



Environment & Infrastructure Solutions  
1075 Big Shanty Road, Suite 100  
Kennesaw, Georgia 30144  
USA

April 16, 2021

Mr. John Fonk  
Unit Coordinator – Remedial Sites Unit  
Georgia Environmental Protection Division  
2 Martin Luther King Jr. Drive, SE  
Suite 1054, East Tower  
Atlanta, Georgia 30334

T: +11 770-421-3400

[www.woodplc.com](http://www.woodplc.com)

Subject: **RCRA Part B Permit Renewal Application Revised Section E for EPD Review  
Former Xerox Facility, Atlanta, Georgia  
EPA I.D. No. GAD010103232**

Dear Mr. Fonk:

On behalf of our client, Xerox Corporation, we are submitting for EPD review the attached revised Section E of the RCRA Part B Permit Renewal Application for the former Xerox CRC facility (EPA I.D. No. GAD010103232) located on Fulton Industrial Boulevard in Atlanta, Georgia. This draft Section has been revised as discussed during our conference call of February 10, 2021. Xerox has reviewed and approved this revised Section for transmittal to EPD for review.

Please call us if you have any questions concerning this submittal.

Sincerely,

**Wood Environment & Infrastructure Solutions, Inc.**

John M. Quinn, P.G.  
Senior Geologist

A. David Alcott  
Principal

Attachment

cc: Julia Ispentchian – Xerox Corporation  
Marcus Lathrop – Xerox Corporation



## **SECTION E - GROUNDWATER MONITORING**

Since April 2000, Xerox has been conducting corrective actions in accordance with the Contingent Corrective Action Plan (CCAP) dated November 17, 1998 as incorporated in the November 18, 1999 Amended RCRA Permit, and subsequent modifications (Appendix E-1). Prior to implementing the CCAP, all recovery and monitoring wells that were inside the building were abandoned and the point of compliance (POC) was relocated to the B-11 cluster, outside of the northwest side of the building. In preparing the subsections of Section E that address site geology and hydrology, the Test Boring and Well Completion Records for all site wells (Appendix E-2), including those abandoned when contingent corrective actions were initiated, were used, as appropriate.

With the implementation of the CCAP, groundwater monitoring has been conducted in the following wells: from one well (B-32) upgradient of the former release area, from the POC wells (the B-11 cluster), and from nine wells located between the B-11 cluster and the downgradient property line. These monitoring data, presented on Tables E-1 through E-4 have been used in this Section to describe site hydrogeology and the contaminant plume. A summary of earlier groundwater quality data, covering the period from 1988 to initiation of monitoring under the CCAP, is presented in Appendix E-3.

### **E-1 - Interim Status Monitoring Data**

Interim status groundwater monitoring data for the Xerox facility was presented in Section 5 of the facility Part B permit application submitted in November 1987. This subsection is no longer applicable to the facility.

### **E-2 - General Hydrogeologic Information**

#### **E-2.a Regional Geology**

Atlanta is located within the Piedmont Physiographic Province. The Piedmont has undergone several periods of intense deformation resulting in significant folding, faulting, and thrusting. The predominant rock types common to the Atlanta area Piedmont are normally described as biotite gneiss, amphibole (hornblende) gneiss, and granitic gneiss.

The geology in the vicinity of the site consists principally of metamorphic rock (primarily biotite gneiss and schist) and some igneous intrusions (primarily granite). These rocks generally occur in wide belts trending in a northeast direction. These belts are the result of repeated structural deformations that have produced extremely complex structures, including closed folds, overthrust faults, and igneous intrusions. The site is located along the southeastern edge of the Brevard Fault Zone where local rock structure generally trends parallel or normal to the strike of the zone (Figure E-1).

The parent rocks in the region are composed primarily of quartz, feldspar, mica, and a wide variety of dark minerals such as hornblende and various pyroxenes. Because of their crystalline structure, their chemical decomposition occurs first as a breakdown along the boundaries of individual mineral crystals. As a result, partially weathered rock typically has the appearance of a dense silty or poorly graded sand (SM, SP). The crystals occupy the same position they occupied in the original rock. With further weathering, the individual crystals are attacked and the mass becomes a micaceous silty sand (SM) or micaceous sandy silt (ML) in which the original banding of the parent rock is apparent, but in which the original crystalline structure is obscured. Mica flakes rather than quartz grains often comprise most of the sand-size particles. Finally, in the more advanced stages of chemical weathering, the material is changed into a red or reddish-brown silty clay (CL or CH) or clayey silt (ML or MH). The

banding and crystalline structure of the parent rocks are lost. Soils formed by this in-place chemical weathering of the parent rock are called "residual soils."

Primary porosity and permeability of the metamorphic rock are extremely low; however, structural deformations have produced planes of secondary permeability along which groundwater movement occurs. These secondary permeability zones consist of fault planes, fractures, shear zones, planes of schistosity resulting from folding, and intrusive contacts around the margins of large intrusive bodies.

Groundwater typically occurs under unconfined or water-table conditions within the residual soils and underlying rock. The depth to the water table is highly variable, being dependent on a variety of factors, including surface topography, soil permeability, rainfall/evapotranspiration, and underlying bedrock structure. However, the water table generally follows the land surface configuration, as a subdued expression of the surface topography.

Recharge to the water-table aquifer is direct through the surface soil either by infiltration of rainfall or by seepage from streambeds and surface impoundments. Because of the low permeability of the residual soils, infiltration rates are low and subsequent surface-water runoff rates are high.

### **E-2.b Site Geology**

The geology underlying the site can be subdivided as follows:

- residual soil
- partially weathered rock (PWR)
- shallow (fractured) rock
- deep rock

Hydrogeologic cross-sections representative of the site are shown on Figure E-2.

#### Description of Soil

Site grading for construction of the warehouse/office structure altered the original site topography. As shown on Figure B-1, the pre-development ground surface sloped from the southeast corner of the site down to the northwest. Fill (residual soils) obtained from the higher southeastern part of the site was used to raise the lower northwestern portion to provide for level building area.

The soil beneath the fill (and from the ground surface in undisturbed portions of the site) is typical of the residual materials found throughout the Piedmont. Two specific soil types are predominant at this site: micaceous silty sands and micaceous sandy silts. In a few areas clayey materials were also encountered. Clayey materials occur as the result of a more advanced stage of weathering and/or minor variations in the mineralogy and type of parent rock. These soils were encountered in the borings to depths ranging from approximately 20 to 60 feet. The thickness of the residual soil zone generally increases from the southeast to the northwest across the site. While the variation in thickness may be due in part to site grading activities, the increase in thickness of the residual soil away from areas of higher topography is typical in the Piedmont.

#### Description of Partially Weathered Rock (PWR)

The contact between the residual soils and PWR is irregular and uneven, reflecting different stages in the weathering process. The partially weathered rock typically retains the relic structure of the parent rock and is generally more granular, being described as a dense sandy silt to poorly graded silty sand with rock fragments. The PWR is less micaceous and contains more quartz. The PWR is generally very dense, being characterized by standard penetration resistance values exceeding 100 blows per foot.

Resulting from the same weathering process as the residual soil, the PWR also tends to increase in thickness away from areas of higher topography, ranging from a few feet thick in the higher southeastern portion of the site to 20 to 30 feet in the northwestern portion.

#### Description of Shallow (Fractured) Rock

The top of rock (the contact between PWR and fractured rock) is also gradational and is generally identified by refusal to soil drilling equipment. At this site, it is described as a soft to hard white to grey quartz biotite schist. The incidence of joints and fractures generally decrease with depth, as reflected by an increase in rock core recovery (for example, see logs for wells B-4B, B-15C, and B-28B in Appendix E-2). Though variable, the zone of fracturing significantly decreased below a depth of 15 to 30 feet into rock.

#### Description of Deep Rock

Two deep borings (for monitoring wells B-11D and B-15D) were advanced to depths of 187.0 and 137.5 feet, respectively. At B-11D, a weathered quartz biotite gneiss was detected to a depth of 94 feet, where granite was encountered; a biotite gneiss was encountered at B-15. At both locations, the rock is hard with fracturing decreasing with depth. Below approximately 80 feet in both borings, core recovery in the gneiss ranged from 90 to 100 percent while core recovery in the granite was 100 percent. Very few potential water-bearing fractures were present below 100 feet.

### **E-2.c Site Hydrogeology**

The investigation of site hydrogeology included the installation of 32 monitoring wells in residual soils, 12 in PWR, 5 in the upper fractured rock, and 2 in deep rock. This investigation showed that groundwater at the site occurs under unconfined (i.e., water table) conditions and flows from southeast of the site, beneath the plant building, and to the northwestern corner of the property. Measurements of the depth to groundwater across the site have shown the depth to vary from about 20 feet southeast of the building to 25 feet at the northwestern corner of the property. Figure E-3 shows the potentiometric surface for groundwater levels measured in residual soil wells on January 18, 2021. This figure shows the southeast to northwest flow across the site. This flow pattern has remained consistent since hydrogeologic investigations at this site were initiated.

Groundwater elevations measured for individual wells installed in the B-11 cluster (wells installed in the residual soil, PWR, shallow rock, and deep rock) show similar groundwater fluctuations in all four hydrogeologic zones (Figure E-4). The similarity suggests that all four zones are interconnected and respond as a single hydrogeologic medium (i.e., unconfined or water table aquifer conditions). Therefore, the potentiometric surface in the residual soil (Figure E-3) appears to be representative of all four hydrogeologic zones.

#### Hydraulic Properties

The residual soil and PWR consist of silts and sands, generally becoming more granular with depth within the PWR. In 1985, an aquifer (pumping) test was conducted in a test well screened in both the residual soil and PWR as discussed further in Appendix E-4. In May 1989 (reported in LAW, July 25, 1989), slug tests were performed in 32 monitoring wells installed in residual soil and 12 installed in PWR. In residual soil, hydraulic conductivity values ranged from approximately 0.05 to 2.02 ft/day while in PWR the values ranged from approximately 0.05 to 9.23 ft/day. The effective porosity values for residual soil and PWR (0.15 to 0.20) are based on estimates cited in Fetter (2001) and reported in LAW (July 25, 1989), and as discussed further in Appendix E-5).



In May 1989 slug tests were also conducted in five wells screened in fractured rock. Hydraulic conductivity values ranged from 0.09 to 2.25 ft/day. The hydraulic conductivity of this zone is very dependent on the degree of fracturing present at the specific location being tested. With depth into the rock, the presence of potential flow paths (fractures) decreases significantly and the potential for groundwater flow decreases accordingly. As described in the report of the installation of the two deep rock wells (LAW, March 1990), the hydraulic conductivity of fractures (where any water "take" in packer tests was recorded) ranged from  $4 \times 10^{-5}$  to  $8 \times 10^{-5}$  cm/sec. Fractures were limited and no take was recorded for most of the test intervals.

### Groundwater Flow Velocity

Groundwater flow velocities,  $V$ , of the water table aquifer beneath the site have been calculated using the modified Darcy equation as presented in the USEPA RCRA Groundwater Monitoring: Draft Technical Guidance (November 1992). The modified Darcy equation is:

$$V = ki/n_e$$

$V$  = Interstitial groundwater flow velocity, ft/day.

$k$  = Hydraulic conductivity, ft/day.

$i$  = Hydraulic gradient (H/L), ft/ft.

$n_e$  = Effective porosity (dimensionless).

Figure E-3 shows the potentiometric surface for groundwater levels in residual soil wells measured on January 18, 2021. Using the hydraulic properties discussed above and a gradient of approximately 0.0151 ft/ft, calculated from the January 18, 2021 potentiometric surface map, groundwater velocities were calculated for the upper (soil/PWR) portion of the aquifer [ $k = 0.05$  to  $5.0$  ft/day;  $i = 0.0151$  ft/ft;  $n_e = 0.17$ ]. Calculated groundwater velocities ranged from approximately 1.62 to 162 ft/year.

The velocity calculation, except for effective porosity, used site-specific parameters (gradient and hydraulic conductivity). Site-specific or site area Piedmont values of effective porosity are not available. Reference values used in developing the estimated effective porosity for calculating groundwater velocity at the Xerox site are presented in Appendix E-5.

### **E-3 - Topographic Map Information**

The topographic maps of the site required by Subsection B-2 are presented on Figures B-1 and B-2. The property boundaries, the POC for the closed tanks area, the hazardous waste management unit (HWMU) and Waste Management Area (WMA) (former tanks/piping area) are illustrated on Figure B-2. The locations of existing groundwater quality monitoring wells are also shown on Figure B-2. The horizontal extent of the plume based on groundwater quality monitoring for site-specific constituents is shown on Figure E-5a (residual soil), Figure E-5b (partially weathered rock), Figure E-5c (fractured rock) and Figure E-5d (deep rock). Contaminant plume descriptions are provided in Subsection E-4.

### **E-4 - Contaminant Plume Description**

Previous operations at the Xerox facility (described in Section B-1) resulted in release of the chlorinated solvent blend from the two underground tanks and associated piping system (see Table C-1). Ground water contaminated with site-specific constituents has been assessed and monitored since 1984 through installation, sampling, and laboratory analyses of ground water at 32 wells within residual soils, 12 wells within partially weathered rock, 5 wells within fractured rock, and 2 wells in

deep rock. By 1998, active remediation included pumping ground water from up to 17 recovery wells and operation of a 2-PHASE Extraction System for enhanced recovery of source area contaminants from soil and ground water. Xerox prepared a Contingent Corrective Action Plan (CCAP) dated November 17, 1998. This Plan demonstrated that the remediation programs conducted at the site had gone beyond the practical limits for achieving any further substantive improvements in ground-water quality or contaminant mass removal and that residual ground-water contamination did not pose a danger to public health or to the environment. Considering these conditions, the absence of known areas of soil contamination, and Xerox' desire to maximize the beneficial use of the property, a plan for transitioning corrective actions to a monitoring-based program was proposed, accepted by EPD, and incorporated in the facility's November 18, 1999 Amended RCRA Permit. Under this Plan, all active remedial measures and monitoring being conducted inside the building were terminated; remediation equipment was removed from the building; all ground-water recovery wells and those monitoring wells located inside the building were abandoned; and the POC was established at the B-11 cluster. Subsequently, ground-water monitoring was, and continues to be, performed in the area northwest of the building, downgradient from the former release.

Beginning in 2000, Xerox initiated groundwater quality sampling in accordance with the CCAP. The CCAP groundwater quality monitoring wells are shown on Figure E-6 and consist of background monitoring well B-32, the POC B-11 cluster wells, and four downgradient wells (B-28A, B-28B, B-29A and B-33B). Groundwater elevations are also measured in these wells and from five additional downgradient wells (B-10, B-10A, B-12, B-28, and B-29). The results of groundwater elevations measured from 2000 through January 2021 are presented on Table E-1. Table E-2 through E-4 present groundwater quality results for sampling events (including Appendix IX Sampling) conducted during this period.

Figures E-7a, E-7b and E-7c illustrate PCE and TCE concentrations detected in B-11A, B-11B, and B-11D that have occurred since CCAP monitoring was initiated in 2000. These figures show a generally similar pattern in the fluctuations of PCE and TCE concentrations in each well. In each well, concentrations increased through 2003/2004. Thereafter, PCE and TCE concentrations in B-11A decreased to non-detect, PCE and TCE concentrations in samples collected from B-11B decreased while concentrations in those collected from B-11D remained relatively constant. By 2008/early 2009, PCE and TCE concentrations had decreased to non-detect levels in B-11A. PCE and TCE concentrations in B-11B after 2003/2004 initially decreased, but then appeared to level off; PCE at a concentration of approximately 6 µg/L and TCE at a concentration of approximately 3 µg/L. PCE concentrations in B-11D appeared to hold at the 2003/2004 levels and be relatively stable thereafter at approximately 5 µg/L, with TCE concentrations at approximately 2.5 µg/L.

With PCE concentrations appearing to level off in B-11B and B-11D at or slightly above MCLs (drinking water standards), an accelerated remediation plan was developed by Xerox (Haley & Aldrich) to reduce contaminant concentrations so that compliance monitoring could be initiated and formal closure of the facility's post-closure care permit pursued. This plan was conditionally approved by EPD as an Interim Measures (IM) Work Plan on February 5, 2009. The November 21, 2008 *IM Work Plan* and EPD's February 5, 2009 letter are in Appendix E-6. The *Report of the Remedial Enhancement Program (Interim Measure)* prepared by Haley & Aldrich is in Appendix E-7. Figures E-7b and E-7c illustrate the impact of the Interim Measures treatment on PCE and TCE concentrations in POC wells B-11B and B-11D; concentrations were reduced to below MCLs. Table E-4 also illustrates that constituents have not been detected in near downgradient well B-33B; in B-29A; or, since 2005, in the B-28 cluster wells, with the exception of chloroform reported in B-29A and B-33B below the laboratory

Method Reporting Limit (MRL) in January 2019 (shown on Table E-4a) as part of analyses conducted in support of a groundwater modeling effort, as discussed below.

PCE and TCE concentrations remained at post-IM levels for approximately 1 ½ to 2 years following treatment. Thereafter, the concentration of TCE in B-11A, B-11B, and B-11D decreased to either non-detect or as detections at or near the reporting limit of 1 µg/L. TCE remains as being not-detect in current samples. PCE concentrations, however, began to increase in samples collected from B-11B and B-11D (see Figures E-7b and E-7c). For the past several years, the PCE concentration in B-11B has fluctuated between 5 µg/L (the MCL) and approximately 7 µg/L while PCE concentrations in B-11D have fluctuated between 4 µg/L and slightly more than 6 µg/L.

As concentrations were increasing in B-11B and B-11D from post-IM concentrations, PCE began to be detected in B-11A samples; PCE had been non-detect (or was detected at the reporting limit of 1 µg/L) in B-11A since 2005. The concentration of PCE rose steadily to a little over 3 µg/L in the mid-2018 sample. In the January 2019 sample and the February 2020 sample, PCE concentrations of 6.1 and 7.6 µg/L, respectively, were reported. Rainfall totals in the months immediately prior to collecting the 2019 and 2020 samples significantly exceeded normal values and groundwater levels rose to levels 1 to 2 feet above those levels occurring prior to previous sampling events, as shown on Figure E-4. Increased infiltration and the rise in groundwater levels are thought to be likely responsible for the 2019/2020 increased PCE concentration in the B-11A samples. The PCE concentration in B-11A increased to 9.4 µg/L in January 2021 (Figure E-7a). Additional sampling and analyses associated with continued monitoring activities will allow a better understanding of the PCE trend in B-11A.

The semi-annual sampling event conducted in January and February 2019 included, in addition to the Permit-required sampling for PCE and TCE in wells B-11, B-11A, B-11B, B-11D, B-28A, B-28B, B-29A, B-32 and B-33B, sampling and analyses for additional parameters in wells B-10, B-10A, B-12, B-28 and B-29, for input into the groundwater modeling being conducted for Xerox by Haley & Aldrich in support of potential Permit modification or termination. A summary of the results of these analyses is presented in Table E-4A. These results show that the Permit constituent PCE was the only volatile organic compound (VOC) detected in groundwater above its laboratory MRL, and was detected only in B-11A, B-11B and B-11D, consistent with historical data. All other VOCs shown on Table E-4A in relation to the sampled wells (acetone, carbon disulfide, chloroform, chloromethane, cis-1,2-dichloroethene, and TCE) were listed in the laboratory report at very low levels below the MRL, and were qualified by the laboratory with the notation of "J", meaning that the listed value was estimated, and concentrations could not be verified as the listed values were too low to be within the linear range of the laboratory calibration. Additionally, the reported chloromethane values in the well samples were "B" flagged during Wood's data quality evaluation (DQE) due to a chloromethane detection in the associated trip blank. These estimated unverified concentrations are discussed below.

Acetone was reported in the samples collected from B-11A, B-11B and B-11D, all at concentrations below the acetone MRL of 5.0 µg/L. The USEPA considers acetone to be a common laboratory contaminant (USEPA 1999a). The reported acetone values at B-11A, and B-11B and B-11D are considered to be laboratory artifacts, based on the low values reported and its known status as a common laboratory contaminant.

Carbon disulfide was reported (at 0.44 J µg/L) in one sample (well B-12) of the 14 wells sampled in the January/February 2019 sampling event. The United States Geological Survey (USGS) has stated that a likely source of contamination of samples by carbon sulfide is the nitrile gloves used by both laboratory and field personnel (Fram et al., 2012). Based on this information, and considering the

single isolated occurrence of carbon disulfide at a reported value below the MRL, the carbon disulfide value reported at MW-12 is considered to be a field sampling or laboratory artifact.

Chloroform was reported in the samples collected from B-11D, B-29A and B-33B, all at concentrations below the chloroform MRL of 1.0 ug/L. The USGS has stated that chloroform is a common laboratory contaminant (Sloto et al., 1996). The reported chloroform values at B-11D, and B-29A and B-33B are considered to be artifacts, based on the low values reported, its known status as a common laboratory contaminant, and as it is not an associated product of PCE (Ohio EPA, 2014).

Chloromethane was reported in the samples collected from B-11, B-11B, B-12 and B-32, all at concentrations below the chloromethane MRL of 1.0 ug/L, with a maximum value of 0.47 J ug/L at well B-12. Chloromethane was detected only in the sample group (R1900973) which consisted of B-11, B-11B, B-12 and B-32, and was detected in all 4 of these wells. Chloromethane was detected in the trip blank (Trip Blank-3) associated with this sample group at 0.45 J ug/L, as compared to the maximum value of 0.47 J ug/L reported at well B-12. Therefore, the reported chloromethane values in the well samples were "B" flagged during Wood's DQE, meaning they are considered either field or laboratory artifacts and should not be evaluated as detections of chloromethane. Additionally, the chloromethane detection reported in background well B-32 would indicate it is not a constituent related to the site, although it was also "B" flagged. As a result of the information presented above, the reported chloromethane values at B-11, B-11B, B-12 and B-32 are considered to be artifacts, based on the positive chloromethane result in the associated trip blank causing the results to be "B" flagged and the reported detection in background well B-32.

A single occurrence of cis-1,2-dichloroethene at a value of 0.49 J ug/L was reported at well B-12, of the 14 wells sampled in the January/February 2019 sampling event. This value is below the MRL of 1.0 ug/L, and only slightly above the cis-1,2-dichloroethene method detection limit (MDL) of 0.26 ug/L. Although the estimated value reported at well B-12 was below the MRL, there were no other detections of cis-1,2-dichloroethene above either the MRL or MDL in any of the other 13 wells sampled during this event. Cis-1,2-dichloroethene is included in the table below for consideration for addition as a constituent to Table I of the Permit, as it can be formed as a product of anaerobic biodegradation of TCE.

During the January/February 2019 sampling event, site-specific constituent PCE was reported above the MRL at wells B-11A, B-11B and B-11D, consistent with historical results. PCE was reported below the MRL of 1.0 ug/L at wells B-12 and B-28. There were no detections of TCE above the MRL; TCE was only reported at wells B-11B, B-11D, B-12 and B-28 below the MRL of 1.0 ug/L.

Based on the information presented above, the site-specific constituents are given in the table below:

**Site-Specific Constituents  
and Ground Water Protection Standards (GWPS)**

<b>Site-Specific Constituents</b>	<b>GWPS</b>
Trichloroethene	Background
Tetrachloroethene	Background
Cis-1,2-Dichloroethene	Background

Section E-4 References

Fram, M.S., Olsen, L.D., and Belitz, Kenneth, 2012, Evaluation of volatile organic compound (VOC) blank data and application of study reporting levels to groundwater data collected for the California GAMA Priority Basin Project, May 2004 through September 2010: U.S. Geological Survey Scientific Investigations Report 2012–5139, 94 p.

Ohio Environmental Protection Agency, 2014, Source Water Assessment and Protection Program, Susceptibility Analysis Process Manual: Division of Drinking and Groundwaters, Source Water Assessment and Protection Program, Revised December 2014.

Sloto, R.A., and McManus, B.C., 1996, Hydrogeology and ground-water quality of Valley Forge National Historic Park, Montgomery County, Pennsylvania: U.S. Geological Survey Water-Resources Investigations Report 1996–4120, 25 p.

