Clear	Clear	Clear			
Odor	none	none	none	none			
Depth to Water During Purge (ft)	—	—	—	—			
Number of Casing Volumes Removed	0.3	1.0	2.3	3.0			
Dewatered?	No	No	No	No			

A-Field/Forms (4/2/92/mm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: W01 PROJECT NO.: 94-256

WELL NO.: MW-22 TESTED BY: G.A DATE: 9/23/97

Measuring Point Description: Top of casing

Static Water Level (ft): 49.02 Sample Method: Red: Flo 2, low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 1405

Purge Method: 3½" SS. Bailer Sample Depth (ft): 49.00

Time Start Purge: 1327 Field Filtering: for metals only

Time End Purge: 1344 Field Preservation: HCl & HNO3

Comments: Clear 2-5mph sw winds 98°F Field Rinsate sample taken after steam cleaning pump

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole (1.09)	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	77.80		49.02		28.78						31

TIME	1330	1335	1341				
Volume Purged (Gallons)	15	45	70				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	77.0	74.6	74.3				
pH	7.18	6.99	6.98				
Specific Conductivity (uncorrected) (micromhos/cm)	2040	2000	2020				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	cloudy	cloudy	cloudy				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.5	1.5	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: W01 PROJECT NO.: 94-256

WELL NO.: MW-23 TESTED BY: D.A DATE: 9/22/97

Measuring Point Description: Top of casing

Static Water Level (ft): 47.80 Sample Method: Redi Flow 2, low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 1045

Purge Method: 3½" SS. Bailer Sample Depth (ft): 47.88

Time Start Purge: 0946 Field Filtering: for metals only

Time End Purge: 1003 Field Preservation: HCl & HNO3

Comments: 76°F Clear 1-3 mph SW winds Duplicate sample taken

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.24		47.80		15.44		0.60	1.09	1.91		17

TIME	0948	0953	1001				
Volume Purged (Gallons)	10	35	60				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	72.4	71.4	71.5				
pH	7.28	7.14	7.21				
Specific Conductivity (uncorrected) (micromhos/cm)	2210	2230	2200				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	moderate	cloudy	cloudy				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.6	2.1	3.5				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: mw-24 TESTED BY: H.O. DATE: 9/19/97

Measuring Point Description: Top of casing

Static Water Level (ft): 49.42 Sample Method: Redi Flow 2, low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 1355

Purge Method: 3½" SS. Bailer Sample Depth (ft): 49.42

Time Start Purge: 1254 Field Filtering: for metals only

Time End Purge: 1335 Field Preservation: HCl + HNO_3

Comments: SW Winds 2-5mph 88°F Field rinsate sample taken after steam cleaning pump

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	113.10		49.42		63.68		0.60	1.09	1.91		69

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TIME	1300	~~1340~~ 1325	1332				
Volume Purged (Gallons)	40	119 ~~12~~ 140	165				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	73.9	74.3	72.7				
pH	7.53	7.43	7.29				
Specific Conductivity (uncorrected) (micromhos/cm)	2280	2290	2290				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	cloudy	trace	trace				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.6	2.0	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WO1 PROJECT NO.: 94-256

WELL NO.: MW-26 TESTED BY: A.Q DATE: 9/19/97

Measuring Point Description: Top of Casing

Static Water Level (ft): 39.09 Sample Method: Redi Flow 2, low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 1206

Purge Method: 3½" SS bailer Sample Depth (ft): 39.09

Time Start Purge: 1109 Field Filtering: metals only

Time End Purge: 1126 Field Preservation: HCl + HNO3

Comments: SW winds @ 1-3 mph 81°F

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	62.50		39.09		23.41						25

TIME	1111	1117	1121				
Volume Purged (Gallons)	20	40	65				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	73.3	72.1	71.7				
pH	7.82	7.55	7.43				
Specific Conductivity (uncorrected) (micromhos/cm)	2230	2220	2210				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	trace	trace	trace				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.8	1.6	2.2				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDT PROJECT NO. 94-256

WELL NO.: mw-27 TESTED BY: HQ DATE: 9/19/97

Measuring Point Description: Top of casing

Static Water Level (ft): 40.31 Sample Method: Rediflow 2, low flow pump

Water Level Measurement Method: Electric sounder Time Sampled: 1020'

Purge Method: 3½" SS Bailer Sample Depth (ft): 40.37

Time Start Purge: 0923 Field Filtering: metals only

Time End Purge: 0943 Field Preservation: HCl & HNO3

Comments: Calibrated Hydac SN9311 SW winds @ 1-3 mph 77°F.

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	62.85		40.31		22.54						25

TIME	0926	0929	0940				
Volume Purged (Gallons)	15	25	65				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	73.2	71.8	71.9				
pH	7.34	7.13	6.93				
Specific Conductivity (uncorrected) (micromhos/cm)	2080	2040	2100				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	trace	trace	cloudy				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.6	1.0	2.6				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-256

WELL NO.: mw-28 TESTED BY: J.a DATE: 9/18/97

Measuring Point Description: top of casing

Static Water Level (ft): 40.76 Sample Method: Red; flow 2, low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 1035 JA

Purge Method: 3½" SS. Bailer Sample Depth (ft): 40.72

Time Start Purge: 1030 Field Filtering: for metals only

Time End Purge: 1050 Field Preservation: HCl

Comments: 78°F Clear SW winds @ 1-3 mph

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole (0.60)	4 inch casing 10 inch borehole (1.09)	6 inch casing 12 inch borehole (1.91)	=	Volume (gal) (one well)
	63.35		40.76		22.59						25

TIME	1036	1040	1047				
Volume Purged (Gallons)	25	40	70				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	73.7	73.1	72.6				
pH	7.18	7.04	7.00				
Specific Conductivity (uncorrected) (micromhos/cm)	2160	2140	2110				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	cloudy, brn	→ cloudy	cloudy, brn				
Odor	none	→ none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	1.0	1.6	2.8				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-29 TESTED BY: D.G DATE: 9/18/97

Measuring Point Description: Top of casing

Static Water Level (ft): 40.98 Sample Method: Red. Flow 2 low flow pump

Water Level Measurement Method: Electric Sounder Time Sampled: 1022

Purge Method: 3½" S.S. Bailer Sample Depth (ft): 40.98

Time Start Purge: 0850 Field Filtering: for metals only

Time End Purge: 0915 Field Preservation: HCl

Comments: Calibrated Hydac #SN9311 75°F SW winds 1-3 mph

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.18		40.98		22.2		0.60	1.09	1.91		24

x3 = 75

TIME	0907	0911	0915				
Volume Purged (Gallons)	65	80	100				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	72.9	71.9	72.2				
pH	7.28	7.30	7.22				
Specific Conductivity (uncorrected) (micromhos/cm)	2040	2030	2030				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	Cloudy/trace	Cloudy	trace				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	2.6	3.3	4.2				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: GW-30 TESTED BY: RP DATE: 9/17/97

Measuring Point Description: TOP OF CASING

Static Water Level (ft): 40.73' Sample Method: LOW FLOW PUMP

Water Level Measurement Method: SOUNDER Time Sampled: ~~3:15~~ 0831

Purge Method: BAILER Sample Depth (ft): 40.81' (9/18/97 07:49)

Time Start Purge: Field Filtering: YES

Time End Purge: Field Preservation: YES

Comments:

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	93.25'		40.73		52.52						57.2468

TIME		3:20		9/18/97			
Volume Purged (Gallons)				500			
Purge Rate (gpm)							
Temperature (F°) or (C°)		24.3 ~~23.8~~ °C	22.2	73.1 °F			
pH	6.62	~~7.09~~ 7.06	6.94	8.2			
Specific Conductivity (uncorrected) (micromhos/cm)				400			
Dissolved Oxygen (mg/L)							
eH(mV) Pt-AgCl ref.							
Turbidity/Color							
Odor	NONE						
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?							

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-256

WELL NO.: MW-31 TESTED BY: HG DATE: 9/30/97

Measuring Point Description: Top of casing

Static Water Level (ft): 47.95 Sample Method: Red; Flo2, low flow pump

Water Level Measurement Method: Electric sounder Time Sampled: 0825

Purge Method: 3 1/2" SS. Bailer Sample Depth (ft): 48.22

Time Start Purge: 0741 Field Filtering: for metals only

Time End Purge: 0755 Field Preservation: HCl + HNO3

Comments: Calibrated Hydac SN9305. Overcast, cloudy morning 68°F

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size			=	Volume (gal) (one well)
	63.13		47.95		15.18		2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole		16
							0.60	1.09	1.91		

TIME	0744	0747	0754				
Volume Purged (Gallons)	10	25	60				
Purge Rate (gpm)	—	—	—				
Temperature (F°) or (C°)	71.6	70.4	70.3				
pH	6.94	6.89	6.80				
Specific Conductivity (uncorrected) (micromhos/cm)	2140	2150	2160				
Dissolved Oxygen (mg/L)	—	—	—				
eH(mV) Pt-AgCl ref.	—	—	—				
Turbidity/Color	trace	trace	trace				
Odor	none	none	none				
Depth to Water During Purge (ft)	—	—	—				
Number of Casing Volumes Removed	0.6	1.6	3.8				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WD7 PROJECT NO. 94.256

WELL NO.: MW-01 TESTED BY: DA DATE: 1/30/98

Measuring Point Description: Top of casing

Static Water Level (ft): 35.26 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1120

Purge Method: GrundFos Redi Flow 2 Sample Depth (ft): 35.26

Time Start Purge: 1056 Field Filtering: For metals only

17 min @ 4.5 gpm

Time End Purge: 1114 DA Field Preservation: HCl and HNO3 as needed

Comments: Clear 64°F 1-3mph NW wind Surface cover screws missing, well is locked and intact.

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	59.74		35.26		22.48		0.60	1.09	1.91		25

TIME	1057	1102	1107				
Volume Purged (Gallons)	5	27	50				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	70.6	71.7	71.8				
pH	7.27	7.06	7.02				
Specific Conductivity (uncorrected) (micromhos/cm)	2270	2140	2120				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.1	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-256

WELL NO.: MW-02 TESTED BY: H.Q. DATE: 1/29/98

Measuring Point Description: Top of casing

Static Water Level (ft): 30.96 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1400

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 30.96

Time Start Purge: 1330 Field Filtering: For metals only

16 min @ 4.5 gpm

Time End Purge: 1347 Field Preservation: HCl and HNO_3 as needed.

Comments: pH probe not working 69°F Clear 2-5 mph NW wind No lock on well, lock tab is broken Field Rinsate sample taken after pump decon (WDI-MWFR02-0 Duplicate sample taken (WDI-MWFD02-05)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	52.75		30.96		21.79						24

72

TIME	1331	1339	1344				
Volume Purged (Gallons)	5	41	63				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	71.5	70.0	70.7				
pH	—	—	—				
Specific Conductivity (uncorrected) (micromhos/cm)	2470	2590	2590				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear					
Odor	none	none					
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.7	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-03 TESTED BY: H.O. DATE: 1/29/98

Measuring Point Description: Top of casing

Static Water Level (ft): 49.32 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1520

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 49.36

Time Start Purge: 1459 Field Filtering: For metals only

13 min @ 4.5 gpm

Time End Purge: 1513 Field Preservation: HCl and HNO3 as needed.

Comments: 64°F Clear 2-6mph NW winds pH probe not working

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	67.92		49.32		~~18~~ 18.6		0.60	1.09	1.91		20

60

TIME	1500	1505	1510				
Volume Purged (Gallons)	5	27	50				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	71.1	70.7	70.5				
pH	—	—	—				
Specific Conductivity (uncorrected) (micromhos/cm)	2600	2540	2500				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.4	2.5				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-04 TESTED BY: H.Q. DATE: 1/27/98

Measuring Point Description: Top of casing

Static Water Level (ft): 48.53 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1150

Purge Method: Redi Flow 2 Sample Depth (ft): 48.53

15min Time Start Purge: 1128 Field Filtering: For metals only

Time End Purge: 1144 Field Preservation: HCl and HNO3 as needed.

Comments: 67°F Clear 2.5mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	68.33		48.53		19.80						22

TIME	1129	1134	1139				
Volume Purged (Gallons)	5	27	49				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	71.3	70.5	70.2				
pH	7.36	7.15	7.08				
Specific Conductivity (uncorrected) (micromhos/cm)	2770	2790	2760				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.2	2.2				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-05 TESTED BY: H.Q. DATE: 1/26/98

Measuring Point Description: Top of casing

Static Water Level (ft): 48.91 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1458

Purge Method: Redi Flo 2 Sample Depth (ft): 48.93

Time Start Purge: 1430 Field Filtering: For metals only

Time End Purge: 1444 Field Preservation: HCl and HNO3 as needed.