U.S. Environmental Protection Agency, 1999a, Data validation standard operating procedures for contact laboratory program routine analytical services (rev. 2.1): Athens, Ga., U.S. Environmental Protection Agency, Region IV, 32 p

**E-4.a Horizontal Extent of Contamination**

The presence of TCE and PCE detected in groundwater within each hydrogeologic zone in February/March 2020 is shown in Figures E-5a (residual soil), E-5b (partially weathered rock), E-5c (fractured rock), and E-5d (deep rock). These figures identify the wells screened in each zone and the TCE/PCE concentrations at each well. Since constituents have been detected above the MRL only in B-11A, B-11B and B-11D, the results at most locations are reported as ND. As stated above, TCE and PCE were reported at low estimated levels below their respective MRLs at B-12 and B-28 in the samples collected in January/February 2019 to aid in the groundwater modeling effort. Other VOCs were reported below their MRLs in the January/February 2019 samples, but are considered artifacts, as discussed previously. Due to the very limited presence and low concentrations of the constituents, the extent of the plume cannot be further delineated.

**E-4.b Vertical Extent of Contamination**

As discussed in Subsection E-2, the uppermost aquifer beneath the site is an unconfined aquifer consisting of residual soil, partially weathered rock, and the fractured and deep rock water bearing

zones. Groundwater quality data collected under the CCAP shows that constituents remaining in groundwater are in the PWR and in the fractured (shallow) and deep rock zones. Constituents are no longer detected in the residual soil, with the exception of PCE and TCE reported at low estimated levels below their respective MRLs at B-12 and B-28 in the samples collected in January/February 2019 to aid in the groundwater modeling effort. Other VOCs were reported below their MRLs in the January/February 2019 samples, but are considered artifacts, as discussed previously (see Figures E-5a through E-5d).

#### **E-4.c Constituents Within the Plume**

The site-specific constituents listed in the facility's 2011 permit are PCE and TCE. As described in the CCAP, groundwater in POC well B-11 and either B-11B or B-11D has been sampled and analyzed for Appendix IX constituents annually since 2001. Table E-2 shows the constituents more or less consistently detected in Appendix IX sampling events (2000 through 2020) and their concentrations. Constituents consistently detected have been fluoride, several metals, and volatile organic compounds PCE and TCE. Fluoride has not been identified as a facility-related constituent. As shown on Table E-2, fluoride is not detected, or is detected at the reporting limit (0.1mg/1), in POC residual soil well B-11, but is consistently detected in rock wells B-11B and B-11D at concentrations ranging from the reporting limit to 0.28 mg/1. The source of the fluoride in the rock wells has been discussed in past semi-annual reports as likely being associated with groundwater impacts from granitic rocks along the Brevard fault zone, in the site's immediate vicinity. Studies presented in EPD Circular 12U (2007), showed that several metals (including zinc, lead, chromium, barium, and iron) were commonly detected in groundwater samples from wells installed in the Piedmont. Barium, consistently detected in residual soil well B-11 and rarely detected in rock wells B-11B and B-11D, was described in the study as being "nearly ubiquitous" in groundwater collected in monitoring wells installed in Piedmont residual soils.

For a period (2000 through 2008/2009), acetone and formaldehyde were added to the list of site-specific constituents. These were deleted after not being detected for a period of at least three years. Analysis for cis-1,2-dichloroethene was also discontinued in 2008. While other constituents have been detected in Appendix IX samples (see discussions below), and in the samples collected in January/February 2019 to aid in the groundwater modeling effort (see preceding discussion), cis-1,2-dichloroethene has been added to the list of site-specific constituents, for the reasons discussed above.

##### E-4c(1) Chloroform and Chloromethane

Chloroform and chloromethane were detected at very low concentrations in the 2009 Appendix IX sample from B-11B, and in some of the samples collected in January/February 2019 to aid in the groundwater modeling effort. These constituents are not historic plume constituents and the 2009 detections were very likely residual from the potable water used in the IM treatment of the POC wells conducted in April 2009. They were not detected in subsequent Appendix IX sampling events. The 2019 chloroform and chloromethane detections are believed to be artifacts, as discussed above. They were not added to the list of site-specific constituents.

#### E-4c(2) Bis(2-Ethylhexyl) phthalate (DEPH)

Prior to the January 2018 sampling event, DEPH was frequently detected in Appendix IX samples collected from fractured and "deep" rock wells B-11B and B-11D, respectively (see Table E-2). These wells were purged and sampled from the discharge of the well's permanent pumps. POC well B-11 (installed in residual soils) was historically sampled using a bailer: DEPH has not been detected in the B-11 samples.

To assist in assessing the potential that DEPH was an historic plume constituent, Xerox reviewed the results of the analyses of samples collected from the now-abandoned B-7 and B-15 clusters. These wells were located between the piping release areas and the B-11 cluster. B-7C was terminated at a depth of 83 feet in the fractured rock zone; B-15C and 15D were terminated at depths of 105 and 137 feet, respectively, in fractured and "deep" rock. DEPH was not detected in any of the samples collected from these wells.

In January and July 2017, Xerox sampled wells B-33B and B-28B, located downgradient from the B-11 POC well cluster; DEPH was not detected. The results of the DEPH analyses at site monitoring wells from 2002 through 2019 are shown on Table E-2a.

Based on these data and published guidance (*Problems Associated with bis(2-ethylhexyl)phthalate Detections in Groundwater Monitoring Wells*, PUB-WA-1011 Rev. 2002), Xerox has concluded that DEPH detected in the B-11B and B-11D samples is not a constituent in site groundwater. Rather, it is likely present in the water collected from these wells as a product of degradation of the permanent pumps and flexible piping used to purge and sample these wells. With EPD approval, the permanent pumps and piping were removed from these wells and the wells redeveloped in mid-December (2017) and again in late January (2018) by brushing and surging. B-11B and B-11D were then sampled on February 1, 2018 this time using a peristaltic pump. B-11D was sampled in August 2018, also using a peristaltic pump. These samples were non-detect for DEPH. Unless DEPH is later confirmed as a consistent constituent in samples from these wells, it is Xerox's opinion that the current data indicates that DEPH is not a groundwater constituent, but rather was likely present in the samples from B-11B and B-11D as a product of degradation of pump components.

#### E-4c(3) OCDD and THD

EPD, in their letter of April 4, 2016, addressed the results of the Method 8290 analyses of polychlorinated dibenzodioxins and dibenzofuran samples collected from POC wells B-11 and B-11B as part of the October 2015 sampling event. It was noted that three of the 8290 analytes (1,2,3,4,6,7,8- HpCCD, OCDD, and total Hepta-Dioxins) from both wells were reported at concentrations exceeding their respective MRLs. EPD requested the POC wells B-11, B-11B, and B-11D be resampled to include the 8290 analytes. These results were reported in Xerox's June 29, 2016 report of the "*Results of the May 10, 2016 Appendix IX Sampling Event.*" While several Method 8290 constituents were reported in one or more of these samples, none was reported at concentrations exceeding the respective MRLs. EPD requested further Method 8290 sampling as part of the July semi-annual sampling event (conducted August 3-5, 2016) for 1,2,3,4,6,7,8-HpCDD, OCDD, and 1,2,3,4,7,8,9-HpCDF).

The results of the August 2016 analysis of these constituents in POC wells B-11, B-11B, and B-11D are shown on Table E-2b. Two of the three analytes were detected in the POC groundwater samples and in the method blank, reported at concentrations below the MRL. One constituent (1,2,3,4,7,8,9-

HpCFD) was reported as being non-detect in both the POC well samples and in the method blank. Other Method 8290 constituents were also detected, but none exceeded their respective MRLs.

Review of Method 8290 results for Appendix IX samples collected from the POC wells during the previous five years (2010 through 2014) showed similar results, where a variable number of 8290 analytes might be reported, but always at concentrations below their respective MRLs or qualified due to blank contamination (see Table E-2b). These results indicate that the MRL exceedances reported in the results of the Method 8290 analyses of samples collected in October 2015 from POC wells B-11 and B-11B were atypical of historic reported Appendix IX analyses of samples from the Xerox site.

The results of the analysis for OCDD and THD for 2017 through 2019 are also shown on Table E-2b. These results illustrate the continued variability in reported Method 8290 analytes in the POC wells and in the method blanks. Except for the OCDD results in the B-11D sample collected in 2018, all results are below their respective MRLs or are qualified due to blank contamination. While the OCDD concentration in the 2018 B-11D sample was atypical (elevated) of previous B-11D results, when considered relative to the variability of results from previous sampling events and the on-again/off-again reported presence of these constituents in method blank samples, it is Xerox's opinion that it is more likely that the reported results are indicative of laboratory artifacts than representative of site groundwater.

## **E-5 - General Monitoring Program Requirements**

The program requirements for monitoring presented in this subsection are those conducted in accordance with the current permit, incorporating the program described in the CCAP dated November 17, 1998 as incorporated in the November 18, 1999 Amended RCRA Permit and implemented in 2000 and subsequent EPD-approved modifications related to sampling frequency and the site-specific constituent list.

### **E-5.a Description of Wells**

Monitoring wells used to monitor groundwater quality during corrective action are designated as:

- Background Well (B-32)
- Point of Compliance (POC) Wells (B-11, B-11A, B-11B, B-11D)
- Extent of Plume Monitoring Wells (B-28A, B-28B, B-29A, B-33B)

In addition to sampling for groundwater quality in these nine wells, groundwater levels are measured in wells B-10, B-10A, B-12, B-28, and B-29.

Monitoring well B-32 is the hydraulically upgradient, background, well to assess the quality of groundwater entering the site. The POC wells are to allow monitoring of the quality of groundwater crossing the POC while the purpose of the extent of plume monitoring wells is to document that the plume of groundwater containing site-specific constituents in the uppermost aquifer is not expanding.

Figure E-6 shows the locations of the monitoring wells sampled under the CCAP. Installation records for these monitoring wells are presented in Appendix E-2. The background, POC, and extent of plume monitoring wells have been sampled semi-annually for site-specific constituents.

Construction data for all wells installed at this facility, both current CCAP wells and those previously abandoned, are provided on Table E-5.



### **E-5.b Description of Sampling/Analysis Procedures**

The general groundwater sampling procedures are outlined in the Groundwater Sampling Procedures included as Appendix E-8.

### **E-5.c Procedures for Establishing Background Quality**

The groundwater background quality is determined from sampling and analysis of samples from upgradient monitoring well B-32. Therefore, the background data set continues to expand, raising the level of confidence of the statistical procedures described in EPA, March 2009, Statistical Analysis of Groundwater Monitoring Data of RCRA Facilities, Unified Guidance.

### **E-5.d Statistical Procedures**

Statistical procedures to be used during corrective action monitoring and subsequent compliance monitoring will be as described in EPA, March 2009, Statistical Analysis of Groundwater Monitoring Data of RCRA Facilities, Unified Guidance.

### **E-6 - Description of Detection Monitoring Program**

Groundwater contamination has been identified and the limits of the contaminant plume have been defined. This subsection is not applicable.

### **E-7 - Description of Compliance Monitoring Program**

With the concentration of site-specific constituents (PCE and TCE) being detected at concentrations above Groundwater Protection Standards (GWPSs), this subsection is not applicable. Corrective action monitoring, rather than compliance monitoring, will be continued under this permit revision.

### **E-8 - Description of Corrective Action Program**

Corrective actions at this facility started in 1984 with the closure of two underground storage tanks and associated piping (the HWMU), including the excavation and off-site disposal of accessible source area soils and subsequent soil and groundwater investigations and remedial measures.

#### Soil Investigations

The following discussion presents the results of a series of soil investigations conducted concurrent with and following closure of the solvent USTs and piping system.

Prior to backfilling the elbow area excavation (November 1984) five soil samples (the P-Series) were collected from the sides and bottom of the excavation and analyzed for PCE (initial groundwater sampling showed that PCE was by far the most consistently detected and highest concentration constituent in the release). Later, in May and October 1986, additional soil samples were collected from depths of approximately four and nine feet below ground surface at locations extending out to the north, east, and south from the now-filled elbow bend excavation (the A- and B-Series samples). Sampling locations and PCE results are shown on the Source Pit Detail inset on Figure E-8. More complete analytical results are shown on Table E-6.

In Oct/Nov 1984 and in Nov/Dec 1987, borings B-1 through B-13, B-11A and B-25 through B-27 respectively were drilled along and inside the eastern side of the manufacturing building and extending to the west beneath the building and downgradient of the elbow bend area (Figure E-8). Soil samples were collected from these locations for analysis. Samples collected from B-1 through B-13 were analyzed for seven select aliphatic and chlorinated compounds. The samples collected from B-11A and B-25 through B-27 were analyzed by EPA Methods 601 and 602. Detections of PCE in

analyses of these samples are shown on Figure E-8. The analytical results are presented on Table E-7 and Table E-8. The results of this analysis were assessed to determine if releases other than those previously identified have impacted soils, particularly beneath the building where parts washing occurred. PCE was only detected in eight of the 118 samples analyzed from these 17 borings. PCE concentrations in these eight samples were 3.4, 5, 6.8, 6.9, 7.8, 22, 29 and 140 µg/kg at depths of 41, 9, 1, 16, 1, 1, 1 and 16 feet, respectively. Additional source areas are not indicated by these results. Note that the samples collected at depths of 16 and 41 feet below ground surface (bgs) would have been below the natural water table.

Supplemental soil and groundwater sampling was conducted in February and March 1998 along a portion of the former solvent pipeline alignment to investigate for the source(s) of former leaks indicated by the presence of constituents in groundwater samples collected from downgradient of the pipeline in the area. Sampling locations and soil and groundwater analytical results are shown on the Hydropunch Location Detail inset on Figure E-8. Hydropunch borings extended to a depth of 15 feet; most soils samples collected for analysis were from the 10-foot depth, just above the natural water table. While constituents were not detected in the soil samples, relatively significant PCE-impacted groundwater was detected at sample locations HP-2, HP-5, and HP-7 (PCE concentrations of 1500 to 4200 µg/L). These data support the occurrence of a former pipeline leak in this area. Subsequently, in April 1998, monitoring wells B-38 and B-39 were installed in the vicinity of HP-5 and HP-7 and were converted to 2-PHASE extraction wells.

Additional soil sampling was conducted in June 2011 to supplement earlier soils data collected from the area of the two former USTs, from the elbow bend area of the former piping, and from the adjacent interior locations of the former solvent spray booths. Samples were also collected from three temporary groundwater monitoring wells drilled adjacent to and in the area of the former booths (Figure E-9). Thirty soil samples and three groundwater samples were collected and analyzed for EPA Method 8260B VOCs. The analytical results are summarized on Table E-9. PCE was detected in one soil sample (DPT-4 at a depth of two feet) at 37 µg/kg. The results of this investigation presented in "*Preliminary Report of Supplemental Soil Investigation, July 19, 2011*" (Appendix E-9) indicate that the presence of residual PCE in soils in and adjacent to former source areas is limited.

In summary, following excavation of the tanks and piping comprising the HWMU, soil sampling was conducted in and around areas known or suspected to be sources of potential impacts to soil due to releases of constituents (primarily aliphatic and chlorinated volatile organic compounds) associated with the facility parts washing operations. Soils investigated included those adjacent to the USTs and associated piping and interior of the building where parts washing operations occurred. The sampling results showed that potentially impacted soils may remain along a portion of the former piping run from the USTs to the elbow bend area and in the elbow bend area; no indications of releases at locations other than those associated with the cleaning operations, including those conducted interior of the building, were observed.

## Groundwater Investigations

In 1986, following closure of the tanks and solvent piping system, five groundwater recovery wells (B-1 through B-5) were installed and pumping to facilitate groundwater (and contaminant) recovery and plume migration control was initiated. By 1990, the contaminant recovery and plume migration control had been expanded to 17 recovery wells and over 50 monitoring wells. Most of the 6-inch recovery wells were terminated at depths of 35 to 50 feet. Figure E-10 illustrates the limits of the capture zone created by these pumping activities. In 1994, 14 new or existing monitoring or recovery wells were installed/modified for application of a 2-PHASE Extraction System, to focus and enhance contaminant removal at locations of higher residual constituent concentrations. Figure E-11 shows the location of monitoring and recovery wells and 2-PHASE extraction wells in 1998. Figure E-12 illustrates the effectiveness of the 2-PHASE extraction system in contaminant recovery and the significant drop-off with time in the extraction rate. At that time, over 3,500 pounds of contaminants had been removed.

Figures E-13a through E-13f illustrate the approximate limits and concentrations of PCE present in monitoring wells located along the axis of contaminant migration, from background well B-32, through the area of the elbow bend release, through the POC (B-11 cluster wells), and to downgradient well B-12. Figure E-13a, 1998, represents pre-recovery conditions and associated extent and concentrations of contaminant migration. Figure E-13b through Figure E-13f illustrates, in two-year increments, the effectiveness of migration control and plume mitigation from 1988 through 1998. In 1988, the PCE concentration in groundwater samples from the area of the elbow bend release (B-4) was 26,000 µg/l; by mid-1998 PCE concentrations had decreased to 2700 µg/L, a ten-fold decrease. Similarly, PCE concentrations in 1988 in fractured rock wells B-7B (screened from 60 to 80 feet) and B-15C (screened from 85 to 105 feet) were 180 and 160 µg/L, respectively; by 1998, PCE concentrations in these wells had dropped to 2.3 and 4.3 µg/L.

Recovery system operations were terminated in December 1998 following a 15-month pump pulsing and assessment program that demonstrated the operation of these active remedial efforts had achieved their practical limits for substantive improvement in groundwater quality. At that time, over 3,500 pounds of contaminants had been removed. Table E-10 shows residual (post active remediation) PCE concentrations reported from January 1998 through March 2000 in analyses of samples from 19 monitoring and recovery wells located in and downgradient from the release area.

In November 2011, Environmental Resources Management (ERM), on Xerox's behalf, prepared a Work Plan (*Interim Corrective Measures Work Plan, November 4, 2011, Appendix E-10*) to implement a "polishing" treatment for residual contaminants in groundwater in an area adjacent to and beneath the building at a point downgradient (west) from the waste solvent transfer piping, about midway between the former UST's and the refurbishing area. In accordance with the approved Work Plan, groundwater treatment consisting of permanganate injections was conducted (November 29 through December 7, 2011). Injections targeted the zone from the groundwater table through the residuum into the top of the PWR (approximately 10 to 25 feet bgs). Injection locations were in both areas where residual levels of constituents had been reported, in the former parts washing booth areas, and in the area downgradient from the piping. The injection program and results are presented in ERM's January 27, 2012 *Residual Groundwater Polish – Interim Measure Report* (Appendix E-11). A total of 4,347 gallons of 1% and 4.5% potassium permanganate were injected at 10 locations. Due to variations in the permeability of soils at proposed injection locations, some locations received none or less than the planned volume of permanganate while others received a greater amount than planned.

Post-injection sampling could not be conducted due to access constraints (Xerox's facility lease ended at the end of December 2011, three weeks after completion of the injection program).

With EPD's approval of a permit modification request (September 9, 1998), active corrective actions were suspended, and Xerox transitioned to a more compliance-monitoring-based program (CCAP dated November 17, 1998 as incorporated in the November 18, 1999 Amended RCRA Permit, and subsequent modifications). The permit modification granted by EPD established the POC for the corrective actions to be outside and down gradient of the building (at monitoring wells B-11, B-11A, B-11B, and B-11D) with monitoring-based criteria for evaluating potential contingent actions. With the issuance of the permit modification, active remedial system operation ceased, remedial system equipment was removed from the site, and all recovery wells and all monitoring wells not specified for continued monitoring were decommissioned (grouted) per an approved plan. These activities were completed to facilitate Xerox's desire to maximize the facility's beneficial use for a desired property transaction.

The current groundwater monitoring program, the CCAP, consists of 14 wells (Figure E-6): upgradient well B-32; POC wells B-11, B-11A, B-11B, and B-11D; and downgradient wells B-10, B-10A, B-12, B-33B, B-28, B-28A, B-28B, B-29, and B-29A. Groundwater levels are currently monitored in these wells semi-annually and potentiometric maps of groundwater in the uppermost water-bearing zone (residual soil wells) are prepared. Figure E-3 shows the potentiometric surface in the residual soil wells as measured on January 18, 2021. The gradient across the site was 0.0151 ft/ft. to the north-northwest. In January 2021, the only constituent detected was PCE at B-11A, B-11B and B-11D, at 9.4, 6.8 and 6.3 µg/L, respectively.

Xerox continues corrective action monitoring as follows:

- Semi-Annual measurements of groundwater levels will be measured in background well B-32, the four POC wells (B-11 cluster), and down and side gradient wells B-10, B-10A, B-12, B-28, B-28A, B-28B, B-29, B-29A and B-33B.
- Annual sampling for groundwater quality will be conducted in background well B-32, the four POC wells (B-11 cluster), and downgradient wells B-28A, B-28B, B-29A, and B-33B. These are the same wells previously sampled under the CCAP. The wells will be analyzed for TCE, PCE, and cis-1,2-dichloroethene.
- Appendix IX sampling will be conducted annually in the POC wells. Wells will be sampled sequentially, one each year.
- Reports will be submitted annually.
- When GWPS have been achieved by monitoring at and beyond the POC for a period of three years, a revised Corrective Action Plan (CAP) will be prepared to terminate the Post Closure Care Permit. The revised CAP will document that groundwater concentrations are at, or below, these GWPSs and that soil concentrations are at, or below, risk-based standards.

Appendix E-8 contains a discussion of the groundwater sampling procedures which will be used to comply with the requirements of GA Rule 391-3-11-.10(2).

## **TABLES**

**Table E-1**  
**Summary of Groundwater Elevations**  
**January 2001 through January 2021**

Monitoring Well No.	Datum Elevation (ft, NVGD)	1/18/2001 Groundwater Elevation (ft, NGVD)	5/2/2001 Groundwater Elevation (ft, NGVD)	7/30/2001 Groundwater Elevation (ft, NGVD)	10/30/2001 Groundwater Elevation (ft, NGVD)	1/22/2002 Groundwater Elevation (ft, NGVD)	4/22/2002 Groundwater Elevation (ft, NGVD)	7/1/2002 Groundwater Elevation (ft, NGVD)	10/1/2002 Groundwater Elevation (ft, NGVD)	1/20/2003 Groundwater Elevation (ft, NGVD)	4/14/2003 Groundwater Elevation (ft, NGVD)	7/6/2003 Groundwater Elevation (ft, NGVD)	11/11/2003 Groundwater Elevation (ft, NGVD)	2/2/2004 Groundwater Elevation (ft, NGVD)	4/26/2004 Groundwater Elevation (ft, NGVD)	7/26/2004 Groundwater Elevation (ft, NGVD)	10/25/2004 Groundwater Elevation (ft, NGVD)	1/11/2005 Groundwater Elevation (ft, NGVD)	4/18/2005 Groundwater Elevation (ft, NGVD)	7/18/2005 Groundwater Elevation (ft, NGVD)
B-10	793.47	770.82	772.30	772.49	770.15	771.56	771.92	772.52	773.58	772.07	772.49	772.89	771.52	771.91	772.16	771.54	771.39	772.07	772.84	772.41
B-10A	792.60	770.82	772.39	772.14	771.25	771.30	772.05	772.57	773.55	772.13	772.55	772.95	771.60	772.04	772.29	771.65	771.49	772.20	772.95	772.55
B-11	793.57	772.06	774.16	774.90	772.78	772.42	773.75	773.51	774.47	774.42	774.77	775.42	773.62	774.16	774.40	773.72	773.59	774.41	775.31	774.77
B-11A	793.67	772.65	774.36	775.08	773.01	772.88	773.95	773.52	774.69	774.33	775.67	775.16	773.62	774.09	774.27	773.69	773.60	774.29	774.82	774.60
B-11B	793.71	772.49	774.40	775.19	773.02	772.90	773.93	773.50	774.63	774.26	774.59	775.09	773.61	774.05	773.77	773.66	773.58	774.25	774.98	774.51
B-11D	793.95	772.35	774.19	775.39	772.84	772.73	773.75	773.81	774.44	774.07	774.40	774.85	773.45	773.82	774.47	773.46	773.37	774.05	774.79	774.30
B-12*	790.00																			
B-28	793.61	770.52	769.93	771.48	769.96	770.50	771.39	771.12	772.22	771.66	772.01	772.51	771.01	771.40	771.61	DRY	770.90	771.54	772.37	771.90
B-28A	793.53	769.94	769.71	770.92	770.11	770.13	770.92	771.09	772.12	771.14	771.53	772.03	770.58	771.00	771.16	770.55	770.47	771.12	771.92	771.48
B-28B	792.90	769.33	768.95	NA	769.83	769.31	70.14	770.44	771.58	770.08	770.52	771.08	769.60	770.03	770.15	769.65	769.47	770.20	771.08	770.80
B-29	792.61	768.70	769.28	769.74	769.04	769.01	769.98	769.83	770.98	770.42	770.91	771.48	769.61	770.20	770.29	DRY	769.56	770.34	771.21	770.61
B-29A	792.65	768.72	768.58	769.61	769.05	768.98	769.88	769.76	770.94	770.34	770.81	771.37	769.59	770.06	770.19	769.52	769.49	770.26	771.29	770.57
B-32	797.82	774.71	778.61	779.84	776.31	775.91	778.28	776.74	777.79	779.12	779.86	781.42	778.12	779.34	779.26	778.08	778.24	779.64	780.95	780.61
B-33B**	792.35									773.82	774.23	774.55	773.20	773.58	773.89	773.20	773.11	773.70	774.48	774.13

**Notes:**

NA Wasp Nest

\* Monitoring well B-12 listed as abandoned, but was located in July 2013

\*\* Monitoring well B-33B installed December 2002

B-29A - new top-of-casing elevation surveyed on July 28, 2016

**Table E-1**  
**Summary of Groundwater Elevations**  
**January 2001 through January 2021**

Monitoring Well No.	1/24/2006	7/11/2006	1/22/2007	7/23/2007	1/21/2008	7/14/2008	1/26/2009	8/31/2009	1/15/2010	4/26/2010	7/27/2010	January 26, 2011	6/28/2011	2/29/2012
	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)	Groundwater Elevation (ft, NGVD)
B-10	771.70	771.26	771.33	770.36	770.26	770.64	770.09	769.43	771.2	771.89	770.25	769.55	769.45	769.74
B-10A	771.89	771.41	771.52	770.53	770.48	770.81	770.22	769.56	771.12	771.86	770.28	769.68	769.53	769.83
B-11	773.67	773.48	773.15	772.15	771.36	772.61	772.05	771.89	774.36	774.81	773.21	772.10	772.54	772.56
B-11A	773.72	773.45	773.25	772.29	771.87	772.69	771.95	771.81	774.04	774.43	772.98	771.98	771.96	772.09
B-11B	773.69	773.41	773.25	772.31	771.93	772.66	772.19	771.74	773.88	774.37	772.90	771.42	770.78	770.81
B-11D	773.51	773.21	773.04	772.12	771.77	772.47	771.69	771.56	773.73	774.17	772.73	771.90	771.90	772.14
B-12*														
B-28	771.06	770.74	770.65	769.73	769.60	770.00	769.6	768.94	771.19	771.61	770.07	769.17	769.05	769.37
B-28A	770.72	770.32	770.30	769.35	769.27	769.62	769.22	768.55	770.55	771.03	769.50	768.72	768.60	768.89
B-28B	769.93	769.57	769.49	768.55	768.53	768.78	768.5	767.73	769.51	770.08	768.50	767.87	767.69	767.97
B-29	769.74	769.36	769.29	768.31	768.17	768.69	768.53	767.92	770.64	770.80	769.09	768.30	768.20	768.60
B-29A	769.70	769.31	769.23	768.30	768.14	768.67	768.46	767.92	770.44	770.65	769.01	768.24	768.22	768.53
B-32	778.79	778.00	771.81	775.64	774.69	776.62	776.34	776.26	780.06	780.14	778.27	776.88	777.56	777.80
B-33B**	773.20	772.95	772.80	771.92	771.64	772.24	771.76	771.24	773.45	773.83	772.37	771.54	771.52	771.74

**Table E-1**  
**Summary of Groundwater Elevations**  
**January 2001 through January 2021**

	8/7/2012	2/5/2013	7/23/2013	1/16/2014	7/14/2014	4/28/2015	10/6/2015	1/11/2016	8/3/2016	1/31/2017	7/18/2017	1/29/2018	7/31/2018	1/29/2019	7/26/2019	2/25/2020	7/29/2020	1/18/2021
Monitoring	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Well No.	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)	Elevation (ft, NGVD)
B-10	769.02	769.55	771.27	771.25	770.76	771.53	770.29	771.04	769.54	769.17	769.64	769.85	770.53	771.7	770.32	770.88	769.76	770.08
B-10A	769.18	769.71	771.37	771.37	770.88	771.67	770.43		769.69	769.32	769.72	770.03	770.66	771.69	770.42	770.91	769.78	770.12
B-11	771.51	771.74	774.37	773.82	773.65	774.09	772.64	773.91	772.00	771.24	772.39	772.09	773.08	774.5	773.25	774.77	773.20	773.75
B-11A	771.36	771.82	773.89	773.7	773.39	773.95	772.73	773.72	771.64	771.36	772.27	772.14	773.02	774.13	772.04	773.96	772.71	773.09
B-11B	771.18	771.83	773.12	773.68	773.32	773.91	772.71	773.65	769.96	771.33	772.2	772.12	773.01	774.09	773.03	773.83	772.64	773.03
B-11D	771.17	771.64	773.76	773.51	773.13	773.74	772.56	773.49	771.73	771.19	772.05	771.75	772.88	773.94	772.86	773.60	772.43	772.87
B-12*			768.39	767.97	767.60	768.12	766.91	767.86	766.00	765.95	766.32	766.18	766.61	768.08	766.63	767.97	766.12	766.69
B-28	768.46	769.03	771.02	770.84	770.47	771.13	769.91	770.73	769.06	768.66	769.37	769.33	770.09	771.13	770.06	770.71	769.60	769.93
B-28A	768.04	768.60	770.48	770.35	769.88	770.61	769.40	770.25	768.56	768.22	768.79	768.82	769.50	770.56	769.44	770.12	768.94	769.30
B-28B	766.95	767.59	769.45	769.29	768.71	769.52	768.37	769.3	767.60	767.23	768.73	767.73	768.37	769.47	768.28	769.16	767.76	768.22
B-29	767.42	768.05	770.21	769.72	769.30	770.05	768.69	769.83	767.84	767.74	768.38	768.38	768.91	770.39	769.04	770.54	768.87	759.76
B-29A	767.40	768.00	770.13	769.65	769.21	769.95	768.63	769.73	767.90	767.75	768.4	768.37	768.93	770.32	769.01	770.52	768.84	769.75
B-32	775.88	776.80	780.77	779.67	778.84	779.98	777.54	780.01	776.47	775.97	777.08	776.56	778.30	781.53	778.46	781.60	778.46	779.87
B-33B**	770.80	771.28	773.38	773.14	772.81	773.42	772.04	773.16	771.37	770.92	771.74	771.66	772.52	773.48	772.48	773.23	772.05	772.39

Prepared by: DWK 02/02/2021  
 Checked by: JMQ 03/11/2021



**Table E-2: Summary of Detected Constituents - Appendix IX Sampling  
2001 - 2020**

Location:	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11	B-11
Sample Date:	7/31/2001	7/2/2002	7/6/2003	7/26/2004	7/19/2005	7/12/2006	7/25/2007	7/16/2008	9/2/2009	7/28/2010	6/29/2011	8/8/2012	7/24/2013	7/17/2014	10/20/2015	5/10/2016	7/19/2017	8/6/2018	7/25/2019	7/29/2020
<b>Anions, mg/L</b>																				
fluoride	< 0.2	< 0.2	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	<b>0.11</b>	<b>0.1</b>	<b>0.13</b>	<0.1	<0.1	<0.1	<0.1	<b>0.1</b>	<0.1	<0.1	<0.1	<0.1
<b>Metals, mg/L</b>																				
barium	<b>0.12</b>	< 0.2	NS	<b>0.148</b>	<b>0.133</b>	<b>0.145</b>	<b>0.114</b>	<b>0.0953</b>	<b>0.102</b>	<b>0.105</b>	<b>0.126</b>	<b>0.069</b>	<b>0.069</b>	<b>0.109</b>	<0.020	<b>0.095</b>	<b>0.065</b>	<b>0.126</b>	<b>0.132</b>	<b>0.085</b>
iron	<b>14.1</b>	<b>8.6</b>	NS	<b>20</b>	<b>28.2</b>	<b>19.6</b>	<b>5.09</b>	<b>1.42</b>	<b>1.83</b>	<b>6.2</b>	<b>3.14</b>	<b>1.03</b>	<b>6.9</b>	<b>4.07</b>	<0.1	<b>3.3</b>	<b>0.410</b>	<b>2.01</b>	<b>2.54</b>	<b>0.93</b>
lead	<b>0.0053</b>	< 0.005	NS	<b>0.00368 J</b>	<b>0.00974</b>	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<b>0.011</b>	<b>0.0078</b>	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
zinc	<b>0.0284</b>	<b>0.0345</b>	NS	< 0.020	< 0.020	< 0.020	< 0.020	<b>0.0273</b>	< 0.020	< 0.020	<b>0.023</b>	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
<b>Volatile Organics, ug/L</b>																				
acetone	<b>82</b>	<b>28</b>	NS	< 10	< 20	< 10	< 20	<b>36</b>	<20	<5.0	<5.0	<5.0	<b>6.6</b>	<5.0	<5.0	<5.0	<5.0	<5.0	<b>7.5 B</b>	<5.0
cis-1,2-dichloroethene	< 1.0	< 1.0	NS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tetrachloroethene (PCE)	< 1.0	< 1	NS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trichloroethene (TCE)	< 1.0	< 1.0	NS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
<b>Location: B-11A</b>																				
Sample Date:	7/31/2001	7/1/2002	7/7/2003	7/26/2004	7/19/2005	7/11/2006	7/24/2007	7/14/2008	Sept. 2009	7/28/2010	6/29/2011	8/8/2012	7/23/2013	8/7/2014	10/7/2015	May 2016	7/20/2017	8/1/2018	July 2019	7/29/2020
<b>Anions, mg/L</b>																				
fluoride	NS	NS	< 0.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
<b>Metals, mg/L</b>																				
barium	NS	NS	<b>0.0244</b>	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
iron	NS	NS	<b>0.368</b>	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
lead	NS	NS	<b>0.001</b>	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
zinc	NS	NS	< 0.020	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
<b>Volatile Organics, ug/L</b>																				
acetone	NS	NS	< 10	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NS	NS	NA	NA	NS	NS
cis-1,2-dichloroethene	NS	NS	< 1.0	NS	NS	NS	NS	NS	NS	< 1.0	NA	NA	NA	NA	NS	NS	NA	NA	NS	NS
tetrachloroethene (PCE)	NS	NS	<b>2.2</b>	NS	NS	NS	NS	NS	NS	< 1.0	< 1.0	<b>1.0</b>	<b>1.2</b>	<b>1.58</b>	<b>1.95</b>	NS	<b>3.19 (3.42)</b>	<b>3.22</b>	NS	NS
trichloroethene (TCE)	NS	NS	<b>1.2</b>	NS	NS	NS	NS	NS	NS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NS	<1.0 (<1.0)	<1.0	NS	NS

**Notes:**

NA = Not analyzed

NS = Not Sampled

J = Result considered estimated due to the concentration being between the reporting and detection limits

B = Result considered a laboratory artifact, less than 5x/10x the method blank result

mg/L = milligrams per liter

ug/L = micrograms per liter

**BOLDED VALUE REFLECTS A POSITIVE RESULT**

(3.6) - Field duplicate result

**Table E-2: Summary of Detected Constituents - Appendix IX Sampling  
 2001 - 2020**

Location:	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B	B-11B
Sample Date:	7/31/2001	7/1/2002	7/6/2003	7/26/2004	7/19/2005	7/12/2006	7/24/2007	7/14/2008	9/1/2009	7/27/2010	6/29/2011	8/8/2012	7/24/2013	8/6/2014	10/20/2015	5/10/2016	7/19/2017	8/2/2018	7/25/2019	7/29/2020
<b>Anions, mg/L</b>																				
fluoride	< 0.2	< 0.2	NS	<b>0.129</b>	NS	<b>0.121</b>	NS	NS	<b>0.25</b>	NS	<b>0.22</b>	NS	<b>0.28</b>	NS	<b>0.12</b>	<b>0.16</b>	<b>0.13</b>	NS	<b>0.11</b>	NS
<b>Metals, mg/L</b>																				
barium	< 0.02	< 0.2	NS	< 0.02	NS	< 0.02	NS	NS	<0.02	NS	<0.020	NS	<0.020	NS	<0.020	<0.020	<0.020	NS	<0.020	NS
chromium	<0.010	<0.010	NS	<0.010	NS	<0.010	NS	NS	<b>0.032</b>	NS	<0.010	NS	<0.010	NS	<0.010	<0.010	<0.010	NS	<0.010	NS
iron	< 0.1	< 0.1	NS	< 0.1	NS	< 0.0378	NS	NS	<0.1	NS	<0.1	NS	<0.1	NS	<0.1	<0.1	<0.1	NS	<0.1	NS
lead	< 0.005	< 0.005	NS	< 0.005	NS	< 0.005	NS	NS	< 0.005	NS	< 0.005	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	NS	< 0.005	NS
zinc	< 0.020	< 0.020	NS	< 0.020	NS	< 0.020	NS	NS	< 0.020	NS	< 0.020	NS	< 0.020	NS	< 0.020	< 0.020	< 0.020	NS	< 0.020	NS
<b>Volatile Organics, ug/L</b>																				
acetone	< 10	< 10	NS	< 10	NS	< 10	NS	NS	< 20	NA	<5.0	NA	<5.0	NA	<5.0	<5.0	<5.0	NA	<b>6.9 B</b>	NS
cis-1,2-dichloroethene	< 1.0	< 1.0	NS	< 1.0	NS	< 1.0	NS	NS	< 1.0	<1.0 (<1.0)	<1.0	NA	< 1.0	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	NS
chloroform	< 1.0	< 1.0	NS	< 1.0	NS	< 1.0	NS	NS	<b>3.5</b>	< 1.0	< 1.0	NA	< 1.0	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	NS
chloromethane	< 1.0	< 1.0	NS	< 1.0	NS	< 1.0	NS	NS	<b>1.2</b>	< 1.0	< 1.0	NA	< 1.0	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	NS
tetrachloroethene (PCE)	<b>5.4</b>	<b>5.1</b>	NS	<b>7.4</b>	NS	<b>6.3</b>	NS	NS	<b>3.8</b>	<b>3.61 (3.55)</b>	<b>5.6</b>	<b>4.23</b>	<b>4.6</b>	<b>4.5</b>	<b>5.2</b>	<b>6.0</b>	<b>5.5</b>	<b>4.55</b>	<b>6.9</b>	NS
trichloroethene (TCE)	<b>3.4</b>	<b>3.1</b>	NS	<b>4.5</b>	NS	<b>3.1</b>	NS	NS	<b>1.2</b>	<b>1.48 (1.49)</b>	<b>1.8</b>	<b>1.3</b>	<b>1.3</b>	<1.0	<b>1.0</b>	<b>1.1</b>	<1.0	<1.0	< 1.0	NS
<b>Location: B-11D</b>																				
<b>Sample Date:</b>																				
<b>Anions, mg/L</b>																				
fluoride	NS	NS	<b>0.149</b>	NS	<b>0.171</b>	NS	<b>0.225</b>	<b>0.216</b>	NS	<b>0.28</b>	NS	<b>0.16</b>	NS	<0.1	NS	<b>0.22</b>	NS	<b>0.21</b>	NS	<b>0.17</b>
<b>Metals, mg/L</b>																				
barium	NS	NS	< 0.020	NS	< 0.020	NS	< 0.020	< 0.020	NS	< 0.020	NS	<0.020	NS	<0.020	NS	<0.020	NS	<0.020	NS	<0.020
iron	NS	NS	< 0.1	NS	< 0.1	NS	<b>0.193</b>	< 0.1	NS	<b>0.19</b>	NS	<b>0.220</b>	NS	<b>0.110</b>	NS	< 0.1	NS	<b>0.36</b>	NS	< 0.1
lead	NS	NS	< 0.001	NS	< 0.001	NS	< 0.005	< 0.005	NS	< 0.005	NS	< 0.005	NS	< 0.005	NS	< 0.005	NS	< 0.005	NS	< 0.005
zinc	NS	NS	< 0.020	NS	< 0.020	NS	< 0.020	< 0.020	NS	< 0.020	NS	< 0.020	NS	< 0.020	NS	< 0.020	NS	< 0.020	NS	< 0.020
<b>Volatile Organics, ug/L</b>																				
acetone	NS	NS	< 10	NS	< 20	NS	< 20	< 20	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<b>5.6</b>	NS	<5.0
cis-1,2-dichloroethene	NS	NS	< 1.0	NS	< 1.0	NS	< 1.0	< 1.0	<1.0 (<1.0)	<1.0	NA	<1.0	NA	<1.0	NA	< 1.0	NA	< 1.0	NS	< 1.0
chloroform	NS	NS	< 1.0	NS	< 1.0	NS	< 1.0	< 1.0	NA	<b>2.6</b>	NA	<1.0	NA	<1.0	NA	< 1.0	NA	< 1.0	NS	< 1.0
tetrachloroethene (PCE)	NS	NS	<b>3.8</b>	NS	<b>4.5</b>	NS	<b>4.8</b>	<b>5.1</b>	<1.0 (<1.0)	<b>3.5</b>	<b>3.5 (3.42)</b>	<b>4.8</b>	<b>3.58 (3.57)</b>	<b>4.9</b>	<b>4.09 (4.13)</b>	<b>5.6 (5.6)</b>	<b>5.67</b>	<b>5.5</b>	NS	<b>5.4</b>
trichloroethene (TCE)	NS	NS	<b>2.3</b>	NS	<b>2.9</b>	NS	<b>2.7</b>	<b>3.2</b>	<b>2.0 (1.7)</b>	<b>1.1</b>	<b>1.03 (1.07)</b>	<b>1.4</b>	<1.0 ( <b>1.01</b> )	<b>1.1</b>	<1.0 (<1.0)	<b>1.1 (1.2)</b>	<b>1.02</b>	<1.0	NS	<1.0

**Notes:**  
 NA = Not analyzed  
 NS = Not sampled  
 B = Result considered a laboratory artifact, less than 5x/10x the method blank result  
 J = Result considered estimated due to the concentration being between the reporting and detection limits  
 mg/L = milligrams per liter  
 ug/L = micrograms per liter  
**BOLDED VALUE REFLECTS A POSITIVE RESULT**  
 (3.6) - Field duplicate result

Prepared by: DWK 09/10/20  
 Checked by: JMQ 09/22/20

**Table E-2a**  
**Bis(2-Ethylhexyl) Phthalate Results\***  
**2002-2020**

<b>Date</b>	<b>B-11</b>	<b>B-11A</b>	<b>B-11B</b>	<b>B-11D</b>	<b>B-33B</b>	<b>B-28B</b>
July 2002	<0.010	NA	<0.010	NA	NA	NA
July 2003	<0.0094	NA	NA	<0.0094	NA	NA
July 2004	<0.010	NA	0.044	NA	NA	NA
July 2005	<0.0093	NA	NA	<0.0093	NA	NA
July 2006	<0.0094	NA	0.02	NA	NA	NA
July 2007	<0.010	NA	NA	<0.010	NA	NA
July 2008	<0.010	NA	NA	<0.010	NA	NA
Sept. 2009	<0.0098	NA	<0.0098	NA	NA	NA
July 2010	<0.010	NA	NA	0.064	NA	NA
June 2011	<0.0094	NA	0.08	NA	NA	NA
Aug. 2012	<0.0094	NA	NA	0.082	NA	NA
July 2013	<0.010	NA	0.021	NA	NA	NA
July 2014	<0.0094	NA	NA	0.046	NA	NA
Oct. 2015	<0.0094	NA	0.072	NA	NA	NA
May 2016	<0.0094	NA	<0.0094	0.044 (0.025)	NA	NA
Jan. 2017	NA	NA	NA	0.012	<0.01	<0.01
July 2017	0.0057 B	NA	0.098	NA	<0.005	<0.005
Aug. 2018	<0.0094	NA	NA	<0.0094	NA	NA
July 2019	<0.0097	NA	<0.0097	NA	NA	NA
July 2020	<0.0091	NA	NA	<0.010	NA	NA

\* in mg/L

Prepared by/Date: DWK 03-18-21

< 0.010 - Not detected at the listed reporting/detection limit

NA - Not analyzed

(0.025) - Field duplicate result

B - Result considered a laboratory artifact, less than the method blank result

**Table E-2b**  
**Summary of OCDD and THD Results (in pg/L)**  
**2010 through 2020**

Monitoring Well/ Constituent	2010	2011	2012	2013	2014	2015	2016 #	2017	2018	2019	2020
B-11 OCDD	68.3 B	59.8 B	<47.2	* 132 B	38.7 B	* 155	45.0 B	* 183 B	31.0 B	* 84.1 B	36.0 B
B-11 THD	19.8	52.0 B	<23.6	13.0 B	6.91	* 74.6	8.64	* 57.2 B	10.1 B	10.1 B	<24.2
B-11B OCDD	--	46.0 B	--	* 66.6 B	--	* 134	20.0 B	* 97.2 B	--	* 65.3 B	--
B-11B THD	--	41.0 B	--	5.53 B	--	* 61.6	6.85	* 38.8 B	--	12.3 B	--
B-11D OCDD	189 B	--	<48.1	--	2.78 B	--	16.8 B	--	* 236	--	* 53.9 B K
B-11D THD	<23.4	--	<24.0	--	<24.8	--	5.33	--	* 30.3 B	--	<24.2
MB OCDD	106	76.0	<50.0	* 58.8	4.89	<50.0	22.6	36.5	17.4	* 355	6.72 K
MB THD	22.0	28.0	<25.0	9.17	<25.0	<25.0	<25.0	11.6	3.39	* 63.9	<25.0

**Notes:**

OCDD = octachlorodibenzodioxin  
 THD = total hepta-dioxins  
 pg/L = picograms per liter  
 B = Result <10x method blank concentration  
 K = Ion abundance ratio outside of acceptance limits, identification and result questionable  
 MB = method blank  
 # Results from August 2016 resampling  
 \* Reported concentration exceeds constituent method reporting limit (MRL)  
 < Constituent was not detected at the reporting limit listed  
 -- Not analyzed

Prepared by: DWK 03/18/21

**Table E-3**  
**Summary of Analytical Results**  
**January 2021**

	B-11	B-11A	B-11B	B-11D	B-32	B-29A	B-28A	B-28B	B-33B
<b>VOCs (µg/L)</b>									
tetrachlorethene	<1.0	<b>9.4</b>	<b>6.8 (7.0)</b>	<b>6.3</b>	<1.0	<1.0	<1.0	<1.0	<1.0
trichlorethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