Comments: 69°F clear light 1-3mph wind NW.

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.93		48.91		15.02		0.60	1.09	1.91		16

TIME	1431	1440	1444
Volume Purged (Gallons)	5	40	56
Purge Rate (gpm)	NM	NM	NM
Temperature (F°) or (C°)	70.2	69.3	70.2
pH	6.91	7.00	6.89
Specific Conductivity (uncorrected) (micromhos/cm)	2830	2910	2950
Dissolved Oxygen (mg/L)	NM	NM	NM
eH(mV) Pt-AgCl ref.	NM	NM	NM
Turbidity/Color	clear	clear	clear
Odor	none	none	none
Depth to Water During Purge (ft)	NM	NM	NM
Number of Casing Volumes Removed	0.3	2.5	3.5
Dewatered?	No	No	No

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-06 TESTED BY: H.C. DATE: 1/26/98

Measuring Point Description: Top of casing

Static Water Level (ft): 40.68 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1214

Purge Method: Redi Flow 2. Sample Depth (ft): 40.68

Time Start Purge: 1147 Field Filtering: For metals only

Time End Purge: 1206 Field Preservation: HCl and HNO3 as needed.

Comments: 69°F Clear

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.95		40.68		22.27		0.60	1.09	1.91		24

TIME	1148	1156	1201				
Volume Purged (Gallons)	5	31	56				
Purge Rate (gpm)	~~NM~~ 4	~~NM~~ 4	~~NM~~ 4				
Temperature (F°) or (C°)	72.8	70.8	71.0				
pH	7.38	7.14	7.09				
Specific Conductivity (uncorrected) (micromhos/cm)	2760	2720	2740				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.3	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/mm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-256

WELL NO.: MW-07 TESTED BY: H.Q. DATE: 1/26/98

Measuring Point Description: Top of casing

Static Water Level (ft): 37.05 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1354

Purge Method: Redi Flow 2 Sample Depth (ft): 37.06

Time Start Purge: 1323 Field Filtering: For metals only

Time End Purge: 1406 Field Preservation: HCl and HNO3 as needed.

Comments: Cement slab around well is broken into 3 pcs. Duplicate sample

69°F Clear, sunny light NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.10		37.05		21.05		0.60	1.09	1.91		23

TIME	1324	1328	1332				
Volume Purged (Gallons)	5	20	36				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	73.0	72.3	72.3				
pH	7.39	7.18	7.12				
Specific Conductivity (uncorrected) (micromhos/cm)	2880	2980	2970				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	0.9	1.6				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-08 TESTED BY: H.Q. DATE: 1/30/98

Measuring Point Description: Top of casing

Static Water Level (ft): 47.63 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1210

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 47.63

Time Start Purge: 1153 Field Filtering: For metals only

12 min @ 4.5 gpm

Time End Purge: 1205 Field Preservation: HCl and HNO3 as needed.

Comments: 63°F Clear 1-3 mph NW winds Field Rinsate sample taken after decon

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.87		47.63		15.24		0.60	1.09	1.91		17

51

TIME	1154	1159	1201				
Volume Purged (Gallons)	5	18	36				
Purge Rate (gpm)	~~NM~~ 4.5	NM	NM				
Temperature (F°) or (C°)	70.4	71.8	72.1				
pH	7.08	6.96	6.91				
Specific Conductivity (uncorrected) (micromhos/cm)	2140	2110	2130				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.1	2.1				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-09 TESTED BY: H.Q. DATE: 1/30/98

Measuring Point Description: Top of casing

Static Water Level (ft): 37.92 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1020

Purge Method: Grundfos Redi Flow 2. Sample Depth (ft): 38.50

Time Start Purge: 0954 Field Filtering: For metals only

14 min @ 4.5 gpm

Time End Purge: 1009 HQ. 1015 Field Preservation: HCl and HNO3 as needed.

Comments: Calibrated Hydac SN 9308 to pH 7, 10 and spec. cond 717 µS

61°F Clear 1-3 mph NW wind. Well in standing water, surface enclosure is empty. well seal maybe leaking Replaced PVC cap w/ a test well plug

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	57.59		37.92		19.67						21

TIME	0955	1000	1005	1010			
Volume Purged (Gallons)	5	27	50	72			
Purge Rate (gpm)	NM	NM	NM	~~NM~~ 4.5			
Temperature (F°) or (C°)	69.6	70.8	70.9	70.9			
pH	7.35	7.12	7.06	7.06			
Specific Conductivity (uncorrected) (micromhos/cm)	2110	2120	2110	2120			
Dissolved Oxygen (mg/L)	NM	NM	NM	NM			
eH(mV) Pt-AgCl ref.	NM	NM	NM	NM			
Turbidity/Color	trace	clear	clear	clear			
Odor	none	none	none	none			
Depth to Water During Purge (ft)	NM	NM	NM	NM			
Number of Casing Volumes Removed	0.2	1.3	2.4	3.4			
Dewatered?	No	No	No	No			

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-10 TESTED BY: H.Q. DATE: 1/29/98

Measuring Point Description: Top of casing

Static Water Level (ft): 37.62 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1245

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 37.62

Time Start Purge: 1221 Field Filtering: For metals only

15 min

Time End Purge: 1237 Field Preservation: HCl and HNO3 as needed.

Comments: pH not working 61°F Cloudy 3-6mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.16		37.62		20.54		0.60	1.09	1.91		22

66

TIME	1227	1228	1232				
Volume Purged (Gallons)	5	31	49				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	72.6	72.3	72.4				
pH	—	—	—				
Specific Conductivity (uncorrected) (micromhos/cm)	2100	2100	2160				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	trace	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.4	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW- 11 TESTED BY: H.Q. DATE: 1/29/98

Measuring Point Description: Top of casing

Static Water Level (ft): 38.04 Sample Method: Grundfos "Red: Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1127

Purge Method: Grundfos Red: Flow 2 Sample Depth (ft): 38.08

Time Start Purge: 1035 Field Filtering: For metals only

47 ~~53~~ min @ 6.3 gpm

Time End Purge: 1122 Field Preservation: HCl and HNO3 as needed.

Comments: 58°F Cloudy 1-3 mph NW wind pH not working on Hydac

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	128.15		38.04		90.11		0.60	1.09	1.91		98 x3=294

TIME	1036	1102	1138				
Volume Purged (Gallons)	5	158	340				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	69.1	69.3	70.4				
pH	—	—	—				
Specific Conductivity (uncorrected) (micromhos/cm)	2780	2760	2830				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.6	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-13 TESTED BY: H.C. DATE: 1/27/98

Measuring Point Description: Top of casing

Static Water Level (ft): 40.61 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1040

Purge Method: Redi Flow 2 Sample Depth (ft): 40.61

Time Start Purge: 1018 Field Filtering: For metals only

13 min

Time End Purge: 1032 Field Preservation: HCl and HNO3 as needed.

Comments: 65°F Clear light winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.35		40.61		17.74		0.60	(1.09)	1.91		19

TIME	1019	1022	1025				
Volume Purged (Gallons)	5	22	32				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	70.5	71.3	71.1				
pH	6.90	6.85	6.83				
Specific Conductivity (uncorrected) (micromhos/cm)	3220	2950	2910				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	~~1.4~~ 1.2	1.7				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-14 TESTED BY: H.Q. DATE: 1/28/98

Measuring Point Description: Top of casing

Static Water Level (ft): 40.80 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1335

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 40.82

Time Start Purge: 1315 Field Filtering: For metals only

12 min

Time End Purge: 1328 Field Preservation: HCl and HNO3 as needed.

Comments: 69°F Clear 2-5 mph NW wind

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	57.50		40.80		16.70						18

54

TIME	1316	1320	1324				
Volume Purged (Gallons)	5	23	41				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	70.5	71.2	71.2				
pH	6.58	7.01	7.17				
Specific Conductivity (uncorrected) (micromhos/cm)	2580	2520	2550				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.3	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-15 TESTED BY: H.Q. DATE: 1/27/98

Measuring Point Description: Top of casing

Static Water Level (ft): 46.03 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0830

Purge Method: Redi Flow 2 Sample Depth (ft): 46.03

Time Start Purge: 0804 Field Filtering: For metals only

Time End Purge: 0821 Field Preservation: HCl and HNO3 as needed.

Comments: Calibrated Hydac SN 9502 to pH 7.0, 10.0 and spec. cond 1413 µs.

60°F Clear, sunny

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	68.35		46.03		22.32		0.60	1.09	1.91		24

TIME	0805	0808	0813				
Volume Purged (Gallons)	5	18	40				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	1.2	69.1	69.1				
pH	7.63	7.25	7.15				
Specific Conductivity (uncorrected) (micromhos/cm)	2710	2720	2700				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	0.8	1.7				
Dewatered?	NO	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-16 TESTED BY: H.Q. DATE: 1/27/98

Measuring Point Description: Top of casing

Static Water Level (ft): 46.34 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0933

Purge Method: Redi Flow 2 Sample Depth (ft): 46.34

Time Start Purge: 0904 Field Filtering: For metals only

23 min Time End Purge: 0928 Field Preservation: HCl and HNO3 as needed.

Comments: Concrete slab around well is in several pcs. 63°F Clear, sunny light winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	78.70		46.34		32.36		0.60	1.09	1.91		35

TIME	0905	0913	0927				
Volume Purged (Gallons)	5	41	81				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	68.8	69.6	69.5				
pH	7.35	7.32	7.29				
Specific Conductivity (uncorrected) (micromhos/cm)	2686	2710	2700				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.2	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-18 TESTED BY: H.Q. DATE: 1/26/98

Measuring Point Description: Top of casing

Static Water Level (ft): 42.52 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1059

Purge Method: Redi Flo 2. Sample Depth (ft): 42.52

Time Start Purge: 1030 Field Filtering: For metals only

Time End Purge: 1055 Field Preservation: HCl and HNO_3 as needed.

Comments: 67°F Clear 1-3 mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	71.0		42.52		28.48		0.60	1.09	1.91		31

TIME	1031	1039	1045				
Volume Purged (Gallons)	5	30	60				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	73.7	71.1	70.3				
pH	7.78	7.48	7.44				
Specific Conductivity (uncorrected) (micromhos/cm)	2850	2710	2700				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.0	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-19 TESTED BY: H.Q. DATE: 1/26/98

Measuring Point Description: Top of casing

Static Water Level (ft): 42.29 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0909

Purge Method: Redi Flo 2 Sample Depth (ft): 42.59

Time Start Purge: 0838 Field Filtering: For metals only

Time End Purge: 0850 Field Preservation: HCl and HNO3 as needed.

Comments: Calibrated Hydac SN9502 to pH 7 and 10, spec cond 1413 µs. 63°F Clear, Sunny

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.80		42.29		16.51		0.60	1.09	1.91		18 x3 = 54

TIME	0839	0842	0845				
Volume Purged (Gallons)	5	20	35				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	68.8	69.8	69.8				
pH	7.34	7.14	7.09				
Specific Conductivity (uncorrected) (micromhos/cm)	2650	2760	2770				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed			2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-21 TESTED BY: H.Q. DATE: 1/28/97

Measuring Point Description: Top of casing

Static Water Level (ft): 38.67 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0915

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 38.68

Time Start Purge: 0852 Field Filtering: For metals only

13 min

Time End Purge: 0905 Field Preservation: HCl and HNO3 as needed.

Comments: Hazy sun 55°F

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	56.65		38.67		17.98		0.60	1.09	1.91		19

57

TIME	0853	0858	0902				
Volume Purged (Gallons)	5	27	45				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	71.8	71.1	70.2				
pH	6.54	6.41	6.31				
Specific Conductivity (uncorrected) (micromhos/cm)	2740	2510	2430				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.4	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-256

WELL NO.: MW- 22 TESTED BY: H.Q. DATE: 1/29/98

Measuring Point Description: Top of casing

Static Water Level (ft): 50.31 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0827

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 50.31

Time Start Purge: 0758 Field Filtering: For metals only

20 min Time End Purge: 0818 Field Preservation: HCl and HNO3 as needed.

Comments: 55°F Rain

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	77.80		50.31		27.49						30

TIME	0759	0806	0813				
Volume Purged (Gallons)	5	36	68				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	69.6	70	70.1				
pH	7.23	7.29	7.31				
Specific Conductivity (uncorrected) (micromhos/cm)	2350	2340	2330				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.2	2.3				
Dewatered?	NO	NO	NO				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-23 TESTED BY: H.O. DATE: 1/28/98

Measuring Point Description: Top of casing

Static Water Level (ft): 49.01 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1510

Purge Method: Grundfos Redi Flow 2. Sample Depth (ft):

Time Start Purge: 1451 Field Filtering: For metals only

Time End Purge: ~~1445~~ 1503 Field Preservation: HCl and HNO3 as needed.