**Notes:**

µg/L = micrograms per liter

<1.0 - Not detected at the listed reporting/detection limit

**(7.0)** Field duplicate result

Prepared by: DWK 02/02/21

Checked by: JMQ 03/11/21

**Table E-4**  
**Summary of Analytical Results**  
**October 2000 through January 2021**

Well and Analysis	Oct 18, 2000	Jan 18, 2001	May 3, 2001	Jul 31- Aug 1, 2001	Oct 31- Nov 1, 2001	Jan 23-24, 2002	Apr 23-25, 2002	July 1-2, 2002	Oct 2-3, 2002 & Oct 9-10, 2002	Jan 21-22, 2003	Apr 14-16, 2003	Jul 6-10, 2003	Nov 11-13, 2003	Feb 3-4, 2004	Apr 27-29, 2004	Jul 26-29 & Aug 2, 2004	Oct 25-27, 2004	Jan 11-13, 2005	Apr 19-20, 2005	Jul 19-21, 2005	Jan 24-26, 2006
<b>B-11</b>																					
Acetone	22	30	170	82	<20	<20	20	28	<20	29	25	26	<20	<20	<20	<10	<20	<10	<20	<20	<20
Formaldehyde	<50	<50	<50	<50	<50	<50		<50	<50	<50	<50	<50	<50	67.8	<50	<50	<50	<50	<50	<50	<50
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>B-11A</b>																					
Acetone	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<10	<20	<20	<20	<20	<20 (<20)	<20	<20	<20	<20
Formaldehyde	<50	<50	<50	<50	<50	<50		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50 (<50)	<50	<50	<50	<50
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 (<1.0)	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	1.1	1.1	1.2	1.1	1.2	1.1	1.2	<1.0	<1.0	<1.0 (<1.0)	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	<1.0	<1.0	1.3	1.3	1.7	1.4	1.2	1.6	1.5	2.1	2.2	2.2	2.2	1.8	2.0	1.5	1.2 (1.3)	1.2	1.4	1.1	<1.0
<b>B-11B</b>																					
Acetone	<20	<20	<20	<10	<20	<20	<20	<10	<20	<20	<20	<20	<20	<20	<20 (<20)	<10	<20 (<20)	<10	<20	<20	<20
Formaldehyde	<50	<50	<50	<50	<50	<50		<50	<50	<50	<50	<50	<50	<50	<50 (<50)	<50	<50 (<50)	<50	<50	<50	<50
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 (1.0)	<1.0	<1.0 (1.0)	<1.0	<1.0	<1.0	<1.0
Trichloroethene	2.2	2.5	3.4	3.4	3.2	4.4	4.2	3.1	4.0	5.0	4.7	3.9	4.2	5.1	4.6 (4.4)	4.5	4.1	4.1	3.4	4.5	3.4
Tetrachloroethene	3.6	3.5	5.3	5.4	5.3	7.3	6.2	5.1	6.5	7.8	7.2	6.6	7.5	7.5	9.1 (8.6)	7.4	6.6	7.5	7.2	7.2	6.0
<b>B-11D</b>																					
Acetone	<20	<20	<20, (<20)	<20, (<10)	<20, (<10)	<20, (<10)	<20, (<10)	<20, (<20)	<20	<20	<20	<10	<20	<20	<20	* <20	<20	<20	<20	<20	<20
Formaldehyde	<50	<50	<50, (<50)	<50, (<50)	<50	<50		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0, (<1.0)	<1.0, (<1.0)	<1.0	<1.0	<1.0	<1.0, (<1.0)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	1.2	1.2	1.5, (1.4)	1.4, (1.8)	1.9, (1.7)	2.2, (2.2)	2.2, (2.0)	2.0, (1.8)	2.4	2.8	2.6	2.3	2.9	3.0	2.6	2.6	2.6	3.2	2.3	2.9	2.6
Tetrachloroethene	2	1.8	2.4, (2.1)	2.2, (2.8)	2.7, (2.9)	3.6, (3.5)	2.9, (3.2)	2.6, (2.8)	3.2	4.1	3.8	3.8	5.2	4.8	5.0	4.3	4.0	5.6	5.0	4.5	4.3
<b>B-28A</b>																					
Acetone	NS	NS	NS	NS	NS	NS	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Formaldehyde	NS	NS	NS	NS	NS	NS	<20	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	NA	<50	<50
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	NS	NS	NS	NS	NS	NS	1.4	<1.0	1.2	1.3	1.3	1	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	NS	NS	NS	NS	NS	NS	2.0	1.5	2.0	1.7	1.6	1.7	1.7	1.5	1.6	1.3	1.1	1.1	1.2	<1.0	<1.0
<b>B-28B</b>																					
Acetone	NS	NS	NS	NS	NS	NS	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Formaldehyde	NS	NS	NS	NS	NS	NS	<20	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	NA	<50	<50
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	NS	NS	NS	NS	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	NS	NS	NS	NS	NS	NS	1.1	<1.0	<1.0	1.1	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>B-29</b>																					
Acetone	NS	NS	NS	NS	NS	<20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Formaldehyde	NS	NS	NS	NS	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
<b>B-29A</b>																					
Acetone	NS	NS	NS	NS	NS	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	* <20	<20	<20	<20	<20	<20
Formaldehyde	NS	NS	NS	NS	NS	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	NS	NS	NS	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	NS	NS	NS	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>B-32</b>																					
Acetone	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	* <20	<20	<20	<20	<20	<20
Formaldehyde	<50	<50	<50	<50	<50	<50		<50	<20	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>B-33B</b>																					
Acetone	NI	NI	NI	NI	NI	NI	NI	NI	NI	<20	<20	<20	<20	<20	<20	<20 (<20)	<20	<20	<20	<20	<20
Formaldehyde	NI	NI	NI	NI	NI	NI	NI	NI	NI	<50	<50	<50	<50	<50	<50	<50 (<50)	<50	<50	<50	<50	<50
Cis-1,2-Dichloroethene	NI	NI	NI	NI	NI	NI	NI	NI	NI	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 (<1.0)	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	NI	NI	NI	NI	NI	NI	NI	NI	NI	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 (<1.0)	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	NI	NI	NI	NI	NI	NI	NI	NI	NI	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 (<1.0)	<1.0	<1.0	<1.0	<1.0	<1.0

**Notes:**

- NS - Not Sampled
- No Volatile compounds were detected in Trip or Method Blank
- NI - Not Installed
- NA - Not Analyzed
- Results in µg/L
- (2.1) - Duplicate results
- (3.2) - VOC / SVOC results from Appendix IX sampling
- (<50) Resample result, collected 09/04/20
- B - Result considered a laboratory artifact, less than 5x/10x the method blank result
- \* Sample collected on Aug 2, 2004
- \*\* Formaldehyde removed from sampling program prior to January 2009 event
- # No sample collected at B-11A due to residual permanganate from Interim Measures Treatment remaining in Groundwater.
- \*\* Sample analysis performed outside of holding time, value is estimated.
- © Well B-33B was reported as B-33

**Table E-4**  
**Summary of Analytical Results**  
**October 2000 through January 2021**

Well and Analysis	Jul 11-13, 2006	Jan 22-24, 2007	Jul 24-26, 2007	Jan 21-23, 2008	Jul 14-17, 2008	Aug 20, 2008	Jan 26-29, 2009**	Sep 1-4, 2009 <sup>f</sup>	Jan 19-22, 2010	Apr 26-28, 2010	Jul 27-30, 2010	Jan 26-28, 2011	Jun 28-30, 2011	Feb 29-Mar 2, 2012	Aug 7-10, 2012	Feb 5-8, 2013	Jul 23-26, 2013	Jan 16-20, 2014	July 17, 2014 Aug 5-7, 2014	April 28-30, 2015	May 18, 2015	
<b>B-11</b>																						
Acetone	<10	<20	<20 [ $<20$ ]	<20	<b>36 [74]</b>	<20	7.5 B	<20	NA	NA	[ $<20$ ]	NA	[ $<5$ ]	NA	[ $<5$ ]	NA	<b>[6.6]</b>	NA	[ $<5.0$ ]	NA	NS	
Formaldehyde	<50	<50	<50 [ $<50$ ]	<50	<50 [ $<50$ ]	NS	<50	<50	NS	NS	[ $<50$ ]	NS	[ $<50$ ]	NS	[ $<50$ ]	NS	[ $<50$ ]	NS	<b>[470]</b> <sup>**</sup>	NS	NS	
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0 [ $<1.0$ ]	<1.0	<1.0 [ $<1.0$ ]	NS	<1.0	<1.0	NS	<1.0	[ $<1.0$ ]	NA	[ $<1.0$ ]	NA	[ $<1.0$ ]	NA	[ $<1.0$ ]	NA	[ $<1.0$ ]	NA	NS	
Trichloroethene	<1.0	<1.0	<1.0 [ $<1.0$ ]	<1.0	<1.0 [ $<1.0$ ]	NS	<1.0	<1.0	<1.0	<1.0	[ $<1.0$ ]	<1.0	[ $<1.0$ ]	<1.0	[ $<1.0$ ]	<1.0	[ $<1.0$ ]	<1.0	[ $<1.0$ ]	<1.0	NS	
Tetrachloroethene	<1.0	<1.0	<1.0 [ $<1.0$ ]	<1.0	<1.0 [ $<1.0$ ]	NS	<1.0	<1.0	<1.0	<1.0	[ $<1.0$ ]	<1.0	[ $<1.0$ ]	<1.0	[ $<1.0$ ]	<1.0	[ $<1.0$ ]	<1.0	[ $<1.0$ ]	<1.0	NS	
<b>B-11A</b>																						
Acetone	<20	<20	<20	<20	<20	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	
Formaldehyde	<50	<50	<50	<50	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	NS	NA	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	
Tetrachloroethene	<1.0	<1.0	<1.0	<b>1.0</b>	<1.0	NS	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1.00</b>	<1.0	<b>1.20</b>	<b>1.50</b>	<b>1.58</b>	<b>2.05</b>	NS	
<b>B-11B</b>																						
Acetone	<10	<20	<20	<20	<20	NS	<20	<20	NA	NA	NA	NA	[ $<5$ ]	NA	NA	NA	[ $<5$ ]	NA	NA	NA	NS	
Formaldehyde	<50	<50	<50	<50	<50	NS	NS	<50	NS	NS	NS	NS	[ $<50$ ]	NS	NS	NS	[ $<50$ ]	NS	NS	NS	NS	
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	<1.0	<1.0	NA	<1.0	<1.0 ( $<1.0$ )	NA	[ $<1.0$ ]	NA	NA	NA	[ $<1.0$ ]	NA	NA	NA	NS	
Trichloroethene	<b>3.1</b>	<b>3.6</b>	<b>3.0</b>	<b>3.2</b>	<b>2.9</b>	NS	<b>3.1</b>	<b>1.2</b>	<b>1.34</b>	<b>1.54</b>	<b>1.48 (1.49)</b>	<b>1.35</b>	<b>[1.8]</b>	<b>1.39</b>	<b>1.3</b>	<b>1.3 (1.4)</b>	<b>[1.3]</b>	<b>1.14</b>	<1.0	<1.0	NS	
Tetrachloroethene	<b>6.3</b>	<b>6.4</b>	<b>5.8</b>	<b>6.8</b>	<b>5.3</b>	NS	<b>6.2</b>	<b>3.8</b>	<b>3.33</b>	<b>3.33</b>	<b>3.61 (3.55)</b>	<b>3.39</b>	<b>[5.6]</b>	<b>3.92</b>	<b>4.23</b>	<b>4.2 (4.5)</b>	<b>[4.6]</b>	<b>4.7</b>	<b>4.5</b>	<b>4.73</b>	NS	
<b>B-11D</b>																						
Acetone	<20	<20 ( $<20$ )	<20 [ $<20$ ]	<20 [ $<20$ ]	<20 [ $<10$ ]	NS	NS	NA	NA	NA	[ $<20$ ]	NA (NA)	NA	NA (NA)	[ $<5$ ]	NA	NA (NA)	NA	[ $<5$ ]	NA	NS	
Formaldehyde	<50	<50 ( $<50$ )	<50 [ $<50$ ]	<50 [ $<50$ ]	<50 [NA]	NS	NS	NS	NS	NS	[ $<50$ ]	NS (NS)	NS	NS (NS)	[ $<50$ ]	NS	NS (NS)	NS	<b>[500]</b> <sup>**</sup>	NS	NS	
Cis-1,2-Dichloroethene	<1.0	<1.0 ( $<1.0$ )	<1.0 [ $<1.0$ ]	<1.0 [ $<1.0$ ]	<1.0 [ $<1.0$ ]	NS	NS	<1.0 ( $<1.0$ )	NA	<1.0 ( $<1.0$ )	[ $<1.0$ ]	NA (NA)	NA	NA (NA)	[ $<1.0$ ]	NA	NA (NA)	NA	[ $<1.0$ ]	NA	NS	
Trichloroethene	<b>2.8</b>	<b>2.9 (2.9)</b>	<b>2.7 [3.2]</b>	<b>2.6 [2.9]</b>	<b>3.2 [3.4]</b>	NS	NS	<1.0 ( $<1.0$ )	<1.0 ( $<1.0$ )	<1.0 ( $<1.0$ )	<b>[1.1]</b>	<1.0 ( $<1.0$ )	<b>1.03 (1.07)</b>	<b>1.03 (1.14)</b>	<b>[1.4]</b>	<b>1.0</b>	<1.0 ( $<1.0$ )	<1.0	<1.0 ( $<1.0$ )	<b>[1.1]</b>	<b>1.00 (1.02)</b>	
Tetrachloroethene	<b>5.1</b>	<b>5.1 (4.9)</b>	<b>4.8 [5.2]</b>	<b>4.8 [5.7]</b>	<b>5.1 [5.2]</b>	NS	NS	<b>2.0 (1.7)</b>	<b>2.74 (2.39)</b>	<b>2.23 (2.44)</b>	<b>[3.5]</b>	<b>2.93 (2.98)</b>	<b>3.50 (3.42)</b>	<b>2.93 (3.32)</b>	<b>[4.8]</b>	<b>3.8</b>	<b>3.58 (3.57)</b>	<b>4.02</b>	<b>4.08 (4.00) [4.9]</b>	<b>5.07 (5.01)</b>	<b>4.9 (5.0)</b>	
<b>B-28A</b>																						
Acetone	<20	<20	<20	<20	<20	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	
Formaldehyde	<50	<50	<50	<50	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	NA	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	
Tetrachloroethene	<b>1.0</b>	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	
<b>B-28B</b>																						
Acetone	<20	<20	<20	<20	<20	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA (NA)	NA	NA	NA	NA	NA	NS	
Formaldehyde	<50	<50	<50	<50	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS (NS)	NS	NS	NS	NS	NS	NS	
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	NA	<1.0	<1.0	NA	NA	NA	NA (NA)	NA	NA	NA	NA	NA	NS	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 ( $<1.0$ )	<1.0	<1.0	<1.0	<1.0	<1.0	NS	
Tetrachloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 ( $<1.0$ )	<1.0	<1.0	<1.0	<1.0	<1.0	NS	
<b>B-29</b>																						
Acetone	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Formaldehyde	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Trichloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Tetrachloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
<b>B-29A</b>																						
Acetone	<20	<20	<20	<20	<20	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	
Formaldehyde	<50	<50	<50	<50	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	NA	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	
Tetrachloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	
<b>B-32</b>																						
Acetone	<20	<20	<20	<20	<20	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	
Formaldehyde	<50	<50	<50	<50	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	NA	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	
Tetrachloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	
<b>B-33B</b>																						
Acetone	<20	<20	<20	<20	<20	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	
Formaldehyde	<50	<50	<50	<50	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	NA	<1.0	<1.0	NA	NA	NA	NA</							

**Table E-4**  
**Summary of Analytical Results**  
**October 2000 through January 2021**

Well and Analysis	Oct 6-8, 2015	Oct. 20, 2015	Nov. 5, 2015	Jan. 11, 2016	May 10, 2016	Aug 5, 2016	Feb 1 - 2, 2017	July 18 - 20, 2017	August 15, 2017	Jan. 30 - Feb. 1, 2018	July 31 - August 7, 2018	Jan. 29 - Feb. 4, 2019	Jul. 25, 2019	Feb. 26-28 and Mar. 11, 2020	July 29, 2020	Jan 19 - Jan 21, 2021
<b>B-11</b>																
Acetone	NS	<5	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	7.5 B	NS	<5.0	NS
Formaldehyde	NS	<50	NS	NS	NS	NS	NS	[120]	[60]	NS	NS	NS	<50	NS	60.0 (<50)	NS
Cis-1,2-Dichloroethene	NS	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	<1.0	NS	<1.0	NS
Trichloroethene	NA	<1.0	NS	<1.0	<1.0	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	NA	<1.0	NS	<1.0	<1.0	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>B-11A</b>																
Acetone	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0 (<5.0)	NS	NS	NS	NS
Formaldehyde	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<50	NS	NS	NS	NS	NS
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1.0 (<1.0)	NS	NS	NS	NS
Trichloroethene	<1.0	NS	NS	<1.0	NS	<1.0	<1.0	<1.0 (<1.0)	NS	<1.0	<1.0	<1.0 (<1.0)	NS	<1.0 (<1.0)	NS	<1.0
Tetrachloroethene	1.95	NS	NS	2.25	NS	3.10	2.63	3.19 (3.42)	NS	3.55	3.22	6.1 (6.0)	NS	7.6 (7.1)	NS	9.4
<b>B-11B</b>																
Acetone	NS	<5	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	6.9 B	NS	NS	NS
Formaldehyde	NS	<50	NS	NS	NS	NS	NS	[120]	[57]	NS	<50	NS	<50	NS	NS	NS
Cis-1,2-Dichloroethene	NS	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	<1.0	NS	NS	NS
Trichloroethene	NA	[1.0]	<5.0	<1.0	1.10	1.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	<1.0 (<1.0)
Tetrachloroethene	NA	[5.2]	5.10	4.65 (4.43)	6.00	6.50	5.12	[5.5]	NS	5.05	4.55	6.6	6.9	6.2	NS	6.8 (7.0)
<b>B-11D</b>																
Acetone	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NS	NS	<5.0	NS
Formaldehyde	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<50	NS	NS	NS	<50	NS
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	<1.0	NS
Trichloroethene	1.0 (<1.0)	--	NS	<1.0	1.10	1.0 (1.1)	<1.0 (<1.0)	1.02	NS	<1.0 (<1.0)	<1.0	<1.0	NS	<1.0	<1.0	<1.0
Tetrachloroethene	4.09 (4.13)	NS	NS	3.98	5.60	5.7 (5.7)	4.87 (4.83)	5.67	NS	4.06 (4.29)	5.5	5.5	NS	3.6	5.4	6.3
<b>B-28A</b>																
Acetone	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NS	NS	NS	NS
Formaldehyde	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS
Trichloroethene	<1.0	NS	NS	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	NS	<1.0
Tetrachloroethene	<1.0	NS	NS	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	NS	<1.0
<b>B-28B</b>																
Acetone	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NS	NS	NS	NS
Formaldehyde	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<50	NS	NS	NS	NS	NS
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS
Trichloroethene	<1.0	NS	NS	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	NS	<1.0
Tetrachloroethene	<1.0	NS	NS	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	NS	<1.0
<b>B-29</b>																
Acetone	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NS	NS	NS	NS
Formaldehyde	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS
Trichloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS
Tetrachloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS
<b>B-29A</b>																
Acetone	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NS	NS	NS	NS
Formaldehyde	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS
Trichloroethene	<1.0	NS	NS	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	NS	<1.0
Tetrachloroethene	<1.0	NS	NS	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	NS	<1.0
<b>B-32</b>																
Acetone	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NS	NS	NS	NS
Formaldehyde	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS
Trichloroethene	<1.0	NS	NS	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	NS	<1.0
Tetrachloroethene	<1.0	NS	NS	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	NS	<1.0
<b>B-33B</b>																
Acetone	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NS	NS	NS	NS
Formaldehyde	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<50	NS	NS	NS	NS	NS
Cis-1,2-Dichloroethene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS
Trichloroethene	<1.0	NS	NS	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0 <sup>®</sup>	NS	<1.0
Tetrachloroethene	<1.0	NS	NS	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<1.0	NS	<1.0 <sup>®</sup>	NS	<1.0

**Notes:**

- NS - Not Sampled
- No Volatile compounds were detected in Trip or Method Blank
- NI - Not Installed
- NA - Not Analyzed
- Results in µg/L
- (2.1) - Duplicate results
- [3.2] - VOC / SVOC results from Appendix IX sampling
- <50 Resample result, collected 09/04/20
- B - Result considered a laboratory artifact, I
- \* Sample collected on Aug 2, 2004
- \*\* Formaldehyde removed from sampling program prior to January 2009 event
- <sup>®</sup> No sample collected at B-11A due to residual permanganate from Interim Measures Treatment remaining in Groundwater.
- <sup>®</sup> Sample analysis performed outside of holding time, value is estimated.
- <sup>®</sup> Well B-33B was reported as B-33

Prepared by: DWK 02/02/2021  
Checked by: JMQ 03/11/2021



**Table E-5: Monitoring Well Construction Data**

<b>Well ID</b>	<b>Installation Date</b>	<b>Monitoring Zone</b>	<b>Top of Casing (ft, msl)</b>	<b>Total Depth (ft,bgs)</b>	<b>Screen Interval (ft,bgs)</b>	<b>Abandoned Y/N</b>
B-1	10/84	PWR	806.49	39.0	28.5 - 38.5	Y
B-2	10/84	RS	793.06	28.0	7.5 - 27.5	Y
B-3	10/84	RS	793.74	28.0	7.5 - 27.5	Y
B-4	10/84	RS	791.29	25.0	4.5 - 24.5	Y
B-4A	07/85	RS	790.80	45.0	33.0 - 45.0	Y
B-5	10/84	RS	791.37	28.0	7.5 - 27.5	Y
B-6	10/84	RS	797.57	29.0	8.5 - 28.5	Y
B-7	10/84	RS	791.36	28.0	7.5 - 27.5	Y
B-7A	07/85	PWR	791.15	55.2	49.7 - 54.7	Y
B-7B	12/86	FR	790.80	83.4	18.0 - 83.0	Y
B-8	10/84	RS	793.08	28.0	7.5 - 27.5	Y
B-9	10/84	RS	791.38	28.0	7.5 - 27.5	Y
B-10	10/84	RS	793.69	47.0	26.5 - 46.5	N
B-10A	07/88	PWR	792.60	80.6	70.1 - 80.1	N
B-11	10/84	RS	793.55	32.0	11.5 - 31.5	N
B-11A	11/87	PWR	793.67	59.7	49.8 - 58.8	N
B-11B	10/87	FR	793.71	102.5	92.6 - 101.6	N
B-11D	02/90	DR	793.95	150.2	142.2 - 150.2	N
B-12	10/84	RS	790.00	42.0	21.5 - 41.5	Y
B-13	10/84	RS	790.69	28.0	7.5 - 27.5	Y
B-14	07/85	RS	790.61	30.0	10.0 - 30.0	Y
B-15	07/85	RS	790.82	40.4	35.4 - 40.4	Y
B-15A	08/85	RS	790.90	40.4	35.4 - 40.4	Y
B-15B	12/86	PWR	790.88	66.0	55.5 - 65.5	Y
B-15C	12/86	FR	790.86	105.5	85.0 - 105.0	Y
B-15D	12/89	DR	790.98	137.0	127.0 - 137.0	Y
B-16	07/85	RS	790.89	30.8	10.3 - 30.3	Y
B-17	07/85	RS	793.00	28.5	8.0 - 28.0	Y
B-18	07/85	RS	791.78	30.5	10.0 - 30.0	Y
B-19	08/85	RS	790.80	30.9	10.4 - 30.4	Y
B-20	08/85	RS	790.77	31.0	10.5 - 30.5	Y
B-21	11/86	RS	790.71	31.0	10.5 - 30.5	Y
B-22	12/86	PWR	786.72	32.3	11.8 - 31.8	Y
B-23	12/87	PWR	786.79	25.5	15.6 - 24.6	Y
B-24	11/87	RS	786.90	26.0	16.1 - 25.1	Y
B-25	12/87	PWR	790.88	28.1	18.2 - 27.2	Y
B-26	12/87	RS	790.84	24.6	14.7 - 23.7	Y
B-27	12/87	RS	790.91	29.0	19.1 - 28.1	Y
B-27A	12/87	PWR	790.89	54.4	44.5 - 53.5	Y
B-28	07/88	RS	793.61	33.3	22.8 - 32.8	N
B-28A	07/88	PWR	793.53	72.8	62.3 - 72.3	N
B-28B	07/88	FR	792.90	105.6	95.1 - 105.1	N
B-29	07/88	RS	792.61	33.3	22.8 - 32.8	N
B-29A	07/88	PWR	792.59	60.2	49.7 - 59.7	N
B-30	07/88	RS	790.35	30.9	20.4 - 30.4	Y
B-30A	07/88	PWR	790.27	74.4	63.9 - 73.9	Y

**Table E-5: Monitoring Well Construction Data**

<b>Well ID</b>	<b>Installation Date</b>	<b>Monitoring Zone</b>	<b>Top of Casing (ft, msl)</b>	<b>Total Depth (ft,bgs)</b>	<b>Screen Interval (ft,bgs)</b>	<b>Abandoned Y/N</b>
B-31	07/88	RS	794.88	31.6	21.1 - 31.1	Y
B-32	07/88	PWR	797.82	30.4	19.9 - 29.9	N
B-33	07/88	RS	791.03	47.9	37.4 - 47.4	Y
B-33B	10/02	FR	792.35	98.0	88.0 - 98.0	N
B-34	07/88	RS	790.88	28.0	17.5 - 27.5	Y
B-35	05/95	PWR	790.86	25.0	10.0 - 25.0	Y
B-36	12/96	RS	790.98	34.7	24.7 - 34.7	Y
B-37	11/97	RS	791.75	33.0	22.5 - 32.5	Y
B-38	04/98	RS	--	49.0	8.5 - 48.5	Y
B-39	04/98	RS	--	40.5	10.0 - 40.0	Y