Comments: 71° Clear ~~1682~~ 2-5 mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.24		49.01		14.23		0.60	1.09	1.91		16

TIME	1452	1455	1458				
Volume Purged (Gallons)	5	18	32				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	70.6	71.4	71.6				
pH	7.43	7.53	7.60				
Specific Conductivity (uncorrected) (micromhos/cm)	2630	2680	2720				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.1	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-256

WELL NO.: MW-24 TESTED BY: H.Q. DATE: 1/29/98

Measuring Point Description: Top of casing

Static Water Level (ft): 50.38 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0955

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 50.89

Time Start Purge: 0910 Field Filtering: For metals only

32 min @ 5.5 GPM.

Time End Purge: 0947 Field Preservation: HCl and HNO3 as needed.

Comments: 57°F Rain - well head under water - siphoned water off before opening well head. seal intact. pH on pHydac is not working

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole (1.09)	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	113.10		50.38		62.72						68

205

TIME	0911	0916	0924	0935			
Volume Purged (Gallons)	5	33	77	137			
Purge Rate (gpm)	NM	NM 5.5	NM	5.5			
Temperature (F°) or (C°)	69.5	69.7	68.5	68.1			
pH	6.69	6.80	6.89	—			
Specific Conductivity (uncorrected) (micromhos/cm)	2780	2730	2710	2780			
Dissolved Oxygen (mg/L)	NM	NM	NM	NM			
eH(mV) Pt-AgCl ref.	NM	NM	NM	NM			
Turbidity/Color	clear	clear	clear	clear			
Odor	none	none	none	none			
Depth to Water During Purge (ft)	NM	NM	NM	NM			
Number of Casing Volumes Removed	0.1	0.5	1.1	2.0			
Dewatered?	No	No	No	No			

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-26 TESTED BY: H.Q. DATE: 1/28/98

Measuring Point Description: Top of casing

Static Water Level (ft): 40.03 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1203

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 40.03

Time Start Purge: 1140 Field Filtering: For metals only

17 min Time End Purge: 1158 Field Preservation: HCl and HNO3 as needed.

Comments: Recalibrated pH meter Hazy, winds · 13mph NW 68°F

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.50		40.03		22.47		0.60	1.09	1.91		25

TIME	1141	1146	1151				
Volume Purged (Gallons)	5	27	45				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	69.8	70.4	71.1				
pH	5.89	6.35	6.56				
Specific Conductivity (uncorrected) (micromhos/cm)	2650	2650	2630				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.1	1.8				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WD1 PROJECT NO. 94-256

WELL NO.: MW-27 TESTED BY: H.Q. DATE: 1/28/98

Measuring Point Description: Top of casing

Static Water Level (ft): 41.19 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1020

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 41.24

Time Start Purge: 0957 Field Filtering: For metals only

16 min Time End Purge: 1014 Field Preservation: HCl and HNO3 as needed.

Comments: 66°F Hazy sun 1-3mph NW winds pH probe out of calib., no pH measurements taken. Duplicate sample taken (WD1-MWFD 27-05)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	62.85		41.19		21.66						24

72

TIME	0958	1006	1011
Volume Purged (Gallons)	5	41	63
Purge Rate (gpm)	NM	NM	NM
Temperature (F°) or (C°)	70.2	71.5	71.1
pH	NM	NM	NM.
Specific Conductivity (uncorrected) (micromhos/cm)	2580	2450	2470
Dissolved Oxygen (mg/L)	NM	NM	NM
eH(mV) Pt-AgCl ref.	NM	NM	NM
Turbidity/Color	clear	clear	clear
Odor	none	none	none
Depth to Water During Purge (ft)	NM	NM	NM
Number of Casing Volumes Removed	0.2	1.7	2.6
Dewatered?	No	No	No

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: mw-28 TESTED BY: H.Q. DATE: 1/28/98

Measuring Point Description: Top of casing

Static Water Level (ft): 41.56 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0810

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 41.57

Time Start Purge: 0747 Field Filtering: For metals only

16 min

Time End Purge: 0803 Field Preservation: HCl and HNO3 as needed.

Comments: Calibrated Hydrus SN 9502 to pH 7 and 10 and spec cond to 1413 µs. Heavy fog, 46°F no winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.35		41.56		21.79		0.60	1.09	1.91		24

TIME	0748	0752	0758				
Volume Purged (Gallons)	5	23	50				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	67.6	69.8	70.2				
pH	7.25	7.03	7.00				
Specific Conductivity (uncorrected) (micromhos/cm)	2290	2280	2300				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear					
Odor	none	none					
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.0	2.1				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-29 TESTED BY: H.C. DATE: 1/27/98

Measuring Point Description: Top of casing

Static Water Level (ft): 41.73 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1550

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 41.77

Time Start Purge: 1527 Field Filtering: For metals only

15 Time End Purge: 1542 Field Preservation: HCl and HNO3 as needed.

Comments: 66°F Clear Sunny 2-5mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.18		41.73		21.45		0.60	1.09	1.91		23

70

TIME	1528	1533	1537				
Volume Purged (Gallons)	5	27	45				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	70.7	70.4	70.2				
pH	7.20	7.16	7.10				
Specific Conductivity (uncorrected) (micromhos/cm)	2220	2270	2210				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.2	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-30 TESTED BY: H.Q. DATE: 1/27/98

Measuring Point Description: Top of casing

Static Water Level (ft): 41.37 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1500

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 41.33

Time Start Purge: 1412 Field Filtering: For metals only

37 min

Time End Purge: 1450 Field Preservation: HCl and HNO3 as needed.

Comments: Recalibrated spec. cond. on Hydac. (1638 -> 1413) 69°F Clear 2-5mph NW wind.

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	93.25		41.37		51.88						56

x3 = 168

TIME	1413	1422	1432	1444			
Volume Purged (Gallons)	5	45	90	144			
Purge Rate (gpm)	NM	NM	NM	~4.5			
Temperature (F°) or (C°)	72.0	70.4	70.3	70.2			
pH	7.79	7.69	7.61	7.55			
Specific Conductivity (uncorrected) (micromhos/cm)	1029	1002	1013	1009			
Dissolved Oxygen (mg/L)	NM	NM	NM	NM			
eH(mV) Pt-AgCl ref.	NM	NM	NM	NM			
Turbidity/Color	cloudy	clear	clear	clear			
Odor	none	none	none	none			
Depth to Water During Purge (ft)	NM	NM	NM	NM			
Number of Casing Volumes Removed	0.1	0.8	1.6	2.6			
Dewatered?	No	No	No	No			

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-31 TESTED BY: H.C. DATE: 1/27/98

Measuring Point Description: Top of casing

Static Water Level (ft): 48.96 Sample Method: Grundfos "Redi Flow 2" (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1320

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 48.96

Time Start Purge: 1303 Field Filtering: For metals only

10 min

Time End Purge: 1314 Field Preservation: HCl and HNO3 as needed.

Comments: Sunny 70°F 3-5 mph NW winds Filled Rinsate sample after decon of pump/check valve.

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.13		48.96		14.17		0.60	(1.09)	1.91		15

TIME	1304	1306	1309				
Volume Purged (Gallons)	5	14	~~2~~ 27 ~~45~~				
Purge Rate (gpm)	NM	NM	NM				
Temperature (F°) or (C°)	70.3	70.9	71.2				
pH	7.36	7.16	7.09				
Specific Conductivity (uncorrected) (micromhos/cm)	2760	2720	2740				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear					
Odor	none	none					
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.0	~~3.0~~ 1.9				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM = Not Measured.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-01 TESTED BY: H.Q. DATE: 4/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 32.93 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0745

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 32.95

Time Start Purge: 0725 Field Filtering: for metals only

Time End Purge: 0741 Field Preservation: HCl and HNO3 as needed

Comments: 63.5°F 29.71" Hg clear still

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	57.74		32.93		24.81		0.60	1.09	1.91		27

x3 = 81

TIME	0726	0731	0735				
Volume Purged (Gallons)	5	31	52				
Purge Rate (gpm)	~5.2	→	→				
Temperature (F°) or (C°)	68.6	69.7	70.0				
pH	7.37	7.14	7.11				
Specific Conductivity (uncorrected) (micromhos/cm)	2420	2330	2260				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.2	1.9				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-254

WELL NO.: MW-02 TESTED BY: B.Q. DATE: 4/16/98

Measuring Point Description: Top of casing

Static Water Level (ft): 28.74 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1415

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 28.74

Time Start Purge: 1347 Field Filtering: for metals only

Time End Purge: ~~1402~~ 1407 Field Preservation: HCl and HNO_3 as needed

Comments: 74°F Clear · Pump off ~5 min, generator off due to low oil switch

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	52.75		28.74		24.01		0.60	1.09	1.91		26

X3 = 78

TIME	1347	1351	1400				
Volume Purged (Gallons)	5	21	52				
Purge Rate (gpm)	~5.2 →						
Temperature (F°) or (C°)	71.1	71.2	71.1				
pH	7.41	7.41	7.34				
Specific Conductivity (uncorrected) (micromhos/cm)	2080	2270	2290				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	0.8	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-03 TESTED BY: H.Q. DATE: 4/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 47.10 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0940

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 47.11

Time Start Purge: 0913 Field Filtering: for metals only

Time End Purge: 14 0927 Field Preservation: HCl and HNO_3 as needed

Comments: Duplicate sample taken (WD2-MWFD 03-06) 75°F clear still

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	67.92		47.10		20.82		0.60	1.09	1.91		23

x3 = 69

TIME	0914	0917	0923				
Volume Purged (Gallons)	5	21	52				
Purge Rate (gpm)	~5.2						
Temperature (F°) or (C°)	69.5	70.6	70.7				
pH	7.41	7.24	7.32				
Specific Conductivity (uncorrected) (micromhos/cm)	2350	2390	2360				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	0.9	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-254

WELL NO.: MW-04 TESTED BY: J.C. DATE: 4/17/98

Measuring Point Description: Top of casing

Static Water Level (ft): 46.26 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1340

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 46.26

Time Start Purge: 1315 Field Filtering: for metals only

Time End Purge: 15 1330 Field Preservation: HCl and HNO_3 as needed

Comments:

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	68.33		46.26		22.07		0.60	1.09	1.91		24

x3 = 72

TIME	1316	1321	1327				
Volume Purged (Gallons)	5	31	62				
Purge Rate (gpm)	5.2 →	→	→				
Temperature (F°) or (C°)	70.1	69.8	69.4				
pH	7.14	7.06	7.03				
Specific Conductivity (uncorrected) (micromhos/cm)	2390	2430	2440				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.3	2.6				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-05 TESTED BY: D.Q. DATE: 4/16/98

Measuring Point Description: Top of casing

Static Water Level (ft): 46.73 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1310

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 46.73

Time Start Purge: 1246 Field Filtering: for metals only

Time End Purge: 1252 Field Preservation: HCl and HNO_3 as needed

Comments: 73.4°F Clear, 1-3 mph NW wind Duplicate sample taken (WDI-MWFD05-06)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.93		46.73		17.20		0.60	1.09	1.91		19

x3 = 57

TIME	1247	1251	1255				
Volume Purged (Gallons)	5	26	47				
Purge Rate (gpm)	~5.2						
Temperature (F°) or (C°)	67.6	68.4	68.6				
pH	7.09	6.92	6.91				
Specific Conductivity (uncorrected) (micromhos/cm)	2390	2420	2440				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.4	2.5				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-06 TESTED BY: D.Q. DATE: 4/15/98

Measuring Point Description: Top of casing

Static Water Level (ft): 38.40 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1055

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 38.43

Time Start Purge: 1031 Field Filtering: for metals only

Time End Purge: 1047 Field Preservation: HCl and HNO3 as needed

Comments: 68.9°F Clear, sunny 1-3 mph NW wind

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.95		38.40		24.55		0.60	1.09	1.91		27 x3 = 81

TIME	1032	1035	1039				
Volume Purged (Gallons)	5	21	42				
Purge Rate (gpm)	~6.2						
Temperature (F°) or (C°)	69.4	68.5	68.2				
pH	7.27	7.11	7.05				
Specific Conductivity (uncorrected) (micromhos/cm)	2240	2160	2170				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	0.8	1.6				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/tmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-07 TESTED BY: H.Q. DATE: 4/15/98

Measuring Point Description: Top of casing

Static Water Level (ft): 34.83 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1155