RS - Residual Soil

PWR - Partially Weathered Rock

FR - Fractured Rock

DR - Deep Rock

BGS - Below Ground Surface

-- Data not available

Wells Abandoned in September/October 2000

Table E-6

Summary of Analytical Results  
 Samples Collected in Area of Elbow Release

Analyte	P-1	P-2	P-3	P-4	P-5	A-1	A-2	A-3	A-4	A-5	A-6	B-1	
	11/1/1984	11/1/1984	11/1/1984	11/1/1984	11/1/1984	10/13/1986	10/13/1986	10/13/1986	10/13/1986	10/13/1986	10/13/1986	5/9/1986 3.5 - 5 ft - 8.5 - 10 ft	
Methylene Chloride	<1000	<50	<50	<5	<1000	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Trans-Dichloroethene	<1000	<50	<50	<5	<1000	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5	<5
Chloroform	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	<1000	<50	<50	<5	<b>1400</b>	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1000	<50	<50	<5	<b>1800</b>	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	--	--	--	--	--	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	76,000	<b>4300</b>	<b>2400</b>	<b>64</b>	<b>110000</b>	<5	23	<5	<5	<5	<5	<5	<5
Toluene	<b>3000</b>	<b>130</b>	<1000	<5	<b>1900</b>	<5	<5	<5	<5	<5	<5	<10	<10
Ethylbenzene	<1000	<1000	<1000	<b>8.2</b>	<1000	<5	<5	<5	<5	<5	<5	<10	<10

Analyte	B-2		B-3		B-4		B-5		B-6		B-7	
	5/9/1986		5/9/1986		5/9/1986		5/9/1986		5/9/1986		5/9/1986	
	3.5 - 5 ft - 8.5 - 10 ft		3.5 - 5 ft - 8.5 - 10 ft		3.5 - 5 ft - 8.5 - 10 ft		3.5 - 5 ft - 8.5 - 10 ft		3.5 - 5 ft - 8.5 - 10 ft		3.5 - 5 ft - 8.5 - 10 ft	
Methylene Chloride	<5	<5	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Trans-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	<5	<5	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	<5	<5	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5
Chloroform	<5	<5	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	<5	<5	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	<5	<5	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<5	<5	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	<10	<10	<20	<20	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	<5	<5	<10	<10	<5	<5	<5	<5	<b>10.4</b>	<5	<5	<5
Toluene	<10	<10	<20	<20	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	<10	<10	<20	<20	<10	<10	<10	<10	<10	<10	<10	<10

Notes:

Concentrations reported in µg/kg (ppb)

P-1 through P-4 collected from excavation sidewall (at 5 feet below ground surface)

P-5 collected from base of excavation (at 10 feet below ground surface)

Samples A-1 through A-6 were collected at 4-5 feet below ground surface

Samples from B-1 through B-7 were collected at the depths shown

PREPARED/DATE: DP 12/8/10

CHECKED/DATE: ADA 11/17/11





Table E-7

**Summary of Analytical Results  
Samples Collected from Monitoring Wells**

Boring Number		SOIL											
		Depth (feet)											
		1	4	6	7.5	9	10.5	16	21	26	31	36	41
B-11	1,1,1-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5			
	Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5	7.4		
	Tetrachloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
	Methylene Chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
	Trichloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
	Ethyl Benzene	<5	<5	<5	11	<5	<5	<5	<5	<5	<5		
	1,2-Transdichloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
B-12	1,1,1-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
	Toluene	<5	<5	<5	<5	<5	4.3	5.9	<5	<5	<5		
	Tetrachloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
	Methylene Chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
	Trichloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
	Ethyl Benzene	<5	<5	<5	<5	<5	4.1	<5	13	<5	<5		
	1,2-Transdichloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
B-13	1,1,1-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5			
	Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5			
	Tetrachloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5			
	Methylene Chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5			
	Trichloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5			
	Ethyl Benzene	<5	<5	<5	6.9	<5	<5	6.7	<5	<5	<5		
	1,2-Transdichloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		

Concentrations reported in µg/kg

Table taken from November 16, 1984 "Results of Preliminary Hydrogeologic Investigation"

Prepared by Law Engineering Testing Company

Table E-8

**Summary of Analytical Results  
(PCE Concentrations)  
Samples Collected from Monitoring Wells**

<b>Parameters</b>	<b>B-11A</b>	<b>B-23</b>	<b>B-24</b>	<b>B-25</b>	<b>B-26</b>	<b>B-27</b>
Depth of Sample (ft.)	9-10.5	4-5.5	4-5.5	9-10.5	9-10.5	9-10.5
Tetrachloroethene	<10	129	<10	<10	<10	<10

Concentrations reported in  $\mu\text{g}/\text{kg}$

Table taken from February 5, 1988 "Report of Additional Monitoring Well Installation"  
prepared by Law Environmental, Inc.

**TABLE E-9  
 RESULTS OF SUPPLEMENTAL INVESTIGATION**

<b>Soil</b>						
<b>Sampling Location</b>	<b>Analytes</b>					
	<b>PCE (µg/kg)</b>	<b>Reporting Limit</b>	<b>Acetone (µg/kg)</b>	<b>Reporting Limit</b>	<b>Methyl Acetate (µg/kg)</b>	<b>Reporting Limit</b>
DPT-4-2	ND	28	ND	530	100	28
GW-2-10	ND	23	ND	460	680	23
DPT-8-2	37	8.8	450	180	ND	8.8
GW-3-10	ND	8.6	250	170	ND	8.6
DPT-5-10	ND	10	380	200	ND	10

<b>Groundwater</b>				
<b>Well ID</b>	<b>Analytes</b>			
	<b>PCE (µg/L)</b>	<b>Reporting Limit</b>	<b>Chloroform (µg/L)</b>	<b>Reporting Limit</b>
GW-2	11	5	ND	5
GW-3	180	5	8	5

Prepared by: DP 7/5/11  
 Checked by: ADA 7/5/11

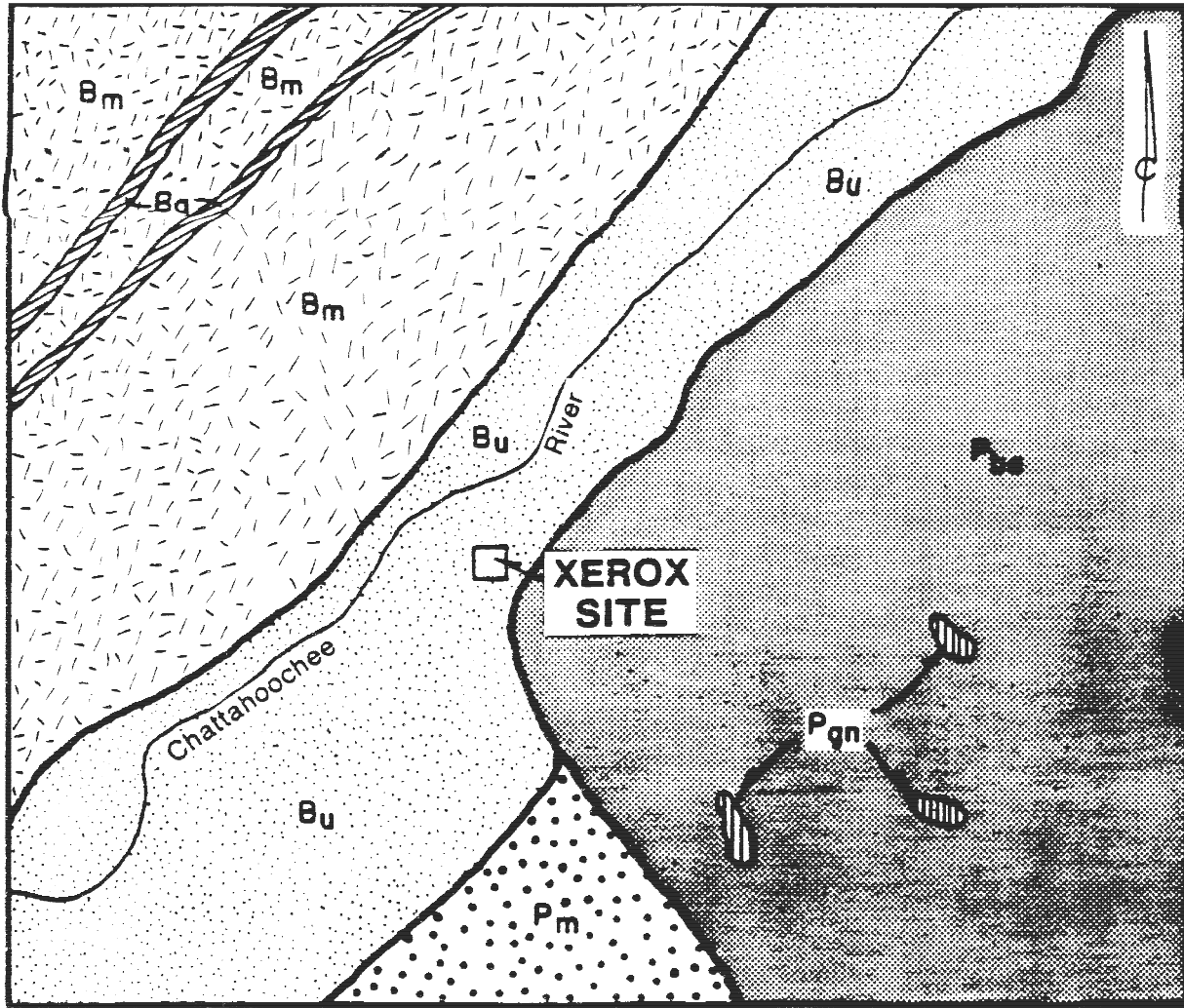


**Table E-10**  
**Summary of PCE Concentrations - East Side of Xerox Warehouse**  
**January 1998 through January 2000**  
**Xerox Facility - Atlanta, Georgia**

Well	1/20/1998	2/25/1998	3/23/1998	4/14/1998	4/27/1998	5/27/1998	6/23/1998	7/27/1998	8/25/1998	9/23/1998	10/28/1998	12/16/1998	1/25/1999	2/23/1999	3/30/1999	4/28/1999	5/26/1999	6/29/1999	7/6/1999	8/31/1999	9/30/1999	10/28/1999	11/30/1999	12/21/1999	1/18/2000	2/21/2000	3/9/2000
B-04	710	600	520	-	330	2600	2700	3100	1200	440	540	1400	1800	1200	760	850	350	390	230	990	830	2300	2100	660	630	1400	780
B-04A	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.2	<1	<1	<1	<1	<1
B-04B	<1	<1	<1	-	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
B-15	8.4	30	13	-	14	57	35	9.6	2.5	1.7	<1	1.2	1.4	<1	1.2	1.3	2.0	6.0	3.0	8.0	6.5	6.0	4.4	6.9	5.5	4.6	7.9
B-15B	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	1.8	<1	<1	<1	<1	<1	<1	<1	1.0	1.2	<1	<1	<1	1.5	1.4	2.6
B-15C	4.2	6.7	6.4	-	4.4	-	4.3	3.8	2.5	1.9	2.1	5.7	4.2	4.8	3.9	6.6	5.4	6.0	5.2	5.9	7.2	5.5	4.1	5.3	5.1	5.4	6.8
B-15D	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
B-16	8.8	4.0	4.5	-	3.6	29	16	18	8.5	15	21	7.3	14	13	12	13	14	25	16	21	18	24	25	27	3.8	5.4	17
B-19	<1	<1	1.4	-	1.0	1.0	<1	<1	<1	<1	<1	27	<1	<1	<1	1.2	1.1	1.1	<1	<1	<1	<1	<1	<1	<1	<1	<1
B-23	110	77	79	-	90	130	140	100	82	99	85	110	120	130	110	130	150	160	120	200	280	200	180	180	190	140	140
B-26	780	790	470	-	450	900	1000	1100	1200	1400	1300	1400	1500	1600	1600	1400	1100	1100	1100	480	810	1600	1500	1500	1500	1500	1800
RW-12	2.8	4.5	5.8	-	3.0	6.8	5.1	6.2	4.2	5.3	6.4	5.1	4.2	3.1	4.8	4.4	4.8	3.9	3.8	4.6	4.2	4.0	4.1	3.4	3.1	4.8	3.7
RW-01	100	18	63	-	-	-	670	-	-	-	-	93	-	-	-	130	240	-	160	250	530	290	260	380	590	480	440
RW-13	8.4	5.8	54	-	28	20	<1	<1	32	16	19	62	45	52	49	48	28	43	40	57	62	60	58	54	58	46	34
RW-09	45	61	160	-	-	340	78	180	180	30	75	83	140	210	120	64	160	120	100	140	110	190	180	190	180	250	230
B-20	26	32	33	-	-	-	64	82	84	98	120	100	82	110	79	100	83	99	100	88	90	93	110	130	120	92	110
B-37	2900	-8.6	880	-	830	1200	1900	2200	2800	3900	2700	370	250	1400	960	1800	2100	1800	1900	1800	2100	2100	2500	2500	2800	3500	2900
B-38	-	-	-	-	-	280	630	440	340	370	160	57	200	170	180	230	220	250	240	390	380	380	570	610	570	260	470
B-39	-	-	-	-	-	1100	2100	700	300	500	380	410	430	700	630	1100	950	1200	1400	1600	1600	1400	1200	1800	1800	1700	1700

All concentrations are reported as µ/L

## FIGURES



BREVARD FAULT ZONE

- Bu BREVARD FAULT ZONE UNDIFFERENTIATED
- Bm MUSCOVITE SCHIST
- Bq QUARTZITE

SOUTHERN PIEDMONT

- Pbn BEN HILL GRANITE
- Pgn BIOTITE GNEISS
- Pm MUSCOVITE SCHIST

SCALE IN MILES



SOURCE: After McConnell and Abrams, 1984

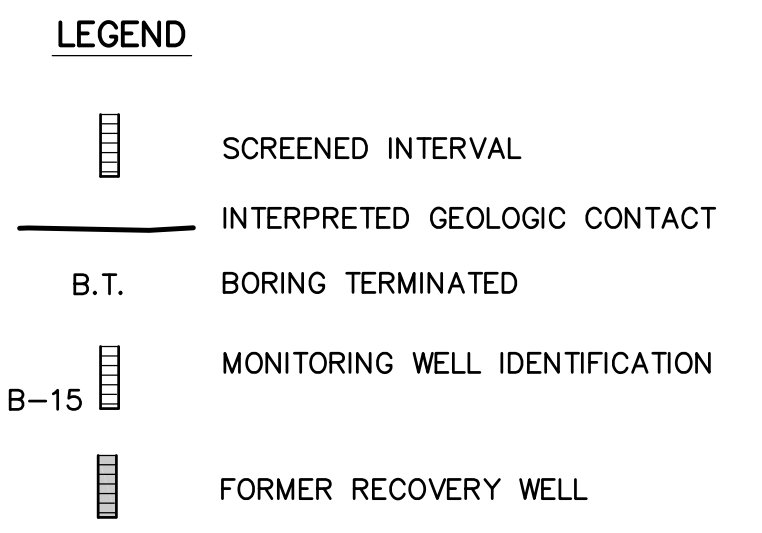
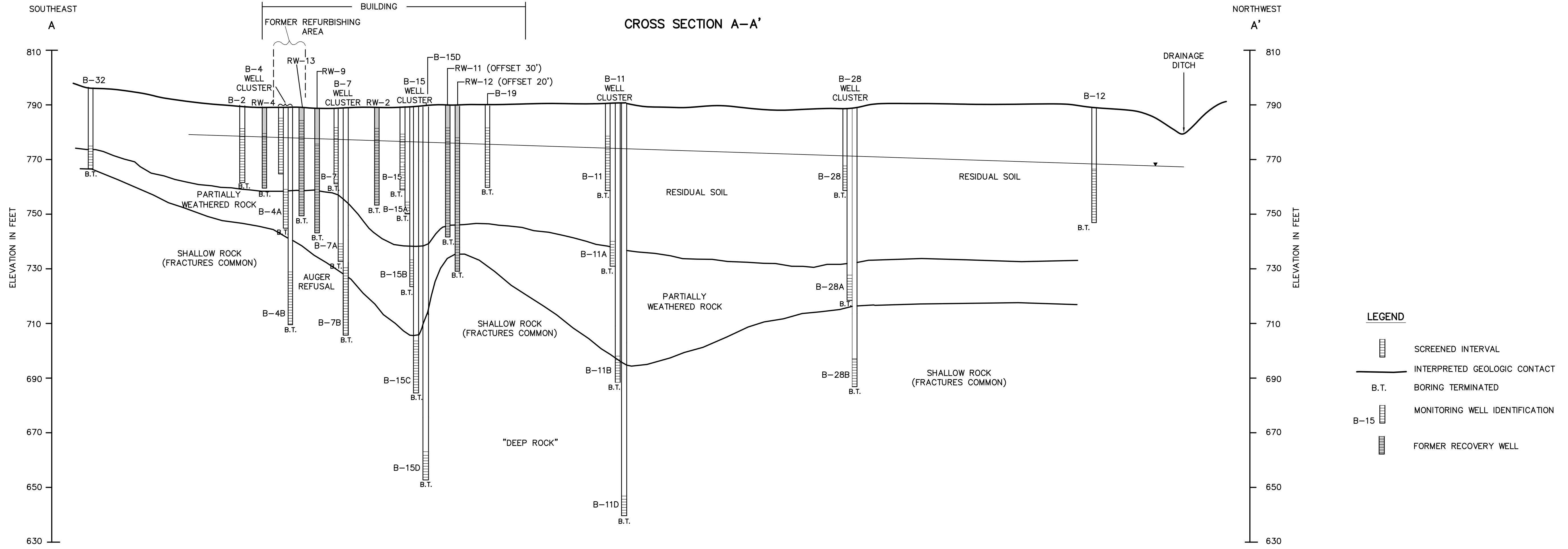
XEROX CORPORATION  
FULTON INDUSTRIAL PARK  
ATLANTA, GEORGIA

**wood.** Environment & Infrastructure  
Solutions, Inc.  
1075 BIG SHANTY ROAD, NW, SUITE 100  
KENNESAW, GEORGIA 30144 (770) 421-3400

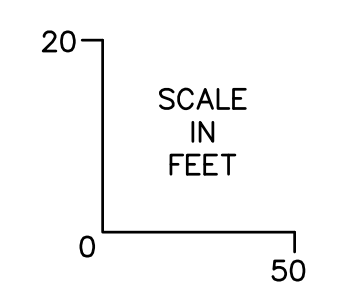
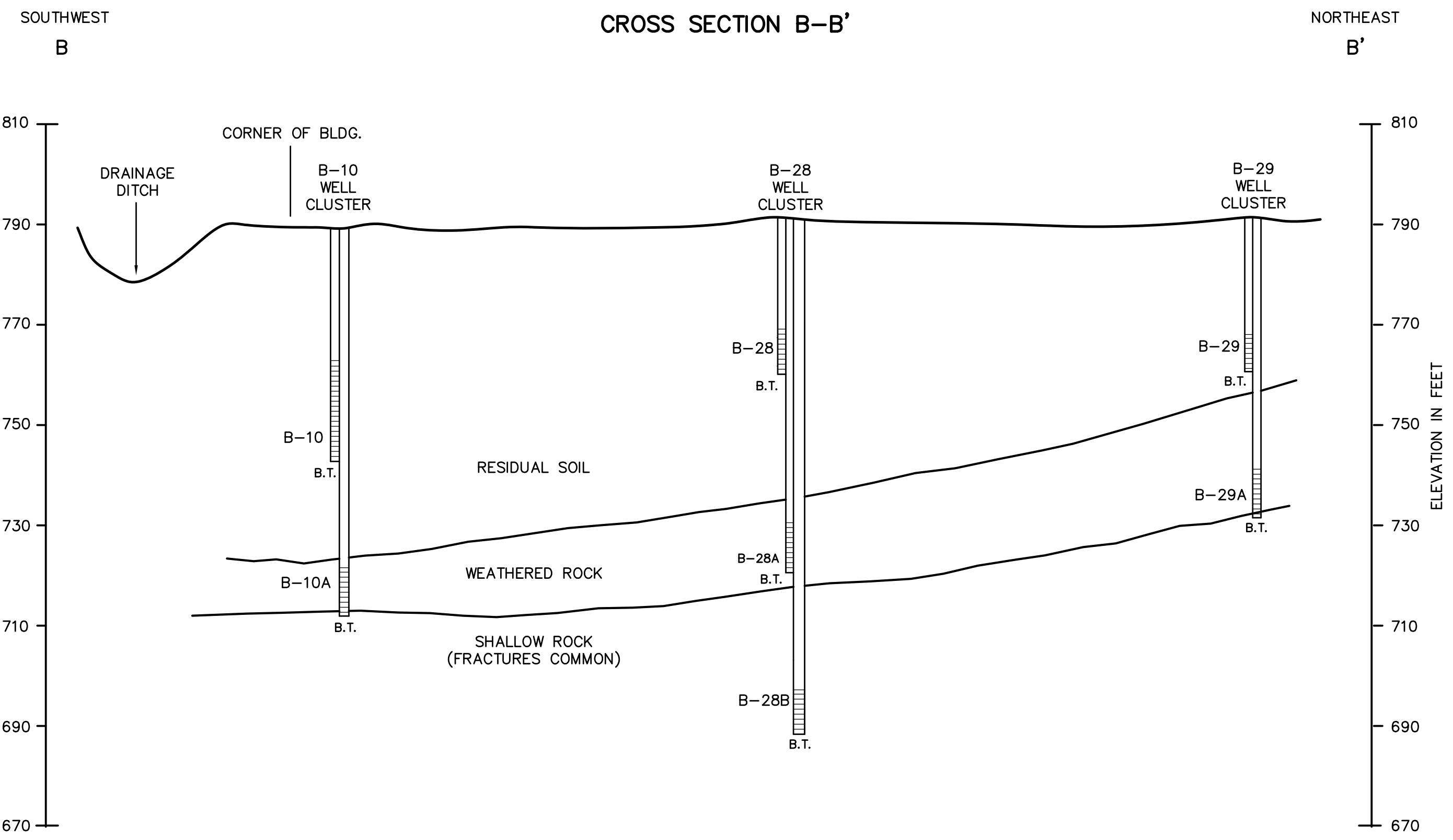
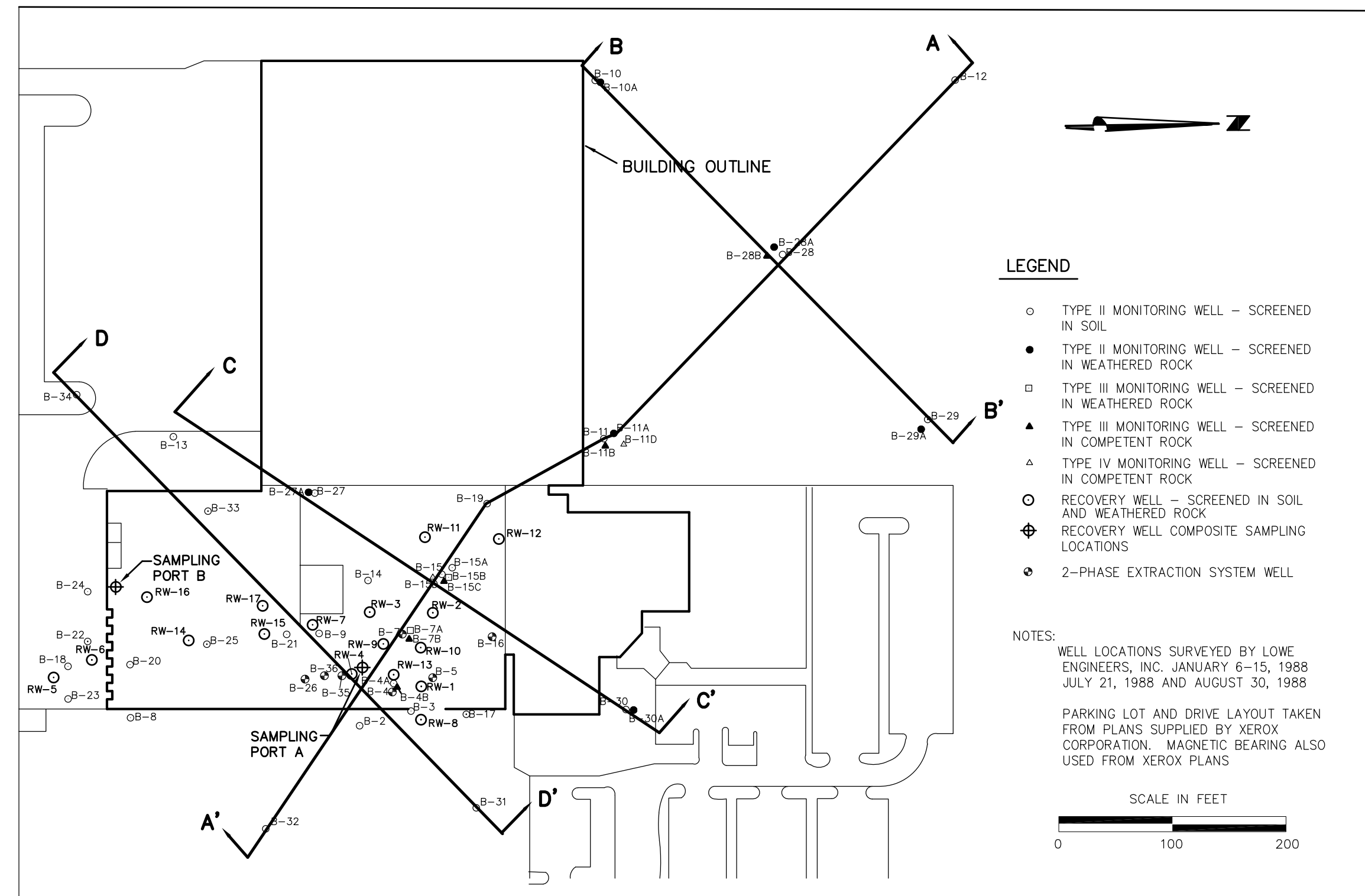
SITE GEOLOGIC  
MAP