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 34.84

Time Start Purge: 1134 Field Filtering: for metals only

Time End Purge: 1149 Field Preservation: HCl and HNO3 as needed

Comments: Cement slab broken. 66.2° Clear 2.5mph NW wind

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.10		34.83		23.27		0.60	1.09	1.91		25

23 ~ 75

TIME	1135	1140	1146				
Volume Purged (Gallons)	5	31	62				
Purge Rate (gpm)	~5.2						
Temperature (F°) or (C°)	68.4	69.5	69.1				
pH	6.89	6.87	6.90				
Specific Conductivity (uncorrected) (micromhos/cm)	4120	3660	3500				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.2	2.5				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-256

WELL NO.: MW-08 TESTED BY: J.Q. DATE: 4/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 43.50 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0835

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 43.50

Time Start Purge: 0818 Field Filtering: for metals only

Time End Purge: 0831 (13) Field Preservation: HCl and HNO_3 as needed

Comments: 69.8°F

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.87		43.50		19.37		0.60	1.09	1.91		21

x3=63

TIME	0819	0823	0827				
Volume Purged (Gallons)	5	26	47				
Purge Rate (gpm)	~5.2	→	→				
Temperature (F°) or (C°)	69.5	70.4					
pH	7.07	7.02	7.09				
Specific Conductivity (uncorrected) (micromhos/cm)	2290	2260	2300				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.2	2.2				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-254

WELL NO.: MW-09 TESTED BY: D.Q. DATE: 4/17/98

Measuring Point Description: Top of casing

Static Water Level (ft): 33.85 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1245

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 33.82

Time Start Purge: 1220 Field Filtering: for metals only

Time End Purge: 1235 Field Preservation: HCl and HNO_3 as needed

Comments: 76°F 29.85" Hg Clear, sunny

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	57.59		33.85		23.74		0.60	1.09	1.91		26

x 3 = 78

TIME	1221	1224	1231				
Volume Purged (Gallons)	5	21	57				
Purge Rate (gpm)	~5.2	→	→				
Temperature (F°) or (C°)	71.4	71.4	71.1				
pH	7.14	7.08	7.08				
Specific Conductivity (uncorrected) (micromhos/cm)	2350	2390	2340				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	0.8	2.2				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-254

WELL NO.: MW-10 TESTED BY: B.Q. DATE: 4/15/98

Measuring Point Description: Top of casing

Static Water Level (ft): 35.66 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1550

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 35.68

Time Start Purge: 1527 Field Filtering: for metals only

Time End Purge: 1542 Field Preservation: HCl and HNO3 as needed

Comments: 67.1°F Clear 3-8mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.16		35.66		22.5		0.60	1.09	1.91		25

x3 = 75

TIME	1528	1532	1538
Volume Purged (Gallons)	5	26	57
Purge Rate (gpm)	5.2		
Temperature (F°) or (C°)	70.4	70.2	70.2
pH	6.82	6.81	6.80
Specific Conductivity (uncorrected) (micromhos/cm)	1846	1814	1908
Dissolved Oxygen (mg/L)	NM	NM	NM
eH(mV) Pt-AgCl ref.	NM	NM	NM
Turbidity/Color	clear	clear	clear
Odor	none	none	none
Depth to Water During Purge (ft)	NM	NM	NM
Number of Casing Volumes Removed	0.2	1.0	2.3
Dewatered?	No	No	No

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-254

WELL NO.: MW-11 TESTED BY: H.Q. DATE: 4/14/98

Measuring Point Description: Top of casing

Static Water Level (ft): 37.90 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1515

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 38.93

Time Start Purge: 1417 Field Filtering: for metals only

Time End Purge: 1505 Field Preservation: HCl and HNO3 as needed

Comments: 69.1° 2-5 mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	128.15		37.90		90.25		0.60	1.09	1.91		98

x3 = 294

TIME	1423	1435	1451				
Volume Purged (Gallons)	31	93.6	192				
Purge Rate (gpm)	5.2						
Temperature (F°) or (C°)	69.3	68.9	68.3				
pH	7.06	7.09	7.12				
Specific Conductivity (uncorrected) (micromhos/cm)	2410	2390	2400				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear					
Odor	none	none					
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	H.G. 0.94 ~~1.96~~	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-13 TESTED BY: G.Q. DATE: 4/17/98

Measuring Point Description: Top of casing

Static Water Level (ft): 38.72 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0955

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 38.72

Time Start Purge: 0937 Field Filtering: for metals only

Time End Purge: 0950 Field Preservation: HCl and HNO_3 as needed

Comments: 68.4°F 29.88" Hg Clear 1-2 mph NW winds Field Rinsate sample taken after decon of pump (WDI-MWFR 13-06)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.35		38.72		19.63		0.60	(1.09)	1.91		21

63

TIME	0938	0941	0945				
Volume Purged (Gallons)	5	21	42				
Purge Rate (gpm)	~ 5.2 →	→	→				
Temperature (F°) or (C°)	70.7	70.4	70.7				
pH	6.76	6.89	6.84				
Specific Conductivity (uncorrected) (micromhos/cm)	2690	2470	2460				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.0	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-14 TESTED BY: D.Q. DATE: 4/15/98

Measuring Point Description: Top of casing

Static Water Level (ft): 38.98 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1445

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 38.98

Time Start Purge: 1424 Field Filtering: for metals only

Time End Purge: 1436 Field Preservation: HCl and HNO_3 as needed

Comments: ~~70.9~~ 68.0°F, 29.68" Hg 3-10mph NW wind. Sawdust blowing around asphalt.

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	57.50		38.98		18.52		0.60	(1.09)	1.91		20

x3 = 60

TIME	1426	1429	1432				
Volume Purged (Gallons)	10	26	42				
Purge Rate (gpm)	~5.2 →						
Temperature (F°) or (C°)	69.1	69.5	69.4				
pH	6.99	6.92	6.90				
Specific Conductivity (uncorrected) (micromhos/cm)	2330	2310	2320				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.5	1.3	2.1				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/mm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-254

WELL NO.: MW-15 TESTED BY: H.Q. DATE: 4/14/98

Measuring Point Description: Top of casing

Static Water Level (ft): 44.44 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0750

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 44.13

Time Start Purge: 0721 Field Filtering: for metals only

Time End Purge: 0736 Field Preservation: HCl and HNO3 as needed

Comments: 53.6°F 29.85" Hg Clear still

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	68.35		44.44		23.91		0.60	1.09	1.91		26

TIME	0723	0728	0733				
Volume Purged (Gallons)	10	34	62.4				
Purge Rate (gpm)	~5.2						
Temperature (F°) or (C°)	66.8	67.6	67.3				
pH	7.23	7.27	7.28				
Specific Conductivity (uncorrected) (micromhos/cm)	2370	2370	2370				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.4	1.4	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/mm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-16 TESTED BY: H.Q. DATE: 4/13/98

Measuring Point Description: Top of casing

Static Water Level (ft): 44.51 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0925

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 44.51

Time Start Purge: 0857 Field Filtering: for metals only

Time End Purge: 0919 Field Preservation: HCl and HNO_3 as needed

Comments: 63.5°F 29.71" Hg Partly Cloudy

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole (1.09)	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	78.70		44.51		34.19						37

x3=112

TIME	0859	0904	0914				
Volume Purged (Gallons)	10	36	88				
Purge Rate (gpm)	~5.2	~5.2	~5.2				
Temperature (F°) or (C°)	69.0	68.9	68.2				
pH	7.36	7.27	7.30				
Specific Conductivity (uncorrected) (micromhos/cm)	2400	2380	2250				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	med/lt. brn	clear					
Odor	none	none					
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.0	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-19 TESTED BY: H.Q. DATE: 4/14/98

Measuring Point Description: Top of casing

Static Water Level (ft): 40.30 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1515

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 40.32

Time Start Purge: 1456 Field Filtering: for metals only

Time End Purge: 1508 Field Preservation: HCl and HNO3 as needed

Comments:

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.80		40.30		18.5		0.60	1.09	1.91		20

x3 = 60

TIME	1457	1501	1506				
Volume Purged (Gallons)	5	26	52				
Purge Rate (gpm)	5.2 →						
Temperature (F°) or (C°)	70.4	70.6	69.7				
pH	6.88	6.86	6.89				
Specific Conductivity (uncorrected) (micromhos/cm)	2030	2300	2260				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	Clear	Clear	Clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.3	2.6				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-254

WELL NO.: MW-21 TESTED BY: G.C. DATE: 4/17/98

Measuring Point Description: Top of casing

Static Water Level (ft): 36.52 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1115

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 38.55

Time Start Purge: 1056 Field Filtering: for metals only

Time End Purge: 1110 Field Preservation: HCl and HNO_3 as needed

Comments:

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	56.65				20.13		0.60	(1.09)	1.91		22

x3 = 66

TIME	1057	1100	1104	1108			
Volume Purged (Gallons)	5	21	42	62			
Purge Rate (gpm)	~5.2	→	→	→			
Temperature (F°) or (C°)	71.3	71.3	71.3	71.0			
pH	7.03	6.99	6.99	7.00			
Specific Conductivity (uncorrected) (micromhos/cm)	3250	3020	2720	2600			
Dissolved Oxygen (mg/L)	NM	NM	NM	NM			
eH(mV) Pt-AgCl ref.	NM	NM	NM	NM			
Turbidity/Color	clear	clear	clear	clear			
Odor	none	none	none	none			
Depth to Water During Purge (ft)	NM	NM	NM	NM			
Number of Casing Volumes Removed	0.2	1.0	2.0	2.8			
Dewatered?	No	No	No	No			

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-22 TESTED BY: G.Q. DATE: 4/16/98

Measuring Point Description: Top of casing

Static Water Level (ft): 49.44 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1200

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 49.04

Time Start Purge: 1135 (15min) Field Filtering: for metals only

Time End Purge: 1153 Field Preservation: HCl and HNO3 as needed

Comments: Field Rinsate sample taken after decon. of pump (WDI-MW FR 22-06)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	77.80		49.44		28.36		0.60	1.09	1.91		31

x3 = 93

TIME	1137	1141	1147				
Volume Purged (Gallons)	~~5.2~~ 10	31	62				
Purge Rate (gpm)	~5.2 →						
Temperature (F°) or (C°)	70.2	71.0	70.4				
pH	6.97	6.93	6.96				
Specific Conductivity (uncorrected) (micromhos/cm)	2130	2100	2120				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.0	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-254

WELL NO.: MW-23 TESTED BY: H.Q. DATE: 4/16/98

Measuring Point Description: Top of casing

Static Water Level (ft): 48.02 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0910

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 48.03

Time Start Purge: 0851 Field Filtering: for metals only

Time End Purge: 0901 Field Preservation: HCl and HNO_3 as needed

Comments: 65.3°F Clear, sunny 1-3mph NW wind

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.24		48.02		15.22		0.60	(1.09)	1.91		17

51

TIME	0852	~~0854~~ 0859	0901				
Volume Purged (Gallons)	5	31	52				
Purge Rate (gpm)	5.2	→	→				
Temperature (F°) or (C°)	68.6	69.6	69.6				
pH	7.06	6.99	6.93				
Specific Conductivity (uncorrected) (micromhos/cm)	2360	2420	2450				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.8	3.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-24 TESTED BY: B.Q. DATE: 4/16/98

Measuring Point Description: Top of casing

Static Water Level (ft): 49.67 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1040

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 49.71

Time Start Purge: 0950 Field Filtering: for metals only

Time End Purge: +40min = 1030 Field Preservation: HCl and HNO_3 as needed

Comments: 68.9°F Clear 1-3mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	113.10		49.67		63.43		0.60	1.09	1.91		69

x3 = 207

TIME	0952	1010	1020				
Volume Purged (Gallons)	10	94	156				
Purge Rate (gpm)	25.2 →						
Temperature (F°) or (C°)	69.4	68.5	68.8				
pH	6.96	7.14	7.22				
Specific Conductivity (uncorrected) (micromhos/cm)	2360	2360	2360				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.4	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-18 TESTED BY: G.Q. DATE: 4/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 40.47 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1035

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 40.43

Time Start Purge: 1007 Field Filtering: for metals only

Time End Purge: 1027 Field Preservation: HCl and HNO_3 as needed

Comments: Field Rinsate sample taken after decon of pump (WDI-MWFR18-06)

74°F 29.71" Hg Clear, sunny, 1-3mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	71.0		40.42		30.58		0.60	1.09	1.91		33 x 3 = 99

TIME	1007	1012	1021				
Volume Purged (Gallons)	5	26	73				
Purge Rate (gpm)	~5.2	→	→				
Temperature (F°) or (C°)	70.6	70.2	70.0				
pH	7.26	7.23	7.31				
Specific Conductivity (uncorrected) (micromhos/cm)	2210	2190	2190				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	0.8	2.2				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