JOB NO. 6122110362

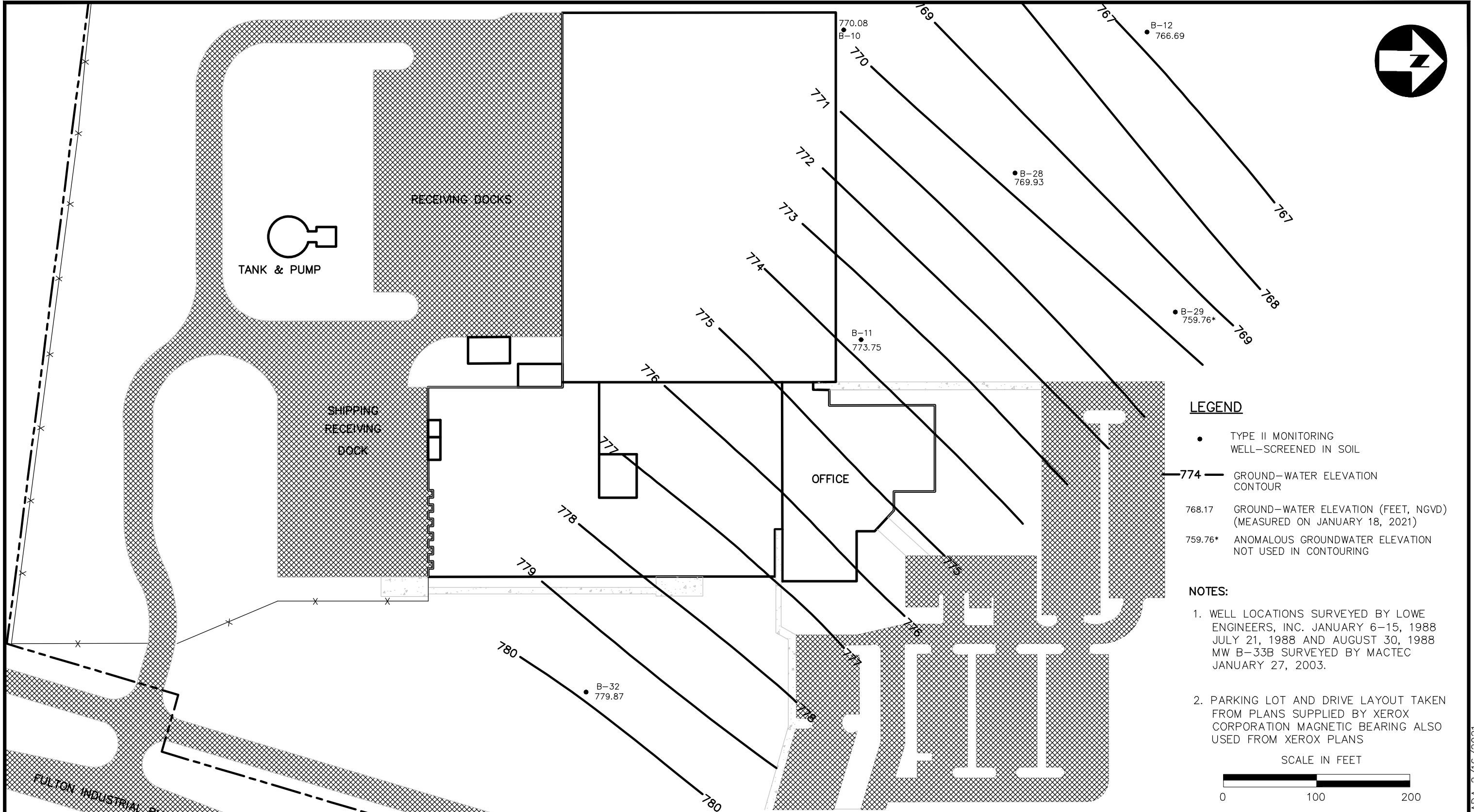
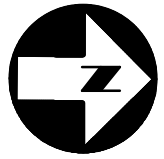
FIGURE E-1



CROSS SECTION LOCATION MAP



<p>XEROX CORPORATION FULTON INDUSTRIAL PARK ATLANTA, GEORGIA</p>	<p><b>wood.</b> Environment &amp; Infrastructure Solutions, Inc. 1075 BIG SHANTY ROAD, NW, SUITE 100 KENNESAW, GEORGIA 30144 (770) 421-3400</p>	<p>CROSS-SECTION A-A' AND B-B' SHOWING INTERPRETED HYDROGEOLOGIC UNITS</p>
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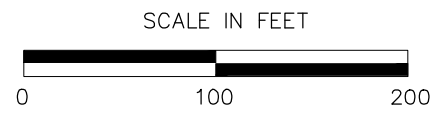


**LEGEND**

- TYPE II MONITORING WELL—SCREENED IN SOIL
- 774— GROUND-WATER ELEVATION CONTOUR
- 768.17 GROUND-WATER ELEVATION (FEET, NGVD) (MEASURED ON JANUARY 18, 2021)
- 759.76\* ANOMALOUS GROUNDWATER ELEVATION NOT USED IN CONTOURING

**NOTES:**

1. WELL LOCATIONS SURVEYED BY LOWE ENGINEERS, INC. JANUARY 6-15, 1988 JULY 21, 1988 AND AUGUST 30, 1988 MW B-33B SURVEYED BY MACTEC JANUARY 27, 2003.
2. PARKING LOT AND DRIVE LAYOUT TAKEN FROM PLANS SUPPLIED BY XEROX CORPORATION MAGNETIC BEARING ALSO USED FROM XEROX PLANS



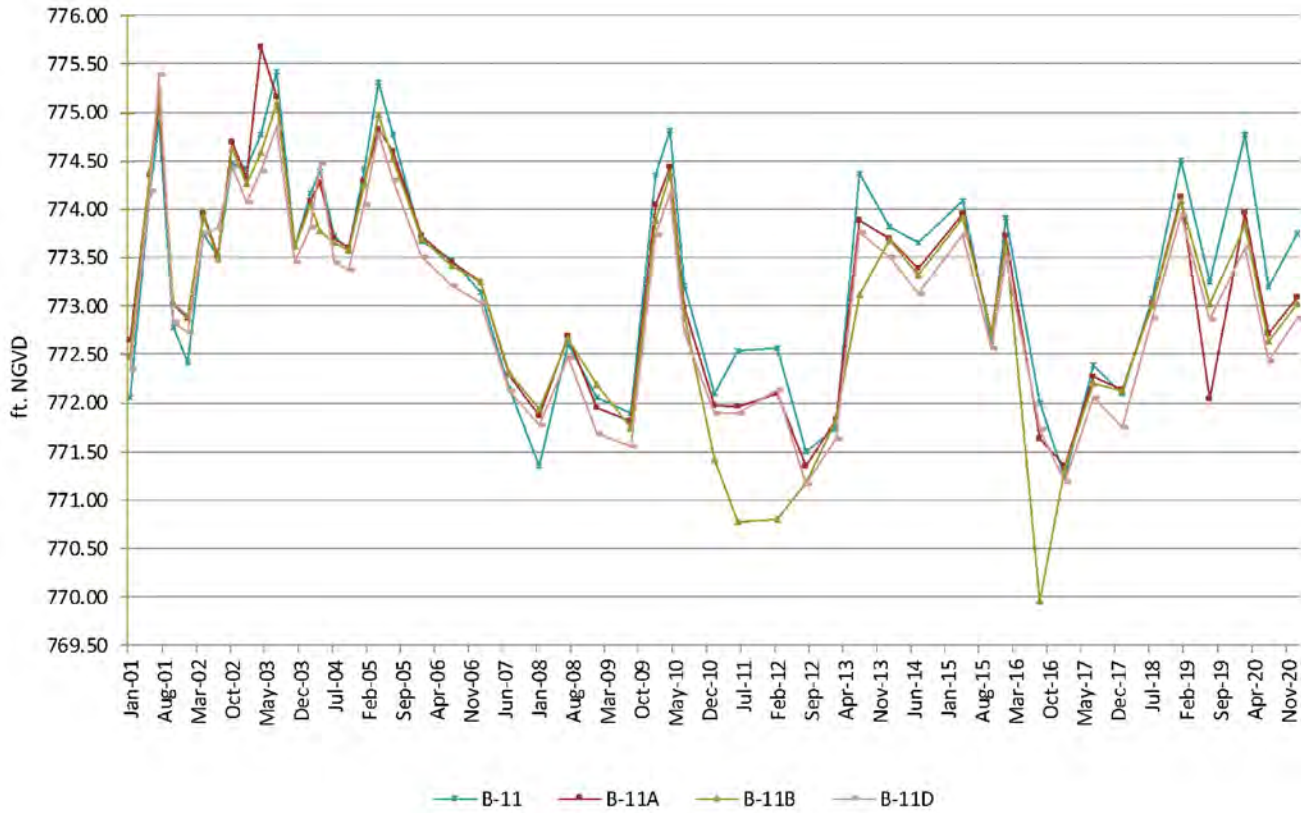
FULTON INDUSTRIAL PARK

XEROX CORPORATION  
FULTON INDUSTRIAL PARK  
ATLANTA, GEORGIA

**wood.** Environment & Infrastructure  
Solutions, Inc.  
1075 BIG SHANTY ROAD, NW, SUITE 100  
KENNESAW, GEORGIA 30144 (770) 421-3400

POTENTIOMETRIC SURFACE MAP  
RESIDUAL SOIL WELLS  
JANUARY 18, 2021  
JOB NO. 6122-11-0362 FIGURE E-3

PREPARED BY/DATE ADA 2/16/2021  
 CHECKED BY/DATE JMQ 2/16/2021



XEROX CORPORATION  
 FULTON INDUSTRIAL PARK  
 ATLANTA, GEORGIA

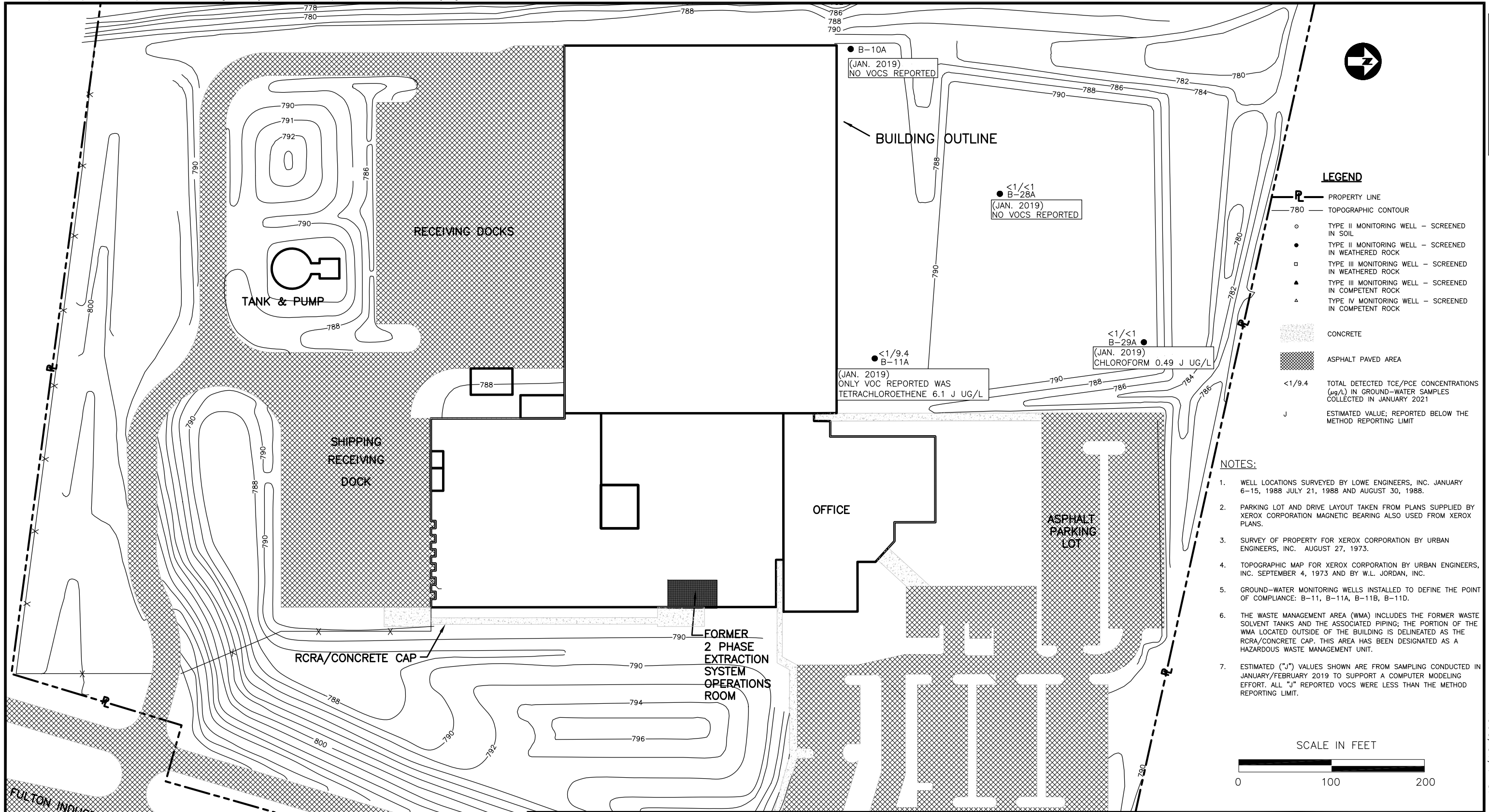
**wood.** Environment & Infrastructure Solutions, Inc.  
 1075 BIG SHANTY ROAD, NW, SUITE 100  
 KENNESAW, GEORGIA 30144 (770) 421-3400

GROUND-WATER ELEVATION  
 2001-2021  
 B-11 CLUSTER WELLS  
 JOB NO. 6122110362      FIGURE E-4

PREPARED BY/DATE JQ 4/15/2021  
 CHECKED BY/DATE ADA 4/15/2021

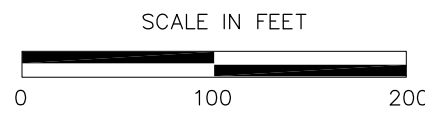






- LEGEND**
- PROPERTY LINE
  - TOPOGRAPHIC CONTOUR
  - TYPE II MONITORING WELL - SCREENED IN SOIL
  - TYPE II MONITORING WELL - SCREENED IN WEATHERED ROCK
  - TYPE III MONITORING WELL - SCREENED IN WEATHERED ROCK
  - TYPE III MONITORING WELL - SCREENED IN COMPETENT ROCK
  - TYPE IV MONITORING WELL - SCREENED IN COMPETENT ROCK
  - CONCRETE
  - ASPHALT PAVED AREA
  - $<1/9.4$  TOTAL DETECTED TCE/PCE CONCENTRATIONS ( $\mu\text{g/L}$ ) IN GROUND-WATER SAMPLES COLLECTED IN JANUARY 2021
  - J ESTIMATED VALUE; REPORTED BELOW THE METHOD REPORTING LIMIT

- NOTES:**
1. WELL LOCATIONS SURVEYED BY LOWE ENGINEERS, INC. JANUARY 6-15, 1988 JULY 21, 1988 AND AUGUST 30, 1988.
  2. PARKING LOT AND DRIVE LAYOUT TAKEN FROM PLANS SUPPLIED BY XEROX CORPORATION MAGNETIC BEARING ALSO USED FROM XEROX PLANS.
  3. SURVEY OF PROPERTY FOR XEROX CORPORATION BY URBAN ENGINEERS, INC. AUGUST 27, 1973.
  4. TOPOGRAPHIC MAP FOR XEROX CORPORATION BY URBAN ENGINEERS, INC. SEPTEMBER 4, 1973 AND BY W.L. JORDAN, INC.
  5. GROUND-WATER MONITORING WELLS INSTALLED TO DEFINE THE POINT OF COMPLIANCE: B-11, B-11A, B-11B, B-11D.
  6. THE WASTE MANAGEMENT AREA (WMA) INCLUDES THE FORMER WASTE SOLVENT TANKS AND THE ASSOCIATED PIPING; THE PORTION OF THE WMA LOCATED OUTSIDE OF THE BUILDING IS DELINEATED AS THE RCRA/CONCRETE CAP. THIS AREA HAS BEEN DESIGNATED AS A HAZARDOUS WASTE MANAGEMENT UNIT.
  7. ESTIMATED ("J") VALUES SHOWN ARE FROM SAMPLING CONDUCTED IN JANUARY/FEBRUARY 2019 TO SUPPORT A COMPUTER MODELING EFFORT. ALL "J" REPORTED VOCs WERE LESS THAN THE METHOD REPORTING LIMIT.



LAYER/LEVEL	

FULTON INDUSTRIAL PARK

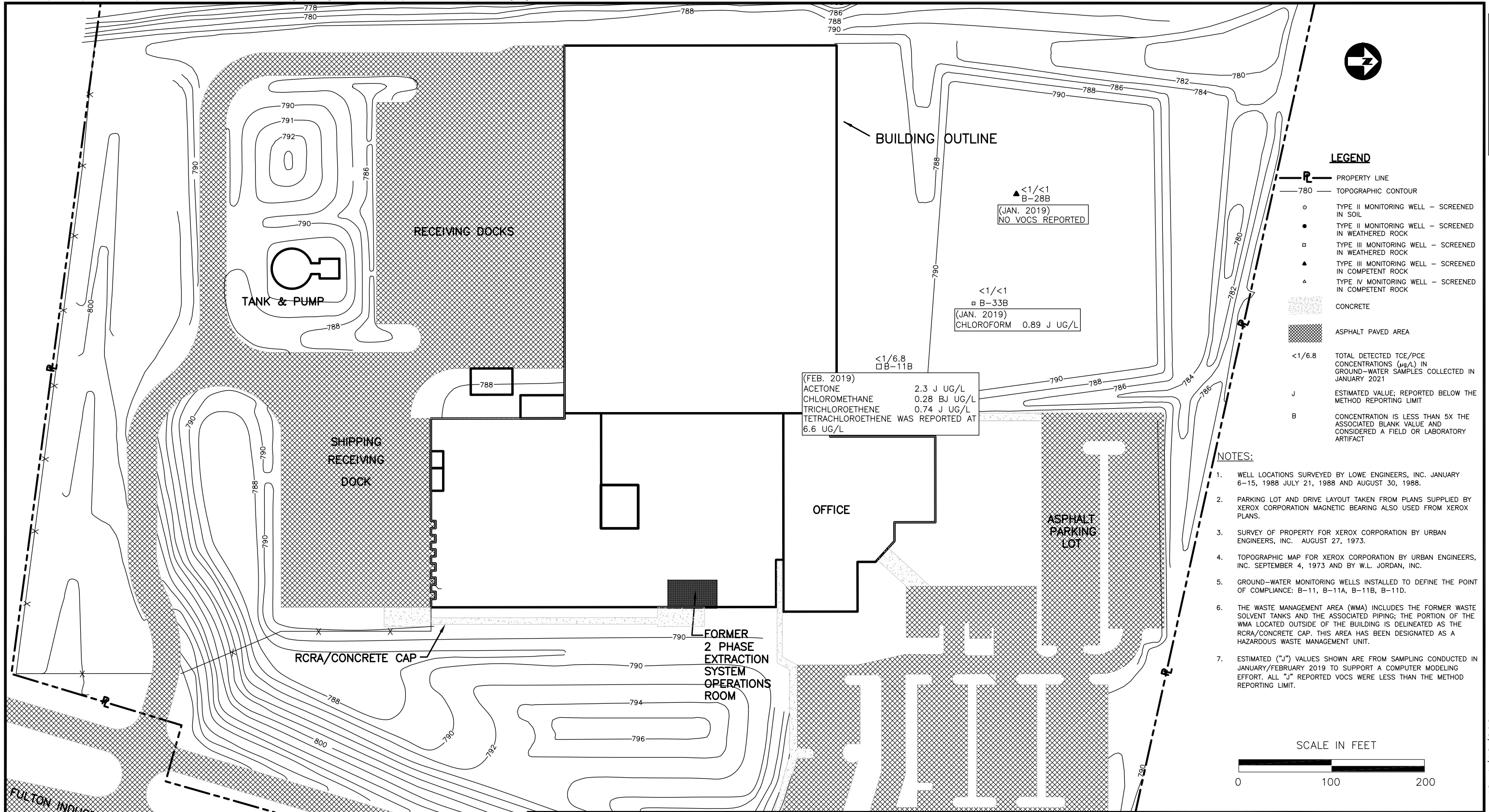
XEROX CORPORATION  
FULTON INDUSTRIAL PARK  
ATLANTA, GEORGIA

**wood.** Environment & Infrastructure  
Solutions, Inc.  
1075 BIG SHANTY ROAD, NW, SUITE 100  
KENNESAW, GEORGIA 30144 (770) 421-3400

GROUND-WATER PLUME DELINEATION  
FOR PARTIALLY WEATHERED ROCK  
JOB NO. 6122110362  
FIGURE E-5b

PREPARED BY/DATE: JQ 4/12/2021  
CHECKED BY/DATE: ADA 4/12/2021



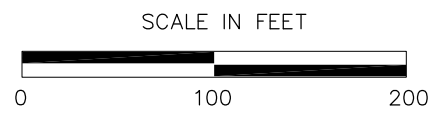


**LEGEND**

- PROPERTY LINE
- TOPOGRAPHIC CONTOUR
- TYPE II MONITORING WELL - SCREENED IN SOIL
- TYPE II MONITORING WELL - SCREENED IN WEATHERED ROCK
- TYPE III MONITORING WELL - SCREENED IN WEATHERED ROCK
- TYPE III MONITORING WELL - SCREENED IN COMPETENT ROCK
- TYPE IV MONITORING WELL - SCREENED IN COMPETENT ROCK
- CONCRETE
- ASPHALT PAVED AREA
- <1/6.8 TOTAL DETECTED TCE/PCE CONCENTRATIONS (µg/L) IN GROUND-WATER SAMPLES COLLECTED IN JANUARY 2021
- ESTIMATED VALUE; REPORTED BELOW THE METHOD REPORTING LIMIT
- CONCENTRATION IS LESS THAN 5X THE ASSOCIATED BLANK VALUE AND CONSIDERED A FIELD OR LABORATORY ARTIFACT

**NOTES:**

1. WELL LOCATIONS SURVEYED BY LOWE ENGINEERS, INC. JANUARY 6-15, 1988 JULY 21, 1988 AND AUGUST 30, 1988.
2. PARKING LOT AND DRIVE LAYOUT TAKEN FROM PLANS SUPPLIED BY XEROX CORPORATION MAGNETIC BEARING ALSO USED FROM XEROX PLANS.
3. SURVEY OF PROPERTY FOR XEROX CORPORATION BY URBAN ENGINEERS, INC. AUGUST 27, 1973.
4. TOPOGRAPHIC MAP FOR XEROX CORPORATION BY URBAN ENGINEERS, INC. SEPTEMBER 4, 1973 AND BY W.L. JORDAN, INC.
5. GROUND-WATER MONITORING WELLS INSTALLED TO DEFINE THE POINT OF COMPLIANCE: B-11, B-11A, B-11B, B-11D.
6. THE WASTE MANAGEMENT AREA (WMA) INCLUDES THE FORMER WASTE SOLVENT TANKS AND THE ASSOCIATED PIPING; THE PORTION OF THE WMA LOCATED OUTSIDE OF THE BUILDING IS DELINEATED AS THE RCRA/CONCRETE CAP. THIS AREA HAS BEEN DESIGNATED AS A HAZARDOUS WASTE MANAGEMENT UNIT.
7. ESTIMATED ("J") VALUES SHOWN ARE FROM SAMPLING CONDUCTED IN JANUARY/FEBRUARY 2019 TO SUPPORT A COMPUTER MODELING EFFORT. ALL "J" REPORTED VOCs WERE LESS THAN THE METHOD REPORTING LIMIT.