8' left in Baker tank P7013

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-26 TESTED BY: H.Q. DATE: 4/15/98

Measuring Point Description: Top of casing

Static Water Level (ft): 38.28 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1325

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 38.28

Time Start Purge: 1303 Field Filtering: for metals only

Time End Purge: 1318 Field Preservation: HCl and HNO_3 as needed

Comments: Equip Rinsate sample taken after decon of pump (WDI-MWFR26-04)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.50		38.28		24.22		0.60	1.09	1.91		26

x3 = 78

TIME	1304	1308	1313				
Volume Purged (Gallons)	5	26	52				
Purge Rate (gpm)	2.5.2 →	→					
Temperature (F°) or (C°)	69.3	69.8	68.9				
pH	7.21	7.03	6.97				
Specific Conductivity (uncorrected) (micromhos/cm)	2240	2310	2360				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.0	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-27 TESTED BY: H.Q. DATE: 4/16/98

Measuring Point Description: Top of casing

Static Water Level (ft): 39.46 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0810

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 39.48

Time Start Purge: 0744 Field Filtering: for metals only

Time End Purge: 0759 Field Preservation: HCl and HNO3 as needed

Comments: 60.8°F 29.77"Hg Clear 1-2 mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.85		39.46		23.39		0.60	1.09	1.91		25

75

TIME	0747	0750	0754				
Volume Purged (Gallons)	15	31	52				
Purge Rate (gpm)	5.2 →						
Temperature (F°) or (C°)	68.4	69.0	68.6				
pH	7.27	6.93	6.99				
Specific Conductivity (uncorrected) (micromhos/cm)	2250	2270	2260				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.6	1.3	2.1				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-28 TESTED BY: G.Q. DATE: 4/14/98

Measuring Point Description: Top of casing

Static Water Level (ft): 39.84 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 0925

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 39.84

Time Start Purge: 0900 Field Filtering: for metals only

Time End Purge: 0915 Field Preservation: HCl and HNO_3 as needed

Comments:

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size			=	Volume (gal) (one well)
							2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole		
	63.35		39.84		23.51		0.60	1.09	1.91		24

TIME	0901	0907	0912				
Volume Purged (Gallons)	5	36	62				
Purge Rate (gpm)	5.2 →						
Temperature (F°) or (C°)	67.7	67.9	68.4				
pH	7.13	7.02	7.00				
Specific Conductivity (uncorrected) (micromhos/cm)	2240	2290	2260				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.5	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-29 TESTED BY: D.Q. DATE: 4/14/98

Measuring Point Description: Top of casing

Static Water Level (ft): 40.05 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1045

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 40.07

Time Start Purge: 1024 Field Filtering: for metals only

Time End Purge: 1039 Field Preservation: HCl and HNO_3 as needed

Comments: 65.3°F 29.85" Hg Partly Cloudy

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.18		40.05		23.13		0.60	1.09	1.91		25

TIME	1025	1029	1034				
Volume Purged (Gallons)	5	26					
Purge Rate (gpm)	2.5.2						
Temperature (F°) or (C°)	67.9	68.4	68.5				
pH	7.27	7.16	7.16				
Specific Conductivity (uncorrected) (micromhos/cm)	2180	2220	2220				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear					
Odor	none	none					
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	1.0					
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-30 TESTED BY: H.Q. DATE: 4/14/98

Measuring Point Description: Top of casing

Static Water Level (ft): 39.42 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1305

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 39.40

Time Start Purge: 1216 Field Filtering: for metals only

Time End Purge: 1250 Field Preservation: HCl and HNO_3 as needed

Comments: 67.1°F Partly Cloudy 29.85" Hg 2.5mph NW winds. Duplicate sample taken. (WDI-MWFD30-06) Field Rinsate sample taken after decon. of pump. (WDI-MWFR30-06)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	93.825 MA		39.42		53.58		0.60	1.09	1.91		58

x3=175 39 m

TIME	1217	1229	1238				
Volume Purged (Gallons)	5	68	114				
Purge Rate (gpm)	~5.2 →						
Temperature (F°) or (C°)	68.5	68.6	68.7				
pH	7.60	7.55	7.65				
Specific Conductivity (uncorrected) (micromhos/cm)	948	997	995				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	trace/Brn	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.2	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-31 TESTED BY: H.Q. DATE: 4/17/98

Measuring Point Description: Top of casing

Static Water Level (ft): 46.74 Sample Method: Grundfos Redi Flow 2 (low flow pump)

Water Level Measurement Method: Electric sounder Time Sampled: 1420

Purge Method: Grundfos Redi Flow 2 Sample Depth (ft): 1

Time Start Purge: 1402 Field Filtering: for metals only

Time End Purge: 1413 Field Preservation: HCl and HNO3 as needed

Comments: 80°F 29.80" Hg 3-7 mph NW wind

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.13		46.74		16.39		0.60	(1.09)	1.91		18

x3 = 54

TIME	1403	1407	1410				
Volume Purged (Gallons)	5	26					
Purge Rate (gpm)	~5.2	→					
Temperature (F°) or (C°)	70.5	70.4	70.3				
pH	7.04	7.02	7.02				
Specific Conductivity (uncorrected) (micromhos/cm)	2300	2340	2340				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear					
Odor	none	none					
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.4					
Dewatered?	No	No					

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-0[redacted]1 TESTED BY: HA DATE: 7/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 32.06 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1050

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 32.08

Time Start Purge: 1027 Field Filtering: for metals only

Time End Purge: 1046 (19 min) Field Preservation: HCl and HNO3 as needed

Comments: 85.1°F 29.65 Partly Cloudy Still

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	57.74		32.06		25.68		0.60	1.09	1.91		28

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TIME	1029	1035	1039				
Volume Purged (Gallons)	9	36	54				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	74.4	73.9	73.2				
pH	7.22	7.07	7.05				
Specific Conductivity (uncorrected) (micromhos/cm)	2240	2190	2170				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.3	1.9				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-02 TESTED BY: HA DATE: 7/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 27.92 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1210

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 27.92

Time Start Purge: 1148 Field Filtering: for metals only

Time End Purge: 1206 (18 min) Field Preservation: HCl and HNO3 as needed

Comments:

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	52.75		27.92		24.83		0.60	1.09	1.91		27

x3 = 81

TIME	1150	1156	1201				
Volume Purged (Gallons)	9	36	59				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	73.7	72.6	72.6				
pH	7.10	7.18	7.13				
Specific Conductivity (uncorrected) (micromhos/cm)	2090	2020	2070				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.3	2.2				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-03 TESTED BY: HA DATE: 7/21/98

Measuring Point Description: Top of casing

Static Water Level (ft): 46.32 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1025

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 46.31

Time Start Purge: 1002 Field Filtering: for metals only

Time End Purge: 1018 (16 min) Field Preservation: HCl and HNO3 as needed

Comments: 85.1°F, 29.80" Hg 1-3 mph NW winds Sunny Field Duplicate sample taken (WDI-MWFD 03-07)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	67.92		46.32		21.60		0.60	1.09	1.91		23.5

TIME	1005	1010	1015				
Volume Purged (Gallons)	13.5	36	58.5				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	72.9	72.6	72.3				
pH	7.02	6.99	6.99				
Specific Conductivity (uncorrected) (micromhos/cm)	2410	2400	2390				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.6	1.5	2.5				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

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ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO : mw-04 TESTED BY. HG DATE: 7/21/98

Measuring Point Description: Top of casing

Static Water Level (ft): 45.52 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1130

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 45.55

Time Start Purge: 1109 Field Filtering: for metals only

Time End Purge: 1126 (17 min) Field Preservation: HCl and HNO3 as needed

Comments:

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	68.33		45.52		22.81		0.60	1.09	1.91		25

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TIME	1111	1116	1122				
Volume Purged (Gallons)	9	31.5	58.5				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	72.0	71.1	70.8				
pH	7.15	6.96	6.98				
Specific Conductivity (uncorrected) (micromhos/cm)	2160	2210	2210				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.4	1.3	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-254

WELL NO.: MW-05 TESTED BY. HA DATE: 7/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 45.95 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1535

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 45.96

Time Start Purge: 1517 Field Filtering: for metals only

Time End Purge: 1531 (14 min) Field Preservation: HCl and HNO3 as needed

Comments: 85°F 29.62" Hg. 2-5 mph NW winds Sunny, Clear

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.93		45.95		17.98		0.60	1.09	1.91		19.6

x3 = 59.

TIME	1519	1523	1528				
Volume Purged (Gallons)	9	27	49.5				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	72.1	70.85	70.9				
pH	6.91	6.89	6.82				
Specific Conductivity (uncorrected) (micromhos/cm)	2390	2390	2370				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.5	1.4	2.5				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WOI PROJECT NO. 94-254

WELL NO.: MW-06 TESTED BY: HA DATE: 7/16/98

Measuring Point Description: Top of casing

Static Water Level (ft): 37.75 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1155

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 37.78

Time Start Purge: 1128 Field Filtering: for metals only

Time End Purge: 1147 (19 min) Field Preservation: HCl and HNO3 as needed

Comments: 94°

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.95		37.75		25.20		0.60	1.09	1.91		27.5 x3=82

TIME	1130	1133	1137				
Volume Purged (Gallons)	9	22.5	40.5				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	73.6	72.6	72.4				
pH	7.12	7.04	7.03				
Specific Conductivity (uncorrected) (micromhos/cm)	2240	2190	2190				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	0.8	1.5				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-07 TESTED BY: H.A. DATE: 7/16/98

Measuring Point Description: Top of casing

Static Water Level (ft): 34.18 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1100

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 34.20

Time Start Purge: 1037 Field Filtering: for metals only

Time End Purge: 1055 Field Preservation: HCl and HNO3 as needed

Comments: 93.2° 1-3mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.10		34.18		23.92		0.60	1.09	1.91		26

x3 = 78

TIME	1041	1045	1052				
Volume Purged (Gallons)	18	36	67				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	74.4	73.7	73.5				
pH	6.97	6.93	6.90				
Specific Conductivity (uncorrected) (micromhos/cm)	2390	2360	2400				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.7	1.4	2.6				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-254

WELL NO.: mw-08 TESTED BY: HA DATE: 7/21/98

Measuring Point Description: Top of casing

Static Water Level (ft): 42.62 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 0910

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 42.63

Time Start Purge: 0853 Field Filtering: for metals only

Time End Purge: 0908 (15 min) Field Preservation: HCl and HNO3 as needed

Comments:

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size			=	Volume (gal) (one well)
							2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole		
	62.87		42.62		20.25		0.60	1.09	1.91		22

TIME	0858	0902	906				
Volume Purged (Gallons)	22.5	40.5	58.5				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	72.4	72.4	72.4				
pH	7.02	6.91	6.89				
Specific Conductivity (uncorrected) (micromhos/cm)	2100	2100	2100				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	1.0	1.8	2.7				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-254

WELL NO.: MW-09 TESTED BY: HG DATE: 7/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 32.87 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1450

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 32.92

Time Start Purge: 1427 Field Filtering: for metals only

Time End Purge: 1445 (18 min) Field Preservation: HCl and HNO3 as needed

Comments: 87.8°F 29.65" Hg 1-2 mph NW winds Partly Cloudy

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	57.59		32.87		24.72		0.60	1.09	1.91		27

x3=81

TIME	1429	1434	1440				
Volume Purged (Gallons)	9	31.5	58.5				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	74.6	73.6	73.8				
pH	7.17	7.03	7.03				
Specific Conductivity (uncorrected) (micromhos/cm)	2220	2160	2190				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.2	2.2				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-10 TESTED BY: H.C. DATE: 7/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 34.68 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 0800

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 34.72

Time Start Purge: 0735 Field Filtering: for metals only

Time End Purge: 0755 (18 min) Field Preservation: HCl and HNO3 as needed

Comments: 72.5°F 29.62" Hg Cloudy, Still Calibrated the Hydac SN 9309

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.16		34.68		23.48		0.60	1.09	1.91		25.6

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TIME	0737	0742	0751				
Volume Purged (Gallons)	9	32	72				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	72.6	73.1	72.5				
pH	6.83	6.72	6.79				
Specific Conductivity (uncorrected) (micromhos/cm)	1565	1611	1657				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.2	2.8				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-11 TESTED BY: HA DATE: 7/20/94

Measuring Point Description: Top of casing

Static Water Level (ft): 35.03 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 0940

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 35.08

Time Start Purge: 0830 Field Filtering: for metals only

Time End Purge: 0928 (58 min) Field Preservation: HCl and HNO3 as needed

Comments:

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	128.15		35.03		93.12		0.60	1.09	1.91		102

5.06

TIME	0836	0854	0926				
Volume Purged (Gallons)	32	127.2					
Purge Rate (gpm)	5.3						
Temperature (F°) or (C°)	72.3	72.2	73.6				
pH	7.60	7.81					
Specific Conductivity (uncorrected) (micromhos/cm)	1814	2140	2190				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none.	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.2	3.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-13 TESTED BY: [illegible] DATE: 7/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 37.69 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1350

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 37.69

Time Start Purge: 1327 Field Filtering: for metals only

Time End Purge: 1342 (15 min) Field Preservation: HCl and HNO_3 as needed

Comments: 90.5° Partly sunny 2-4mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.35		37.69		20.66		0.60	1.09	1.91		22.5

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TIME	1329	1333	1337				
Volume Purged (Gallons)	9	27	45				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	74.6	73.7	73.4				
pH	6.91	6.80	6.78				
Specific Conductivity (uncorrected) (micromhos/cm)	2400	2330	2310				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.4	1.2	2.0				
Dewatered?	NO	NO	NO				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-14 TESTED BY: H.A. DATE: 7/17/98

Measuring Point Description: Top of casing

Static Water Level (ft): 37.97 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1310

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 37.99

Time Start Purge: 1249 Field Filtering: for metals only

Time End Purge: 1303 14 min Field Preservation: HCl and HNO3 as needed

Comments: 89.6°F 29.62" Hg

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	57.50		37.97		19.53		0.60	(1.09)	1.91		21

x3 63

TIME	1251	1255	1358				
Volume Purged (Gallons)	9	27	41				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	73.4	73.0	73.0				
pH	7.06	7.04	7.11				
Specific Conductivity (uncorrected) (micromhos/cm)	2240	2220	2220				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.4	1.3	1.9				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-15 TESTED BY: HA DATE: 7/16/98

Measuring Point Description: Top of casing

Static Water Level (ft): 43.06 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1350

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 43.07

Time Start Purge: 1323 Field Filtering: for metals only

Time End Purge: 1342 (19 min) Field Preservation: HCl and HNO3 as needed

Comments:

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size			=	Volume (gal) (one well)
	68.35		43.06		25.29		2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole		28
							0.60	1.09	1.91		

x3=84

TIME	1327	1332	1337				
Volume Purged (Gallons)	18	40.5	63				
Purge Rate (gpm)	4.5	4.5					
Temperature (F°) or (C°)	75.2	74.1	73.2				
pH	7.10	6.97	6.90				
Specific Conductivity (uncorrected) (micromhos/cm)	2330	2260	2280				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.6	1.4	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-254

WELL NO.: MW-16 TESTED BY: HA DATE: 7/16/98

Measuring Point Description: Top of casing

Static Water Level (ft): 43.38 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1455

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 43.04

Time Start Purge: 1423 Field Filtering: for metals only

Time End Purge: 1448 (25 min) Field Preservation: HCl and HNO3 as needed

Comments: 99°F 29.56" Hg 2-3 mph NW winds Sunny Field Rinsate sample taken after pump was deconed

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	78.70		43.38		35.32		0.60	1.09	1.91		38

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TIME	1424	1430	1435				
Volume Purged (Gallons)	13.5	31.5	54				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	74.4	73.5	73.5				
pH	7.27	7.17	7.16				
Specific Conductivity (uncorrected) (micromhos/cm)	2300	2260	2270				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.4	0.8	1.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: mw -18 TESTED BY: HA DATE: 7/15/98

Measuring Point Description: Top of casing

Static Water Level (ft): 39.67 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1255

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 39.71

Time Start Purge: 12.24 (23min) Field Filtering: for metals only

Time End Purge: 1247 Field Preservation: HCl and HNO3 as needed

Comments: 92.3°F 29.68" Hg

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	71.0		39.67		31.33		0.60	1.09	1.91		34

TIME	12.27	1233	1244				
Volume Purged (Gallons)	13.2	39.4	88				
Purge Rate (gpm)	4.4	4.4	4.4				
Temperature (F°) or (C°)	72.5	72.3	72.5				
pH	7.33	7.23	7.15				
Specific Conductivity (uncorrected) (micromhos/cm)	2160	2110	2130				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.4	1.2	2.6				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-254

WELL NO.: MW-19[redacted] TESTED BY: D.A. DATE: 7/15/58

Measuring Point Description: Top of casing

Static Water Level (ft): 39.50 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1145

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 39.51

Time Start Purge: 1116 Field Filtering: for metals only

Time End Purge: 1131 Field Preservation: HCl and HNO3 as needed

Comments: 89.2°F 29.71" Hg 1-3mph NW winds, Sunny

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.80		39.50		19.30		0.60	1.09	1.91		21.0

TIME	1118	1122	1130				
Volume Purged (Gallons)	9	26.4	61.6				
Purge Rate (gpm)	4.4	4.4	4.4				
Temperature (F°) or (C°)	73.4	72.1	72.4				
pH	7.39	7.08	6.98				
Specific Conductivity (uncorrected) (micromhos/cm)	2190	2190	2160				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.4	1.3	2.9				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/mm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-21 TESTED BY: HA DATE: 7/21/98

Measuring Point Description: Top of casing

Static Water Level (ft): 35.91 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 0810

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 35.94

Time Start Purge: 0740 Field Filtering: for metals only

Time End Purge: ~~0756~~ 0805 (16 min) Field Preservation: HCl and HNO3 as needed

Comments: 77°F 29.80"Hg 1-2 mph NW winds Calibrated the Hydac SN 9305

Field Rinsate sample taken after the pump was decon'd (WDI-MWFR21-07)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	56.65		35.91		20.74		0.60	1.09	1.91		23

69

TIME	0742	0746	0753	0803			
Volume Purged (Gallons)	9	27	58.5	103.5			
Purge Rate (gpm)	4.5	4.5	4.5	4.5			
Temperature (F°) or (C°)	73.0	72.9	72.3	72.1			
pH	7.04	6.89	6.89	6.91			
Specific Conductivity (uncorrected) (micromhos/cm)	2760	2410	2240	2190			
Dissolved Oxygen (mg/L)	NM	NM	NM	NM			
eH(mV) Pt-AgCl ref.	NM	NM	NM	NM			
Turbidity/Color	clear	clear	clear	clear			
Odor	none	none	none	none			
Depth to Water During Purge (ft)	NM	NM	NM	NM			
Number of Casing Volumes Removed	0.4	1.2	2.5	4.5			
Dewatered?	No	No	No	No			

A-Field/Forms (4/2/92/mm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-254

WELL NO.: MW-22 TESTED BY: HA DATE: 7/17/98

Measuring Point Description: Top of casing

Static Water Level (ft): 47.91 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1415

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 47.88

Time Start Purge: 1346 Field Filtering: for metals only

Time End Purge: 1408 (22 min) Field Preservation: HCl and HNO3 as needed

Comments: 94°F 29.56" Hg 1-3 mph NW winds Field Rinsate sample after pump was deemed. (WDI-MWFR 22-07)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	77.80		47.91		29.89		0.60	1.09	1.91		33

TIME	1350	1357	1401				
Volume Purged (Gallons)	18	50	68				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	75.6	74.4	74.3				
pH	6.94	6.88	6.86				
Specific Conductivity (uncorrected) (micromhos/cm)	2020	1990	1980				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.5	1.5	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.. MW-23 TESTED BY: BG DATE: 7/17/98

Measuring Point Description: Top of casing

Static Water Level (ft): 48.63 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1150

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 48.65

Time Start Purge: 1132 Field Filtering: for metals only

Time End Purge: 1144 (12 min) Field Preservation: HCl and HNO3 as needed

Comments: 84.2°F 29.62" Hg 2-4 mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.24		48.63		14.61		0.60	1.09	1.91		16

48

TIME	1134	1139	1142				
Volume Purged (Gallons)	9	31.5	45				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	72.7	73.0	72.9				
pH	7.48	7.24	7.19				
Specific Conductivity (uncorrected) (micromhos/cm)	2170	2210	2220				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.6	2.0	2.8				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: mw-24 TESTED BY: D.A DATE: 7/12/98

Measuring Point Description: Top of casing

Static Water Level (ft): 48.37 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1055

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 48.40

Time Start Purge: 1000 Field Filtering: for metals only

Time End Purge: 1047 (47 min) Field Preservation: HCl and HNO3 as needed

Comments: 77.9°F 29.65"Hg 2-4mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	113.10		48.37		64.73						71

213

TIME	1005	1030	1042				
Volume Purged (Gallons)	23	135	189				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	72.2	72.2	72.1				
pH	7.13	7.31	7.26				
Specific Conductivity (uncorrected) (micromhos/cm)	2190	2170	2170				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.9	2.7				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/mm)

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-326 TESTED BY: HA DATE: 7/17/98

Measuring Point Description: Top of casing

Static Water Level (ft): 37.32 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 0915

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 37.33

Time Start Purge: 0850 Field Filtering: for metals only

Time End Purge: 0908 (18 min) Field Preservation: HCl and HNO3 as needed

Comments: 74.3°F 29.65" Hg

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.50		37.32		25.18		0.60	1.09	1.91		27

81

TIME	0852	0858	0903				
Volume Purged (Gallons)	9	36	59				
Purge Rate (gpm)	4.5	4.5					
Temperature (F°) or (C°)	71.1	71.6	71.4				
pH	7.38	7.08	7.06				
Specific Conductivity (uncorrected) (micromhos/cm)	2160	2140	2140				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.3	2.2				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-27 TESTED BY: HA DATE: 7/17/98

Measuring Point Description: Top of casing

Static Water Level (ft): 38.53 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 0740

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 38.56

Time Start Purge: 0712 Field Filtering: for metals only

Time End Purge: 0730 (18 min) Field Preservation: HCl and HNO3 as needed

Comments: 71.6°F, 29.62" Hg, Still, Hazy. Duplicate sample taken (WDI-MWFD 27-07) Field Blank taken from decon tank (WDI-MWFB 22-07) Calibrated Hydac SN 9305

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.85		38.53		24.32		0.60	1.09	1.91		27

Y3 = 81

TIME	0713	0717	0726				
Volume Purged (Gallons)	5	22.5	63				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	70.9	71.0	70.7				
pH	6.67	6.68	6.73				
Specific Conductivity (uncorrected) (micromhos/cm)	2040	2030	2000				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.2	0.8	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-254

WELL NO.: MW-28 TESTED BY: HA DATE: 7/15/98

Measuring Point Description: Top of casing

Static Water Level (ft): 38.90 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1400

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 38.92

Time Start Purge: 1338 Field Filtering: for metals only

Time End Purge: 1356 18 min Field Preservation: HCl and HNO3 as needed

Comments: 95.9°F 29.68" Hg Field Rinsate sample taken after pump was decomed. (WDI-MWFR 28-07)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	63.35		38.90		24.45						27

TIME	1340	1345	1352				
Volume Purged (Gallons)	8.8	30.8	61.6				
Purge Rate (gpm)	4.4	4.4	4.4				
Temperature (F°) or (C°)	74.4	73.4	73.3				
pH	7.17	7.09	7.04				
Specific Conductivity (uncorrected) (micromhos/cm)	2230	2210	2190				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.1	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: mw-29 TESTED BY: HA DATE: 7/15/98

Measuring Point Description: Top of casing

Static Water Level (ft): 39.13 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1511

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 39.14

Time Start Purge: 1446 Field Filtering: for metals only

Time End Purge: 1504 (18 min) Field Preservation: HCl and HNO3 as needed

Comments: 97.7°

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.18		39.13		24.05		0.60	(1.09)	1.91		26

TIME	1449	1455	1500				
Volume Purged (Gallons)	13.2	39.6	61.6				
Purge Rate (gpm)	4.4	4.4	4.4				
Temperature (F°) or (C°)	74.3	73.1	72.8				
pH	7.17	7.14	7.15				
Specific Conductivity (uncorrected) (micromhos/cm)	2240	2190	2160				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.5	1.5	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-256

WELL NO.: MW-30 TESTED BY: HA DATE: 7/16/98

Measuring Point Description: Top of casing

Static Water Level (ft): 38.69 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1006

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 39.14

Time Start Purge: 0921 Field Filtering: for metals only

Time End Purge: 1001 Field Preservation: HCl and HNO3 as needed

Comments: 79.9°F, 29.65"Hg Sunny, Still - Calibrated Hydac SN.9309

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well)
	93.25		38.69		54.56						59

x3 = 178

TIME	0922	0929	0951				
Volume Purged (Gallons)	4.5	36	135				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	72.3	71.7	72.3				
pH	7.66	7.52	7.54				
Specific Conductivity (uncorrected) (micromhos/cm)	874	876	897				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	trace	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	0.6	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME WDI PROJECT NO. 94-254