FULTON INDUSTRIAL PARK

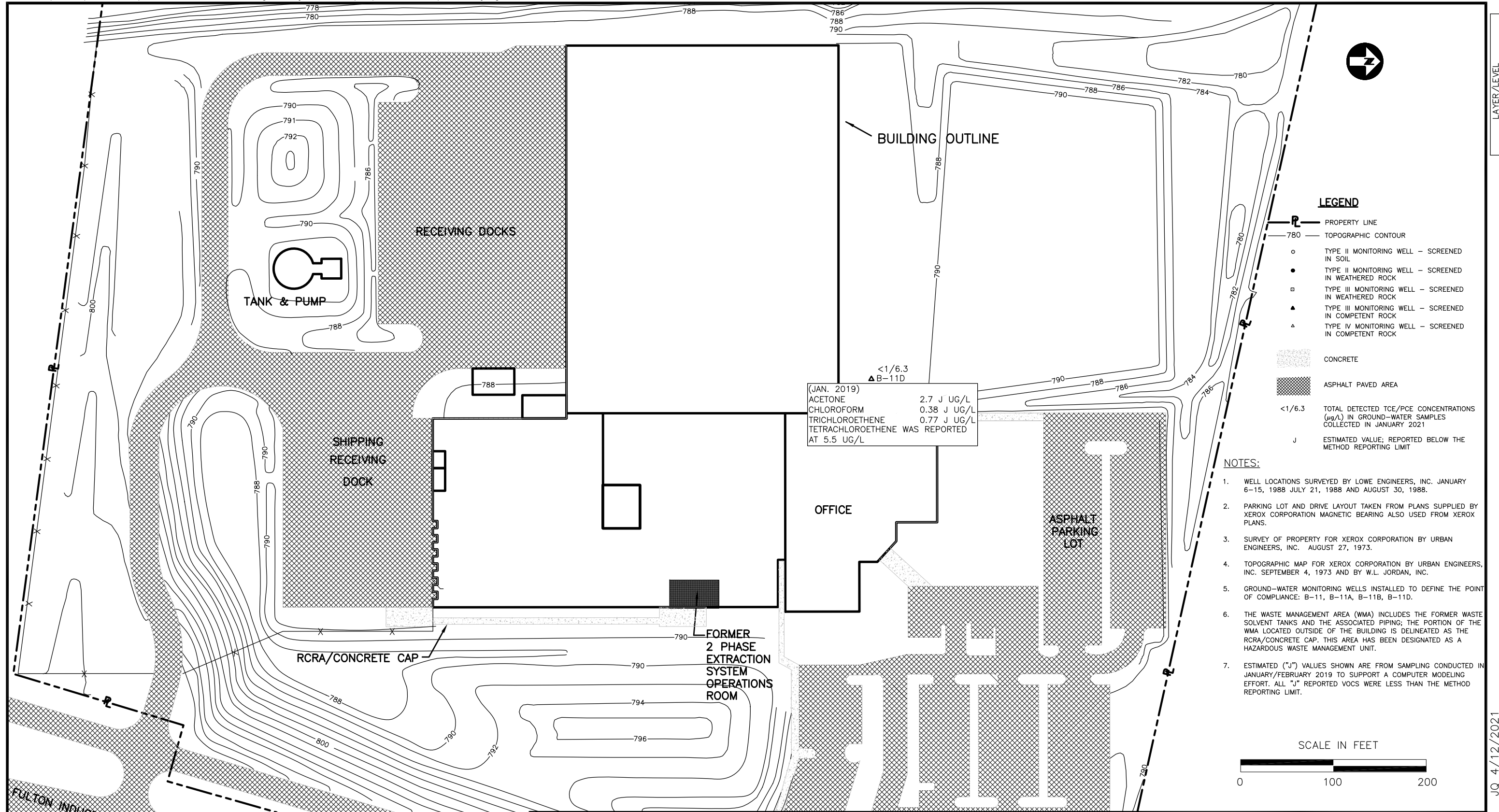
XEROX CORPORATION  
FULTON INDUSTRIAL PARK  
ATLANTA, GEORGIA

**wood.** Environment & Infrastructure  
Solutions, Inc.  
1075 BIG SHANTY ROAD, NW, SUITE 100  
KENNESAW, GEORGIA 30144 (770) 421-3400

GROUND-WATER PLUME DELINEATION  
FOR FRACTURED ROCK  
JOB NO. 6122110362  
FIGURE E-5c

LAYER/LEVEL	

PREPARED BY/DATE: JQ 4/12/2021  
CHECKED BY/DATE: ADA 4/12/2021



(JAN. 2019)  
 ACETONE 2.7 J UG/L  
 CHLOROFORM 0.38 J UG/L  
 TRICHLOROETHENE 0.77 J UG/L  
 TETRACHLOROETHENE WAS REPORTED AT 5.5 UG/L

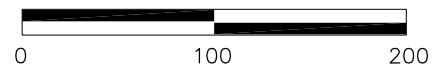
**LEGEND**

- PROPERTY LINE
- 780 TOPOGRAPHIC CONTOUR
- TYPE II MONITORING WELL - SCREENED IN SOIL
- TYPE II MONITORING WELL - SCREENED IN WEATHERED ROCK
- TYPE III MONITORING WELL - SCREENED IN WEATHERED ROCK
- TYPE III MONITORING WELL - SCREENED IN COMPETENT ROCK
- TYPE IV MONITORING WELL - SCREENED IN COMPETENT ROCK
- CONCRETE
- ASPHALT PAVED AREA
- <1/6.3 TOTAL DETECTED TCE/PCE CONCENTRATIONS (UG/L) IN GROUND-WATER SAMPLES COLLECTED IN JANUARY 2021
- J ESTIMATED VALUE; REPORTED BELOW THE METHOD REPORTING LIMIT

**NOTES:**

1. WELL LOCATIONS SURVEYED BY LOWE ENGINEERS, INC. JANUARY 6-15, 1988 JULY 21, 1988 AND AUGUST 30, 1988.
2. PARKING LOT AND DRIVE LAYOUT TAKEN FROM PLANS SUPPLIED BY XEROX CORPORATION MAGNETIC BEARING ALSO USED FROM XEROX PLANS.
3. SURVEY OF PROPERTY FOR XEROX CORPORATION BY URBAN ENGINEERS, INC. AUGUST 27, 1973.
4. TOPOGRAPHIC MAP FOR XEROX CORPORATION BY URBAN ENGINEERS, INC. SEPTEMBER 4, 1973 AND BY W.L. JORDAN, INC.
5. GROUND-WATER MONITORING WELLS INSTALLED TO DEFINE THE POINT OF COMPLIANCE: B-11, B-11A, B-11B, B-11D.
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7. ESTIMATED ("J") VALUES SHOWN ARE FROM SAMPLING CONDUCTED IN JANUARY/FEBRUARY 2019 TO SUPPORT A COMPUTER MODELING EFFORT. ALL "J" REPORTED VOCs WERE LESS THAN THE METHOD REPORTING LIMIT.

SCALE IN FEET



LAYER/LEVEL	

XEROX CORPORATION  
 FULTON INDUSTRIAL PARK  
 ATLANTA, GEORGIA

**wood.** Environment & Infrastructure  
 Solutions, Inc.

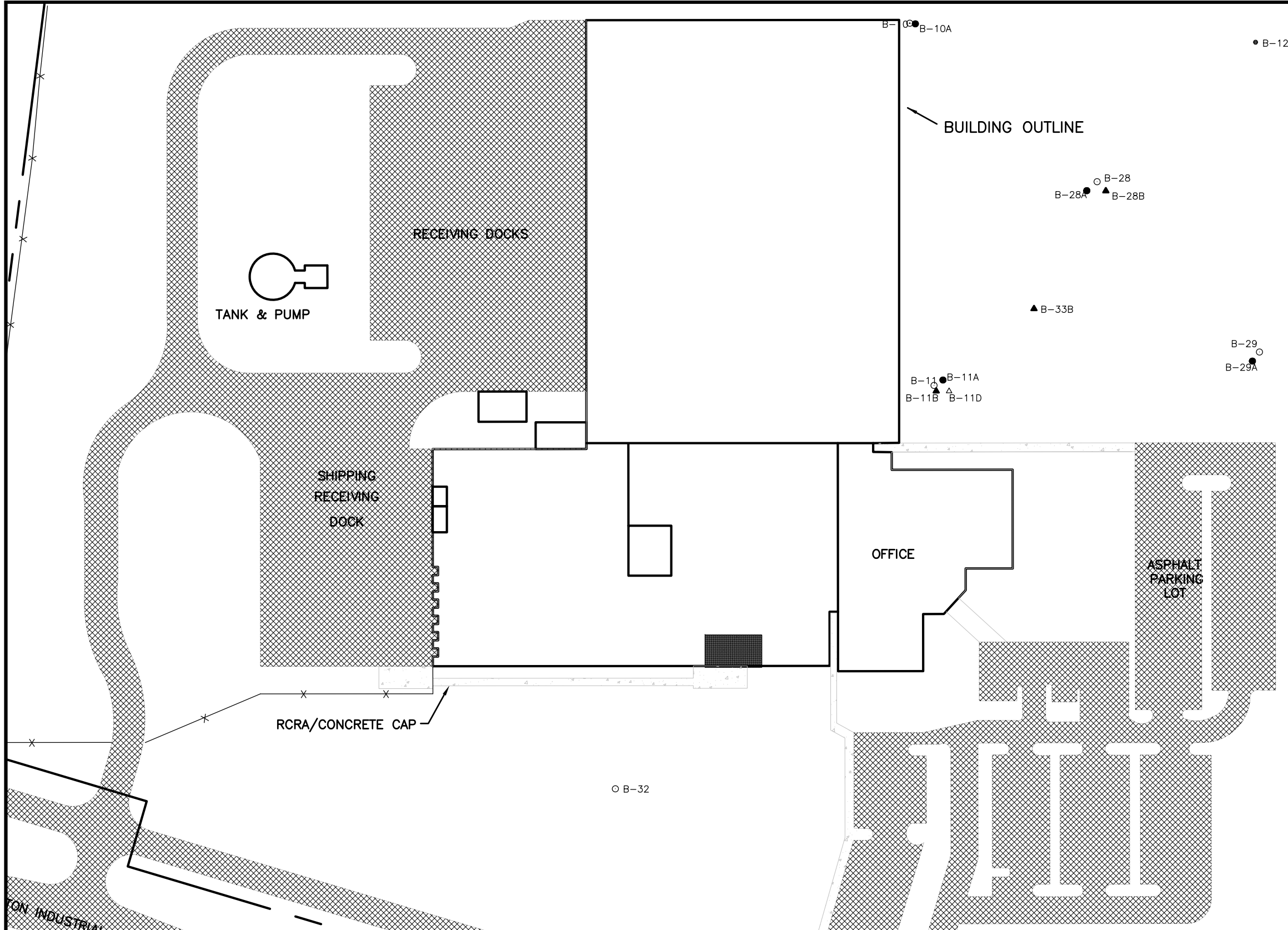
1075 BIG SHANTY ROAD, NW, SUITE 100  
 KENNESAW, GEORGIA 30144 (770) 421-3400

GROUND-WATER PLUME DELINEATION  
 FOR DEEP ROCK

JOB NO. 6122110362

FIGURE E-5d

PREPARED BY/DATE JQ 4/12/2021  
 CHECKED BY/DATE ADA 4/12/2021



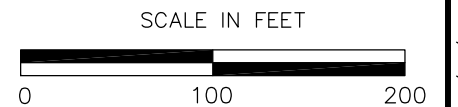
**LEGEND**

- TYPE II MONITORING WELL - SCREENED IN SOIL
- TYPE II MONITORING WELL - SCREENED IN WEATHERED ROCK
- ▲ TYPE III MONITORING WELL - SCREENED IN FRACTURED ROCK
- △ TYPE IV MONITORING WELL - SCREENED IN COMPETENT ROCK

**NOTES:**

WELL LOCATIONS SURVEYED BY LOWE ENGINEERS, INC. JANUARY 6-15, 1988  
JULY 21, 1988 AND AUGUST 30, 1988

PARKING LOT AND DRIVE LAYOUT TAKEN FROM PLANS SUPPLIED BY XEROX CORPORATION MAGNETIC BEARING ALSO USED FROM XEROX PLANS



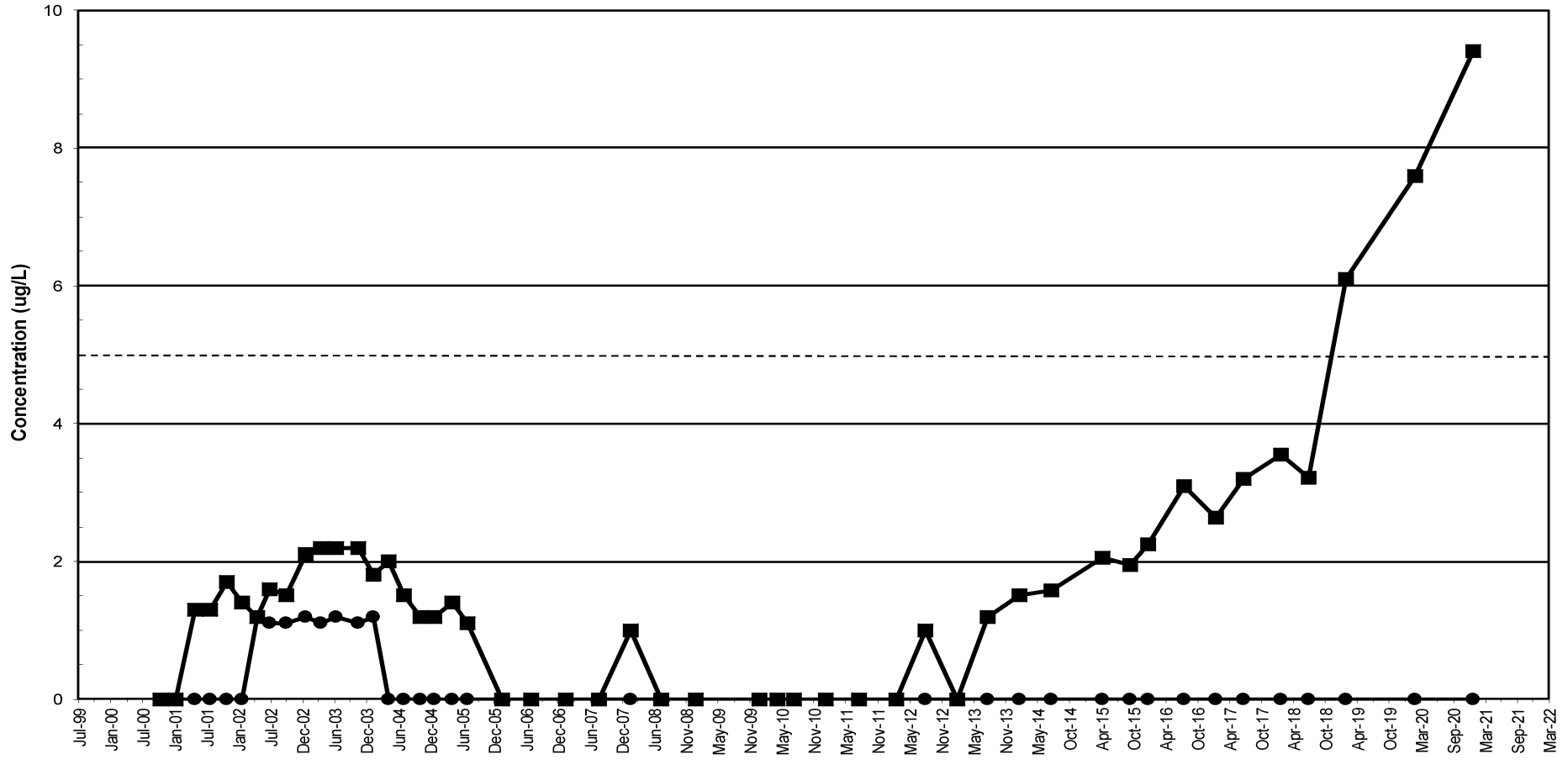
FULTON INDUSTRIAL PARK

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ATLANTA, GA

**wood.** Environment & Infrastructure  
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CONTINGENT CORRECTIVE ACTION PLAN  
WELL LOCATIONS  
JOB NO. 6122110362  
FIGURE E-6

PREPARED BY/DATE: JQ 4/27/2020  
CHECKED BY/DATE: DA 4/27/2020



Note: Analytical results reported as being <1 are plotted as "0"

Date

● Trichloroethene    ■ Tetrachloroethene

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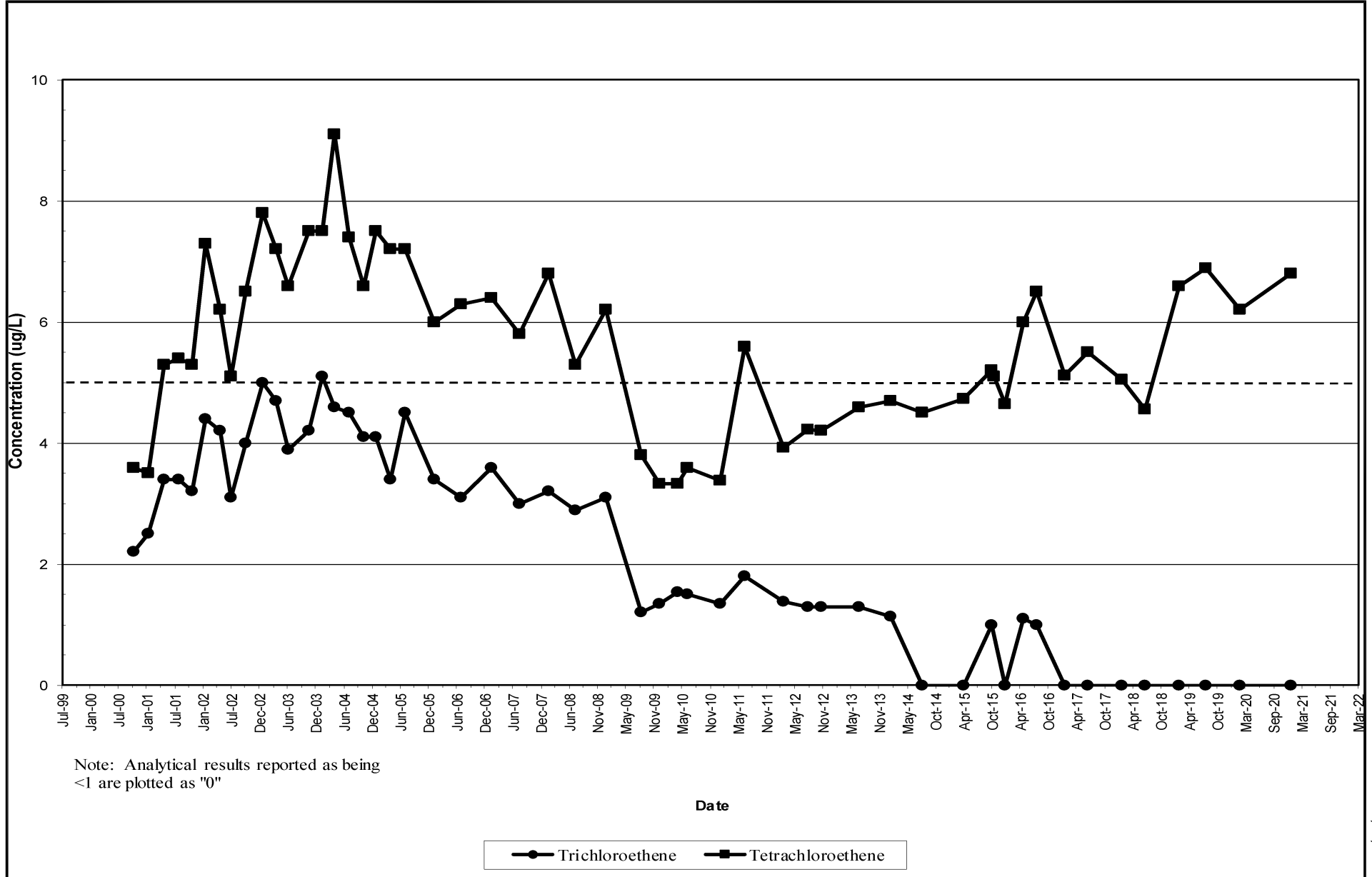
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B-11A  
PCE AND TCE CONCENTRATIONS  
2000-2021

JOB NO. 6122-11-0362

FIGURE E-7a



Note: Analytical results reported as being <1 are plotted as "0"

● Trichloroethene    ■ Tetrachloroethene

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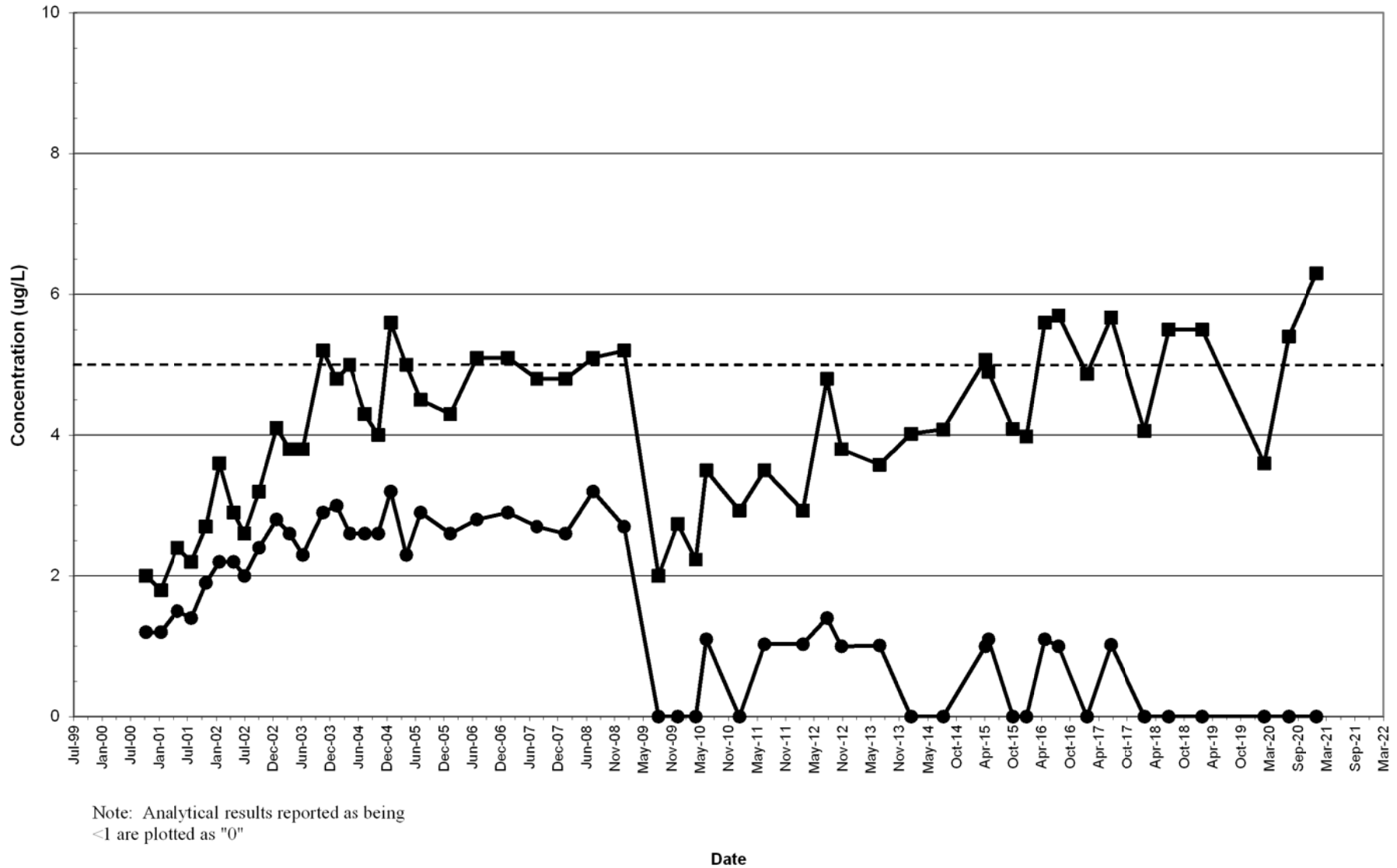
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B-11B  
PCE AND TCE CONCENTRATIONS  
2000-2021