WELL NO.: MW-31 TESTED BY: HA DATE: 7/21/98

Measuring Point Description: Top of casing

Static Water Level (ft): 45.98 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1240

Purge Method: Grundfos Redi Flo 2 Sample Depth (ft): 45.98

Time Start Purge: 1221 Field Filtering: for metals only

Time End Purge: 1234 (13 min) Field Preservation: HCl and HNO3 as needed

Comments: 90.5°F 29.74" Hg 1-3 mph NW winds, sunny

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.13		45.98		17.15		0.60	1.09	1.91		19

57

TIME	1223	1227	1231				
Volume Purged (Gallons)	9	27	45				
Purge Rate (gpm)	4.5	4.5	4.5				
Temperature (F°) or (C°)	73.2	72.2	72.2				
pH	7.01	6.94	6.96				
Specific Conductivity (uncorrected) (micromhos/cm)	2150	2120	2110				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.5	1.4	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-01 TESTED BY: H.A. DATE: 10/22/98

Measuring Point Description: Top of casing

Static Water Level (ft): 32.75 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 0820

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 32.76

Time Start Purge: 0757 Field Filtering: for metals only

Time End Purge: 0813 16min Field Preservation: HCl & HNO3 as needed

Comments: 65.3°F 29.83 Clear, sunny, still. Calibrated Hydac SN 9309

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	57.74 td 57.83		32.75		24.99		0.60	1.09	1.91		27

x3 x 81

TIME	0758	0803	0808
Volume Purged (Gallons)	5	25	55
Purge Rate (gpm)	5.0	5.0	5.0
Temperature (F°) or (C°)	68.8	69.3	70.3
pH	7.17	7.02	7.00
Specific Conductivity (uncorrected) (micromhos/cm)	2000	1846	1860
Dissolved Oxygen (mg/L)	NM	NM	NM
eH(mV) Pt-AgCl ref.	NM	NM	NM
Turbidity/Color	clear	clear	clear
Odor	none	none	none
Depth to Water During Purge (ft)	NM	NM	NM
Number of Casing Volumes Removed	0.1	0.9	2.0
Dewatered?	No	No	No

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: mw-02 TESTED BY: H.A. DATE: 10/22/98

Measuring Point Description: Top of casing

Static Water Level (ft): 28.61 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1140

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 28.59

Time Start Purge: 1116 Field Filtering: for metals only

Time End Purge: 1132 16min Field Preservation: HCl + HNO3 as needed

Comments: 77.0°F, 29.88" Sunny 1.2mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	52.75 (td. 52.90)		28.61		24.14		0.60	1.09	1.91		26 x3 = 78

TIME	1117	1121	1128				
Volume Purged (Gallons)	5	25	68 est.				
Purge Rate (gpm)	5.0	5.0	5.0				
Temperature (F°) or (C°)	70.1	70.4	70.4				
pH	7.97	7.66	7.51				
Specific Conductivity (uncorrected) (micromhos/cm)	1770	1862	1872				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.0	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/mm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-03 TESTED BY: H.A. DATE: 10/27/98

Measuring Point Description: Top of casing

Static Water Level (ft): 46.91 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1355

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 46.93

Time Start Purge: 1334 Field Filtering: for metals only

Time End Purge: 1348 14 min Field Preservation: HCl + HNO3 as needed

Comments: 86°F 29.88" Sunny 1-4 mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	~~68~~ 67.92 (tcl) 67.99		46.91		21.01		0.60	1.09	1.91		23

x3 = 69

TIME	1335	1340	1345				
Volume Purged (Gallons)	5	30	55				
Purge Rate (gpm)	5.0	5.0	5.0				
Temperature (F°) or (C°)	72.1	72.1	72.0				
pH	6.75	6.72	6.67				
Specific Conductivity (uncorrected) (micromhos/cm)	2050	2130	2160				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.3	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-04 TESTED BY: M.A. DATE: 10/19/98

Measuring Point Description: Top of casing

Static Water Level (ft): 46.11 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1325

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 46.10

Time Start Purge: 1244 Field Filtering: for metals only

Time End Purge: 1320 Field Preservation:

Comments:

Well volume Calculation (fill in before purging)	Total Depth (ft) TD 68.62 68.33	-	Depth to Water (ft) 46.11	=	Water Column (ft) 22.22	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well) 24

x 3 = 73

TIME	1245	1256	1308				
Volume Purged (Gallons)	2	24	48				
Purge Rate (gpm)	2.0	2.0					
Temperature (F°) or (C°)	76.9	72.7	72.6				
pH	7.12	7.14	7.01				
Specific Conductivity (uncorrected) (micromhos/cm)	2200	2110	2190				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	slight gry	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.0	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-05 TESTED BY: H.A. DATE: 10/19/98

Measuring Point Description: Top of casing

Static Water Level (ft): 46.53 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1435

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 46.53

Time Start Purge: 1401 Field Filtering: for metals only

Time End Purge: 1430 Field Preservation:

Comments: 79.8°F Sunny 3-10 mph NW winds 29.62" Field Rinsate sample taken after decon of pump

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	TD 63.93 63.93		46.53		17.40		0.60	1.09	1.91		19

x 3 = 57

TIME	1402	1409	1429				
Volume Purged (Gallons)	2	16	46				
Purge Rate (gpm)	2.0	2.0	2.0				
Temperature (F°) or (C°)	73.6	71.9	72.1				
pH	7.09	6.86	6.90				
Specific Conductivity (uncorrected) (micromhos/cm)	2220	2260	2260				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	0.8	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO: 94-256

WELL NO.: MW-06 TESTED BY: H.A. DATE: 10/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 38.46 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1220

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 38.43

Time Start Purge: 1154 Field Filtering: for metals only

Time End Purge: 1211 17 min Field Preservation: HCl & HNO3 as needed

Comments: 84°F 29.68" Sunny 2-5 mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft) TD 63.26 62.95	-	Depth to Water (ft) 38.46	=	Water Column (ft) 24.49	x	Multiplier for Well Size: 2 inch casing 8 inch borehole 0.60	4 inch casing 10 inch borehole 1.09	6 inch casing 12 inch borehole 1.91	=	Volume (gal) (one well) 27	X3=81

TIME	0942 1155	1200	1205				
Volume Purged (Gallons)	5	30	55				
Purge Rate (gpm)	5.0	5.0	5.0				
Temperature (F°) or (C°)	70.2	70.5	70.7				
pH	7.31	7.11	7.08				
Specific Conductivity (uncorrected) (micromhos/cm)	1920	1860	1890				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.1	2.1				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-07 TESTED BY: H.A. DATE: 10/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 34.88 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1310

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 34.84

Time Start Purge: 1250 Field Filtering: for metals only

Time End Purge: 1305 15min Field Preservation: HCl + HNO3 as needed.

Comments: 86°F 29.68 Sunny 1-3 mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.10 (58.24)		34.88		23.22		0.60	1.09	1.91		25

x3 = 75

TIME	1251	1255	1300				
Volume Purged (Gallons)	5	25	50				
Purge Rate (gpm)	5.0	5.0	5.0				
Temperature (F°) or (C°)	72.6	72.6	72.6				
pH	7.16	7.04	6.97				
Specific Conductivity (uncorrected) (micromhos/cm)	2090	2070	2110				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.0	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-08 TESTED BY: H.Q. DATE: 10/22/98

Measuring Point Description: Top of casing

Static Water Level (ft): 43.16 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1445

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 43.9

Time Start Purge: 1429 Field Filtering: for metals only

Time End Purge: 1442 (13 min) Field Preservation: HCl & HNO3

Comments: 86.0°F, 29.88" Sunny 1-3 mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.87 (TD 62.90)		43.16		19.71		0.60	1.09	1.91		22

x3 = 66

TIME	1430	1434	1438				
Volume Purged (Gallons)	5	25	45				
Purge Rate (gpm)	5.0	5.0	5.0				
Temperature (F°) or (C°)	72.4	72.4	72.4				
pH	6.74	6.67	6.66				
Specific Conductivity (uncorrected) (micromhos/cm)	2000	2060	2060				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.1	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-09 TESTED BY: H.A. DATE: 10/21/98

Measuring Point Description: Top of casing

Static Water Level (ft): 33.41 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1505

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 33.41

Time Start Purge: 1445 Field Filtering: for metals only

Time End Purge: 1500 15min Field Preservation: HCl as HNO3 as needed

Comments: 82.4° 29.71" Sunny 1-5mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	57.59 (td 57.62)		33.41		24.18		0.60	1.09	1.91		26

x3 = 78

TIME	1447	1450	1454				
Volume Purged (Gallons)	10	25	45				
Purge Rate (gpm)	5.0	5.0	5.0				
Temperature (F°) or (C°)	72.6	72.1	71.9				
pH	6.72	6.65	6.65				
Specific Conductivity (uncorrected) (micromhos/cm)	2130	2100	2100				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.4	1.0	1.7				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-10 TESTED BY: H.A. DATE: 10/21/98

Measuring Point Description: Top of casing

Static Water Level (ft): 35.27 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1110

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 35.29

Time Start Purge: 1047 Field Filtering: for metals only

Time End Purge: 1102 15min Field Preservation: HCl + HNO3 as needed

Comments: 73.4°, 29.74" Dummy still

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.16 (td 58.97)		35.27		22.89		0.60	1.09	1.91		25

x 3 75

TIME	1051	1055	1100				
Volume Purged (Gallons)	20	40	65				
Purge Rate (gpm)	5.0	5.0	5.0				
Temperature (F°) or (C°)	72.6	72.4	72.2				
pH	6.73	6.80	6.84				
Specific Conductivity (uncorrected) (micromhos/cm)	1491	1514	1543				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.8	1.6	2.6				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/mm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-11 TESTED BY: G.A. DATE: 10/21/98

Measuring Point Description: Top of casing

Static Water Level (ft): 35.79 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1240

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 35.81

Time Start Purge: G.A. ~~10~~ 1147 Field Filtering: for metals only

Time End Purge: 1234 47min Field Preservation: HCl + HNO3 as needed

Comments: 83.3° 29.79" Sunny 1-2mph NW winds Duplicate sample taken (WD1-MWFD 11-08)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	128.15 +d 128.15		35.79		92.36		0.60	1.09	1.91		101

x3 = 303

TIME	1157	1206	1226				
Volume Purged (Gallons)	65	95	253				
Purge Rate (gpm)	6.5	6.5	6.5				
Temperature (F°) or (C°)	70.7	70.6	70.7				
pH	8.03	7.72	7.77				
Specific Conductivity (uncorrected) (micromhos/cm)	1982	1987	1985				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.6	0.9	2.5				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-13 TESTED BY: H.A. DATE: 10/10/98

Measuring Point Description: Top of casing

Static Water Level (ft): 38.22 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1105

Purge Method: Grundfos Redi Flow Sample Depth (ft): NM

Time Start Purge: 1042 Field Filtering: for metals only

Time End Purge: 1056 (14 min) Field Preservation: HCl & HNO3 as needed

Comments: 77° 29.65" Sunny 1-3mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.35		38.22		20.13		0.60	1.09	1.91		22

x3=66

TIME	1043	1048	1052				
Volume Purged (Gallons)	5	30	50				
Purge Rate (gpm)	5.0	5.0					
Temperature (F°) or (C°)	70.1	70.9	71.3				
pH	7.08	6.94	6.87				
Specific Conductivity (uncorrected) (micromhos/cm)	2280	2190	2130				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.4	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-14 TESTED BY: H.Q. DATE: 10/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 38.43 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1405

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 38.42

Time Start Purge: 1344 Field Filtering: for metals only

Time End Purge: 1357 13 min Field Preservation: HCl & HNO3 as needed

Comments: 87°F 29.68" Sunny 2-4mph NW winds Field Rinsate sample taken after decon of pump (WDI-MWFR14-08)

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	57.50 (td 57.67)		38.43		19.07		0.60	1.09	1.91		21 x3=63

TIME	1345	1350	1354				
Volume Purged (Gallons)	5	30					
Purge Rate (gpm)	5.0						
Temperature (F°) or (C°)	72.5	72.2	72.0				
pH	6.94	6.83	6.84				
Specific Conductivity (uncorrected) (micromhos/cm)	2190	2190	2180				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear					
Odor	none	none					
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.4					
Dewatered?	No	No					

A-Field/Forms (4/2/92/rmm)

NM - not measured

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-15 TESTED BY: H.Q. DATE: 10/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 43.66 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 0950

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 43.66

Time Start Purge: 0928 Field Filtering: for metals only

Time End Purge: 0944 Field Preservation: HCl & HNO_3 as needed

Comments: 67.1°F 29.65 sunny, still

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	TD 68.32 68.35		43.66		24.69		0.60	1.09	1.91		27 x3=81

TIME	0928	0933	0939				
Volume Purged (Gallons)	4	25	55				
Purge Rate (gpm)	5.4	5.0	5.0				
Temperature (F°) or (C°)	68.7	68.6	68.6				
pH	7.24	7.14	7.11				
Specific Conductivity (uncorrected) (micromhos/cm)	2090	2000	2010				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.0	2.0				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO. mw-16 TESTED BY: H.A. DATE: 10/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 43.95 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 0840

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 43.97

Time Start Purge: 0741 Field Filtering: for metals only

Time End Purge: 0838 Field Preservation: HCl + HNO3 as needed

Comments: 63.5°F, 29.62" Sunny, still

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	78.70		43.95		34.75		0.60	1.09	1.91		38

x3 = 114

TIME	0742	0808	0823				
Volume Purged (Gallons)	2	54	84				
Purge Rate (gpm)	2.0	2.0	2.0				
Temperature (F°) or (C°)	66.4	69.3	69.0				
pH	6.89	7.04	7.11				
Specific Conductivity (uncorrected) (micromhos/cm)	1870	1940	1940				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.4	2.2				
Dewatered?	No	no	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-18 TESTED BY: H.O. DATE: 10/22/98

Measuring Point Description: Top of casing

Static Water Level (ft): 40.30 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1255

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 40.31

Time Start Purge: 1231 Field Filtering: for metals only

Time End Purge: 1251 20 min Field Preservation: HCl + HNO3 as needed

Comments: 84.2° 29.88" Sunny 1-3 mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	71.0 td 71.08		40.30		30.7		0.60	1.09	1.91		33.

x 3 = 100

TIME	1232	1237	1245				
Volume Purged (Gallons)	5	30	70				
Purge Rate (gpm)	5.0	5.0					
Temperature (F°) or (C°)	70.7	70.7	70.8				
pH	6.93	6.91	7.04				
Specific Conductivity (uncorrected) (micromhos/cm)	1887	1904	1881				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	0.9	2.1				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-19 TESTED BY: H.A. DATE: 10/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 39.99 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1510

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 40.01

Time Start Purge: 1447 Field Filtering: for metals only

Time End Purge: 1500 15min Field Preservation: HCl & HNO3 as needed

Comments: 88°F 29.68" sunny 1-4 mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	58.80 (Td 58.87)		39.99		18.81		0.60	1.09	1.91		21

x3=63

TIME	1448	1454	1501				
Volume Purged (Gallons)	5	35	70				
Purge Rate (gpm)	5.0						
Temperature (F°) or (C°)	73.7	72.1	71.6				
pH	7.23	6.92	6.86				
Specific Conductivity (uncorrected) (micromhos/cm)	2100	2090	2020				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.7	3.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: MW-21 TESTED BY: H.Q. DATE: 10/23/98

Measuring Point Description: Top of casing

Static Water Level (ft): 36.59 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1055

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 36.60

Time Start Purge: 1030 Field Filtering: for metals only

Time End Purge: 1048 (18 min) Field Preservation: HCl + HNO3 as needed

Comments: 77.0°F, 29.85" Sunny 1-3 mph NW wind

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.24		36.59		26.65		0.60	1.09	1.91		29

x 3 = 87

TIME	1033	1039	1044				
Volume Purged (Gallons)	15	45	70				
Purge Rate (gpm)	5.0	5.0	5.0				
Temperature (F°) or (C°)	71.7	71.0	71.0				
pH	6.82	6.89	6.87				
Specific Conductivity (uncorrected) (micromhos/cm)	2550	2260	2260				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.5	1.6	2.4				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO: 94-256

WELL NO.: mw-22 TESTED BY: H.A. DATE: 10/21/98

Measuring Point Description: Top of casing

Static Water Level (ft): 47.82 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1350

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 47.82

Time Start Purge: 1323 Field Filtering: for metals only

Time End Purge: 1343 (20 minutes) Field Preservation: HCl & HNO3 as needed

Comments: 81.5°, 29.74" Sunny 1-3 mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	77.80 (td 77.90)		47.82		29.98		0.60	1.09	1.91		33 X3 = 99

TIME	1324	1330	1338				
Volume Purged (Gallons)	5	35	75				
Purge Rate (gpm)	5.0	5.0	5.0				
Temperature (F°) or (C°)	73.3	72.5	72.6				
pH	7.55	7.24	7.12				
Specific Conductivity (uncorrected) (micromhos/cm)	1856	1820	1816				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.1	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO: 94-256

WELL NO.: mw-23 TESTED BY: H.A. DATE: 10/ /98

Measuring Point Description: Top of casing

Static Water Level (ft): 48.62 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1035

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 46.63

Time Start Purge: 1020 Field Filtering: for metals only

Time End Purge: 1031 11 min Field Preservation:

Comments: 72.5°F, 29.85

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.24 (TD 63.33)		48.62		16.62		0.60	1.09	1.91		18

x3 = 54

TIME	1021	1025	1029				
Volume Purged (Gallons)	5	25	45				
Purge Rate (gpm)	5.0	5.0					
Temperature (F°) or (C°)	70.0	70.7	70.6				
pH	7.82	7.36	7.34				
Specific Conductivity (uncorrected) (micromhos/cm)	1885	1950	1956				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.4	2.5				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: mw-24 TESTED BY: H.Q. DATE: 10/22/98

Measuring Point Description: Top of casing

Static Water Level (ft): 48.31 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 0940

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 48.32

Time Start Purge: 0853 Field Filtering: for metals only

Time End Purge: 0936 43 min Field Preservation: HCl + HNO3 as needed

Comments: 68°F, 29.83"

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	113.10 (td 113.19)		48.31		64.79		0.60	1.09	1.91		71

213

TIME	0855	0905	0914				
Volume Purged (Gallons)	10	60	105				
Purge Rate (gpm)	5.0	5.0	5.0				
Temperature (F°) or (C°)	69.7	69.6	70.1				
pH	7.47	7.40	7.36				
Specific Conductivity (uncorrected) (micromhos/cm)	1920	1930	1930				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	0.8	1.5				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: mw-26 TESTED BY: H.A. DATE: 10/21/98

Measuring Point Description: Top of casing

Static Water Level (ft): 37.79 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1005

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 37.79

Time Start Purge: 0940 Field Filtering: for metals only

Time End Purge: 0956 16 min Field Preservation: HCl, HNO3 as needed

Comments: 69.7° 29.71" Overcast, still

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.50 (+a 62.85)		37.79		24.71		0.60	1.09	1.91		27 x3 = 81

TIME	0942	0952					
Volume Purged (Gallons)	10	70					
Purge Rate (gpm)	5.0	5.0					
Temperature (F°) or (C°)	69.6	69.5					
pH	NM	6.87					
Specific Conductivity (uncorrected) (micromhos/cm)	2000	1960					
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear					
Odor	none	none					
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.4	2.6					
Dewatered?	No	No					

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO: 94-256

WELL NO.: mw-27 TESTED BY: H.A. DATE: 10/20/98

Measuring Point Description: Top of casing

Static Water Level (ft): 39.00 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 0840

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 39.02

Time Start Purge: 0820 Field Filtering: for metals only

Time End Purge: 0836 16mm Field Preservation: HCl & HNO3 as Needed

Comments: 67°, 29.71" Overcast, still Calibrated the Hydac SN 9309

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	62.85		39.00		23.85		0.60	1.09	1.91		26

x3 = 78

TIME	0821	0826	0832				
Volume Purged (Gallons)	5	30	60				
Purge Rate (gpm)	5.0	5.0	5.0				
Temperature (F°) or (C°)	69.6	69.5	69.5				
pH	7.84	7.77	7.70				
Specific Conductivity (uncorrected) (micromhos/cm)	1940	1900	1910				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.1	2.3				
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO. 94-256

WELL NO.: mw-28 TESTED BY: G.A. DATE: 10/ /98

Measuring Point Description: Top of casing

Static Water Level (ft): 39.41 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1410

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 39.43

Time Start Purge: 1346 Field Filtering: for metals only

Time End Purge: 1402 16min Field Preservation:

Comments: 91.4°F 29.83 1-3mph NW winds

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.35 (+d 63.39)		39.41		23.94		0.60	1.09	1.91		24 x3=72

TIME	1347	1352	1402				
Volume Purged (Gallons)	5	30					
Purge Rate (gpm)	5.0	5.0	5.0				
Temperature (F°) or (C°)	73.1	72.4	72.4				
pH	7.02	6.99	7.04				
Specific Conductivity (uncorrected) (micromhos/cm)	2110	2100	2090				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.1	1.2					
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: UDI PROJECT NO: 94-256

WELL NO.: mw-29 TESTED BY: H.A. DATE: 10/23/98

Measuring Point Description: Top of casing

Static Water Level (ft): 39.63 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1320

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 39.63

Time Start Purge: 1255 Field Filtering: for metals only

Time End Purge: 1311 16 min Field Preservation:

Comments: 89.6°F 29.85" Sunny 1-4 mph NW wind

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	63.18 td 63.42		39.63		23.55		0.60	1.09	1.91		26 x3 = 78

TIME	1257	1302	1306				
Volume Purged (Gallons)	10	35					
Purge Rate (gpm)	5.0	5.0					
Temperature (F°) or (C°)	72.7	72.0	71.9				
pH	7.06	7.03	7.01				
Specific Conductivity (uncorrected) (micromhos/cm)	2070	2020	2070				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear					
Odor	none	none					
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.4	1.3					
Dewatered?	No	No					

A-Field/Forms (4/2/92/rmm)

NM - not measured

..ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO: 94-256

WELL NO.: MW-30 TESTED BY: G.A. DATE: 10/23/98

Measuring Point Description: Top of casing

Static Water Level (ft): 39.41 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1220

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 39.40

Time Start Purge: 1133 Field Filtering: for metals only

Time End Purge: ~~1208~~ 1215 (35 min) Field Preservation:

Comments: 84°F 29.85"

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size: 2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole	=	Volume (gal) (one well)
	93.25 (td 93.35)		39.41		53.84		0.60	1.09	1.91		59

x 3 = 177

TIME	1136	1140	1211				
Volume Purged (Gallons)	15	70					
Purge Rate (gpm)	5.0	5.0					
Temperature (F°) or (C°)	71.5	71.1	71.6				
pH	7.87	7.93	7.80				
Specific Conductivity (uncorrected) (micromhos/cm)	854	858	871				
Dissolved Oxygen (mg/L)	NM	NM	NM				
eH(mV) Pt-AgCl ref.	NM	NM	NM				
Turbidity/Color	clear	clear	clear				
Odor	none	none	none				
Depth to Water During Purge (ft)	NM	NM	NM				
Number of Casing Volumes Removed	0.3	1.2					
Dewatered?	No	No	No				

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: WDI PROJECT NO.: 94-256

WELL NO.: MW-31 TESTED BY: H.A. DATE: 10/19/98

Measuring Point Description: Top of casing

Static Water Level (ft): 46.57 Sample Method: Redi Flow 2 (at low flow)

Water Level Measurement Method: Electric sounder Time Sampled: 1145

Purge Method: Grundfos Redi Flow2 Sample Depth (ft): 46.52

Time Start Purge: 1115 Field Filtering: for metals only

Time End Purge: 1142 Field Preservation:

Comments:

Well volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Well Size			=	Volume (gal) (one well)
	TD 63.18 63.13		46.57		16.56		2 inch casing 8 inch borehole	4 inch casing 10 inch borehole	6 inch casing 12 inch borehole		18
							0.60	1.09	1.91		

X3 = 54

TIME	1116	1120	1126	1138			
Volume Purged (Gallons)	2	10	22	46			
Purge Rate (gpm)	2.0	2.0	2.0	2.0			
Temperature (F°) or (C°)	73.1	71.7	72.4	72.2			
pH	7.70	7.23	7.01	6.89			
Specific Conductivity (uncorrected) (micromhos/cm)	2130	2060	2080	2070			
Dissolved Oxygen (mg/L)	NM	NM	NM	NM			
eH(mV) Pt-AgCl ref.	NM	NM	NM	NM			
Turbidity/Color	clear	clear	clear	clear			
Odor	none	none	none	none			
Depth to Water During Purge (ft)	NM	NM	NM	NM			
Number of Casing Volumes Removed	0.1	0.6	1.2	2.6			
Dewatered?	No	No	No	No			

A-Field/Forms (4/2/92/rmm)

NM - not measured

ENVIRONMENTAL SOLUTIONS, INC.