JOB NO. 6122-11-0362

FIGURE E-7b

PREPARED BY/DATE TG 3/4/2021  
CHECKED BY/DATE ADA 3/4/2021



Note: Analytical results reported as being <1 are plotted as "0"

● Trichloroethene    ■ Tetrachloroethene

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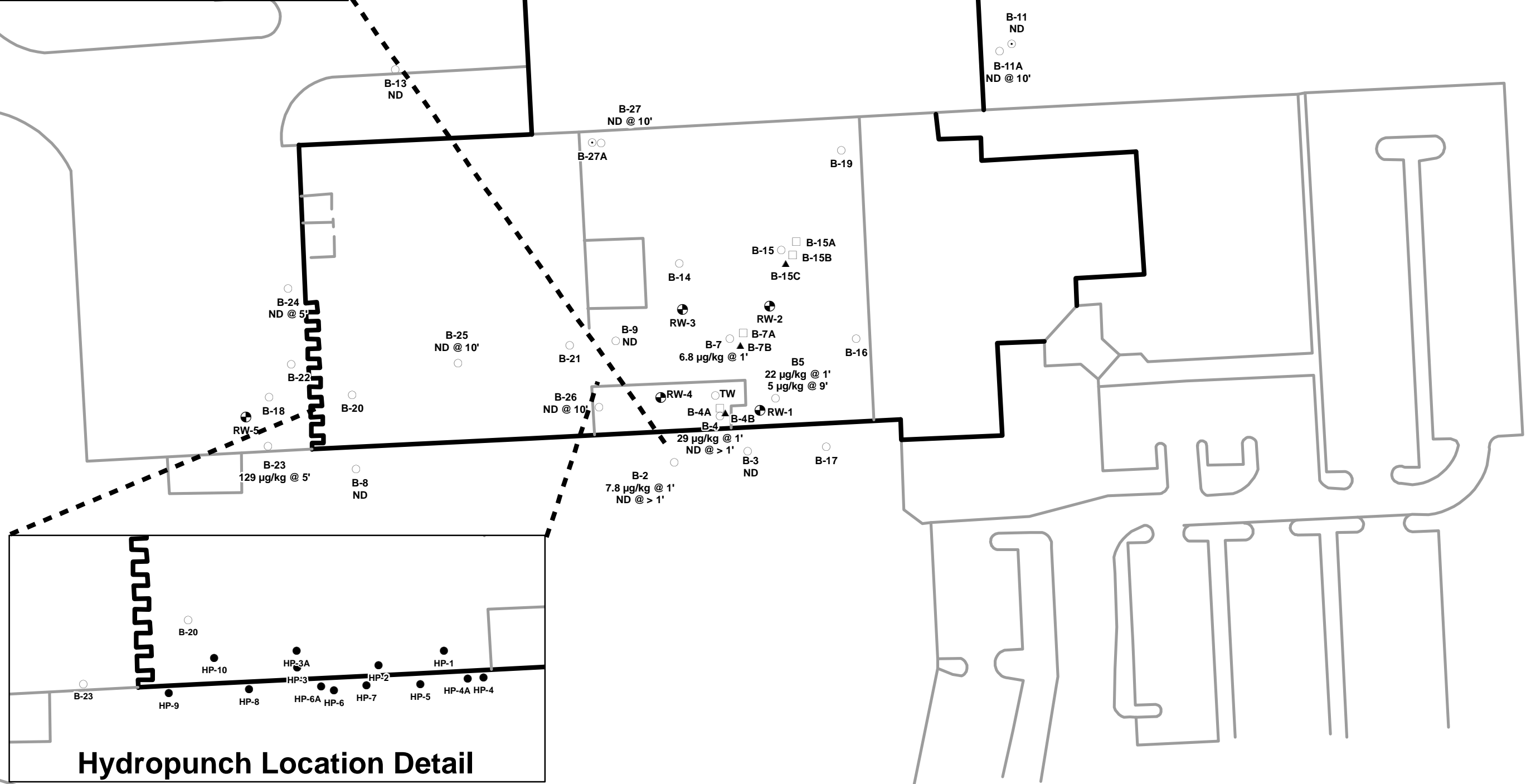
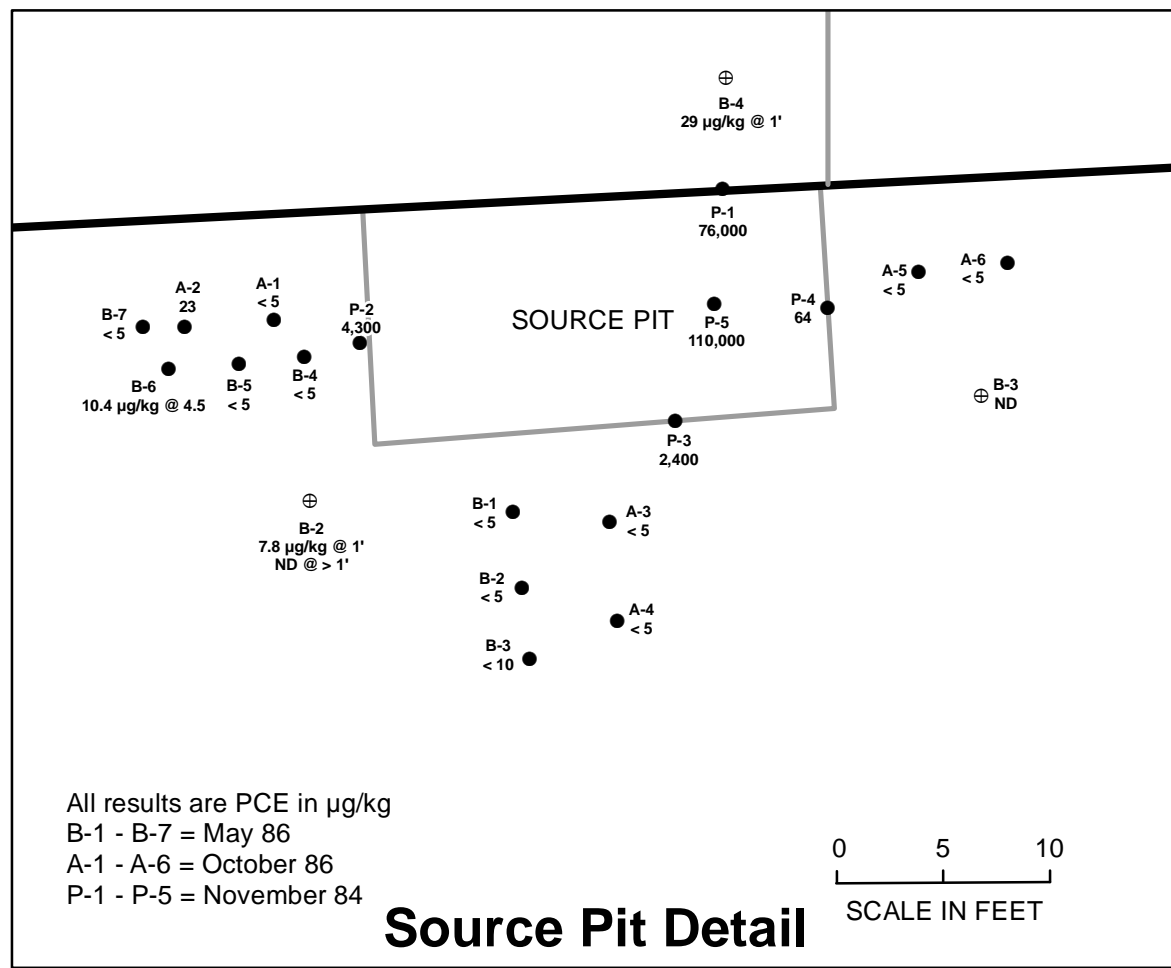
B-11D  
 PCE AND TCE CONCENTRATIONS  
 2000-2021

JOB NO. 6122-11-0362

FIGURE E-7c

PREPARED BY/DATE TG 3/4/2021  
 CHECKED BY/DATE DA 3/4/2021





Source: CRC Facility - Quarterly Progress Report  
 LAR Project No. 12000-8-0019  
 July 1998

**TABLE 1**  
 SUMMARY OF SOIL AND GROUND-WATER DATA  
 HYDROPUNCH SAMPLING EVENT  
 DATE: FEBRUARY 6, 1998

HYDROPUNCH LOCATION	OIL SAMPLE DEPTH (feet)	PID READING (ppm)	SOIL ANALYTICAL RESULTS (µg/kg)		GW ANALYTICAL RESULTS (µg/L)	
			8010 Constituents	Mineral Spirits	PCE - 130	Mineral Spirits
HP-1	0-2	2.6				
	5-7	2.2				
	10-12	1.7				
HP-2	15-17	2.7	ND	<120	PCE - 2100	<100
	1-3	2.8				
	5-7	2.9				
HP-3	10-12	3.0	ND	<110		
	15-17	2.7				
	0-2	0.9	ND	<110	NA	NA
HP-4	0-2	0.5			PCE - 4.8	<100
	5-7	0.3				
	10-12	0.7	ND	<120		
HP-5	15-17	0.5			PCE - 1900	3400
	0-2	0.6				
	5-7	0.3				
HP-6	10-12	1.2	ND	<120		
	15-17	0.5				
	0-2	1.1			NA	NA
HP-7	5-7	0.5				
	10-12	2.5	ND	<110		
	15-17	2.1				

Prepared by: EMS 611596  
 Checked by: NAM 611298

NOTES:  
 Soil samples analyzed using EPA Methods 8010 and 8015M.  
 Ground-water samples analyzed using EPA Methods 8010 and 8015M.  
 NA - not analyzed due to refusal above the water table.  
 ND - no constituents detected.

Source: CRC Facility - Quarterly Progress Report  
 LAR Project No. 12000-8-0019  
 July 1998

**TABLE 2**  
 SUMMARY OF SOIL AND GROUND-WATER DATA  
 HYDROPUNCH SAMPLING EVENT  
 DATE: MARCH 12, 1998

HYDROPUNCH LOCATION	OIL SAMPLE DEPTH (feet)	PID READING (ppm)	SOIL ANALYTICAL RESULTS (µg/kg)		GW ANALYTICAL RESULTS (µg/L)	
			8010 Constituents	Mineral Spirits	8010 Constituents	Mineral Spirits
HP-3A	0-2	2			PCE - 53	<100
	5-7	3				
	10-12	3	ND	<120		
HP-7	15-17	2.4				
	1-3	3.7			PCE - 4200	<100
	5-7	12.0			I.L.I.-TCA - 130	
HP-8	10-12	5.2				
	15-17	13.0	ND	NA		
	0-2	5.0			PCE - 300	<100
HP-9	5-7	1.2			I.L.I.-TCA - 6.5	
	10-12	6.2	ND	<120		
	15-17	2.5				
HP-10	0-2	3.0			PCE - 6	<100
	5-7	13.5	ND	<120	I.L.I.-TCA - 1.2	
	10-12	1.4				
HP-10	15-17	3.4				
	0-2	7.0			PCE - 20	<100
	5-7	5.3			TCE - 1.5	
HP-10	10-12	7.5	ND	<120	I.L.I.-TCA - 1.0	
	15-17	2.9				

Prepared by: EMS 611596  
 Checked by: NAM 611298

NOTES:  
 Soil samples analyzed using EPA Methods 8010 and 8015M.  
 Ground-water samples analyzed using EPA Methods 8010 and 8015M.  
 ND - no constituents detected.  
 NA - not analyzed.

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**Historic Sampling Locations/Results**

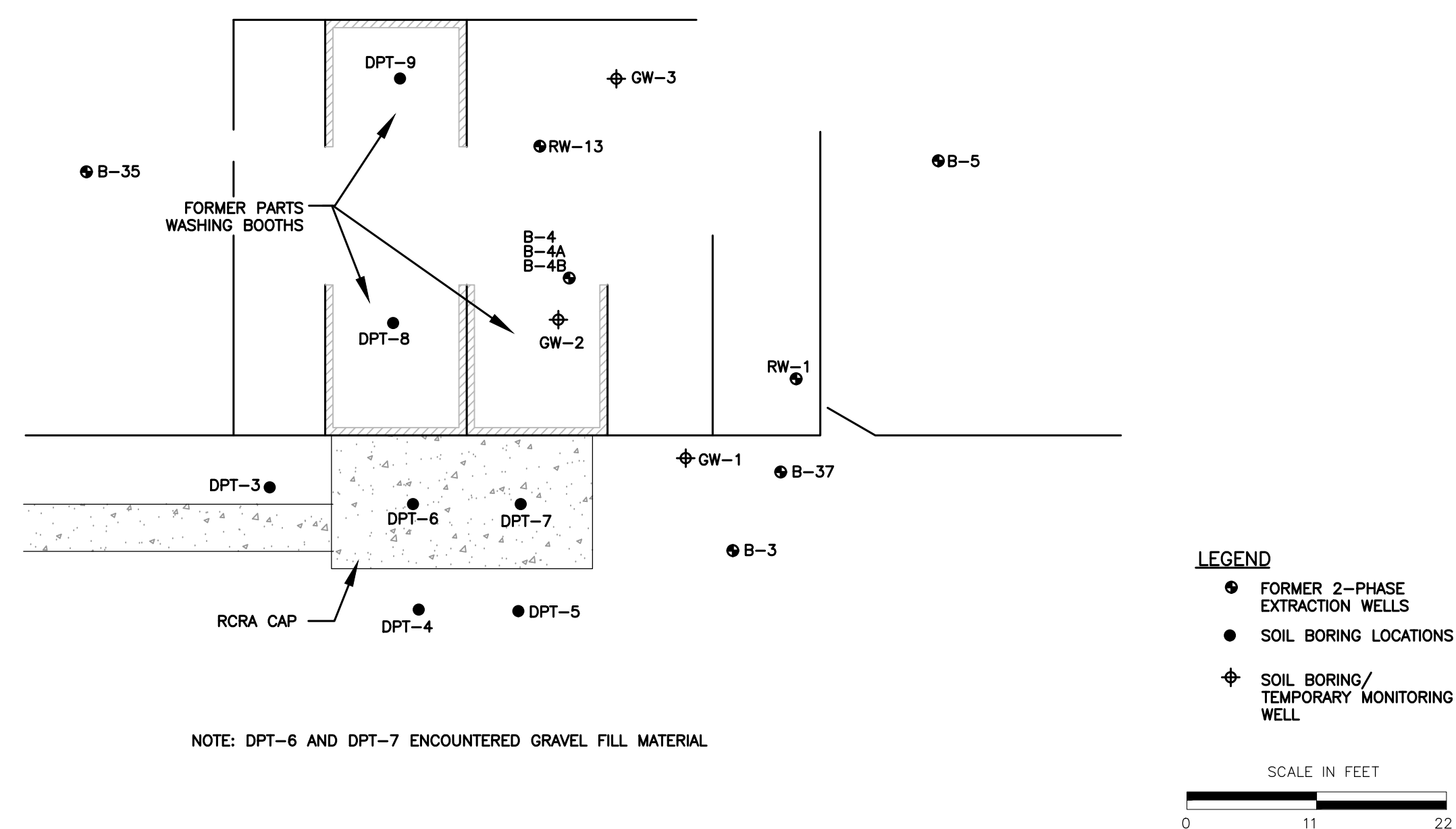
Prepared by/Date:  
 JQ 4/22/2020

Checked by/Date:  
 ADA - 4/22/2020

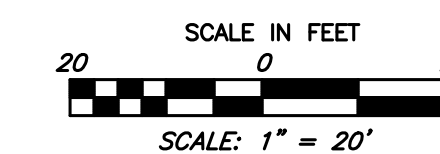
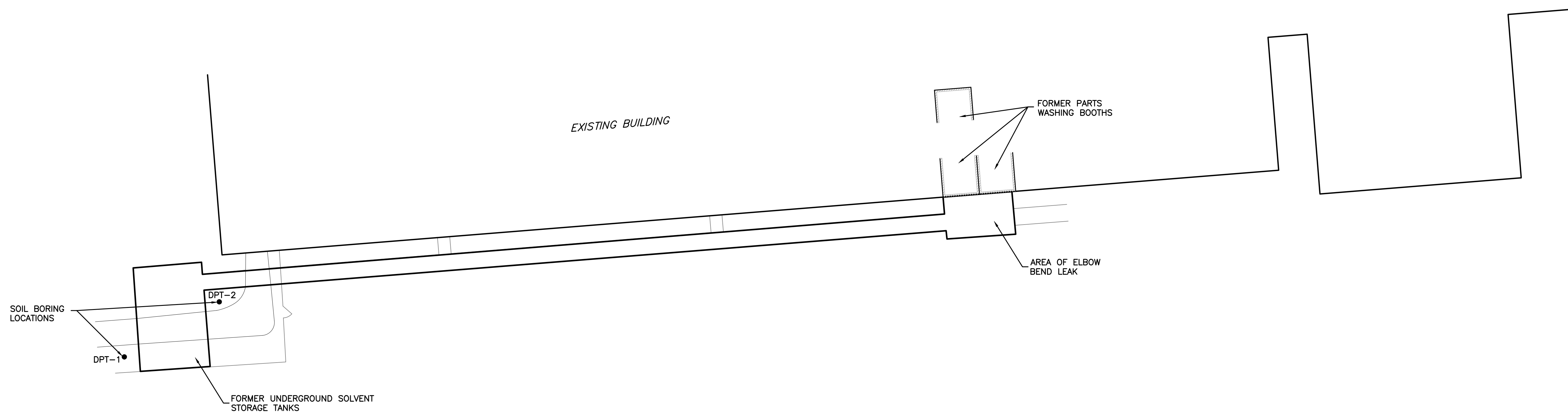
Project Number:  
 6122110362

**wood.**

Figure Number:  
 E-8



NOTE: DPT-6 AND DPT-7 ENCOUNTERED GRAVEL FILL MATERIAL



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DESIGNED T. GLADSTONE
DRAWN
CHECKED J. QUINN
IN CHARGE D. ALCOTT
DATE 4/22/2020

**XEROX CORPORATION**  
 6077 FULTON INDUSTRIAL BOULEVARD, FULTON COUNTY, GEORGIA

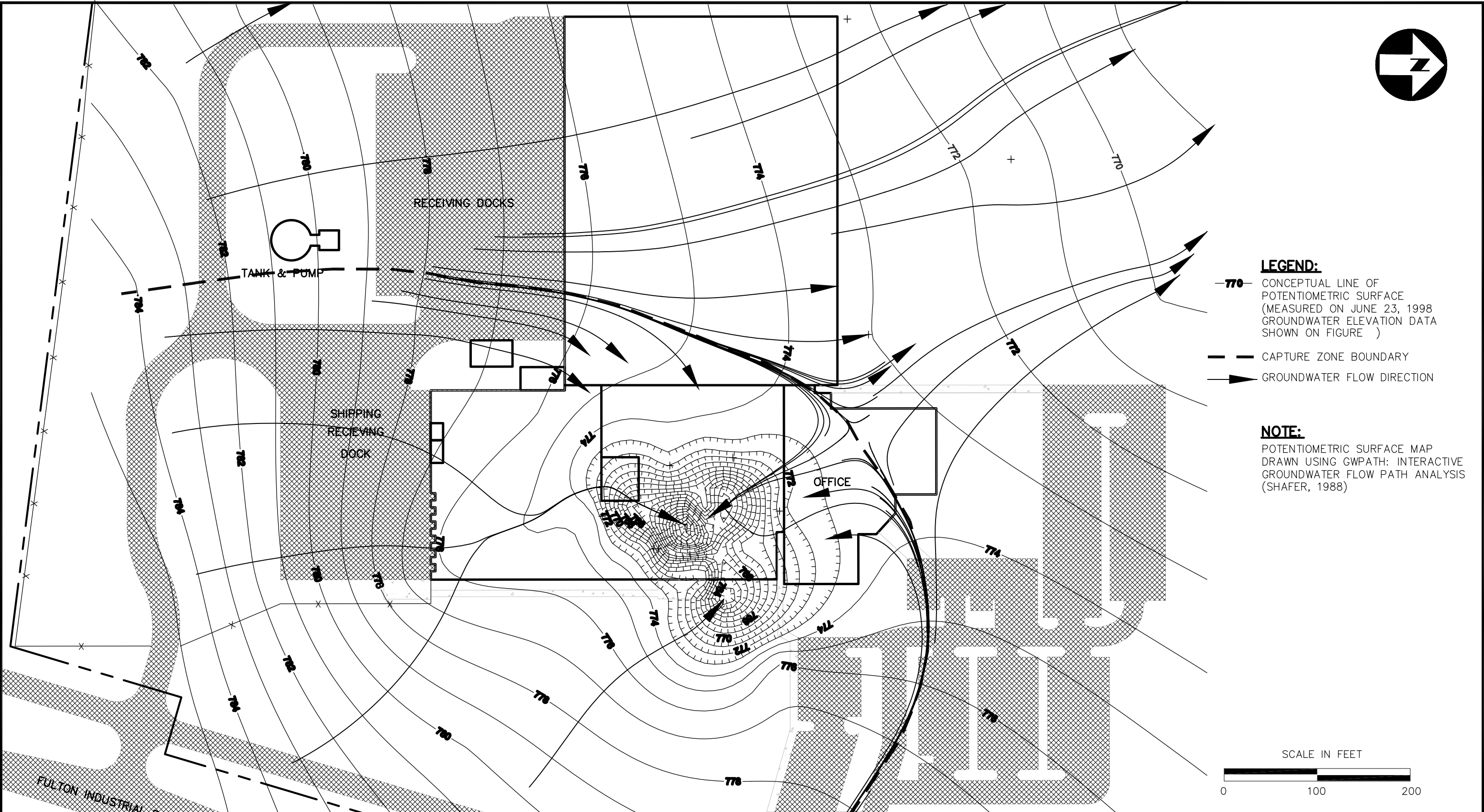
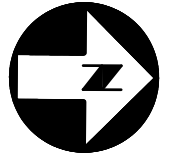


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**SUPPLEMENTAL INVESTIGATION  
 BORING/ WELL LOCATIONS**

SCALE AS SHOWN	
CONTRACT 6122-11-0362	
DWG. NO. FIG. E-9	REV PAGE NO.





**LEGEND:**  
 -770- CONCEPTUAL LINE OF POTENTIOMETRIC SURFACE (MEASURED ON JUNE 23, 1998 GROUNDWATER ELEVATION DATA SHOWN ON FIGURE )  
 - - - CAPTURE ZONE BOUNDARY  
 -> GROUNDWATER FLOW DIRECTION

**NOTE:**  
 POTENTIOMETRIC SURFACE MAP DRAWN USING GWPATH: INTERACTIVE GROUNDWATER FLOW PATH ANALYSIS (SHAFER, 1988)

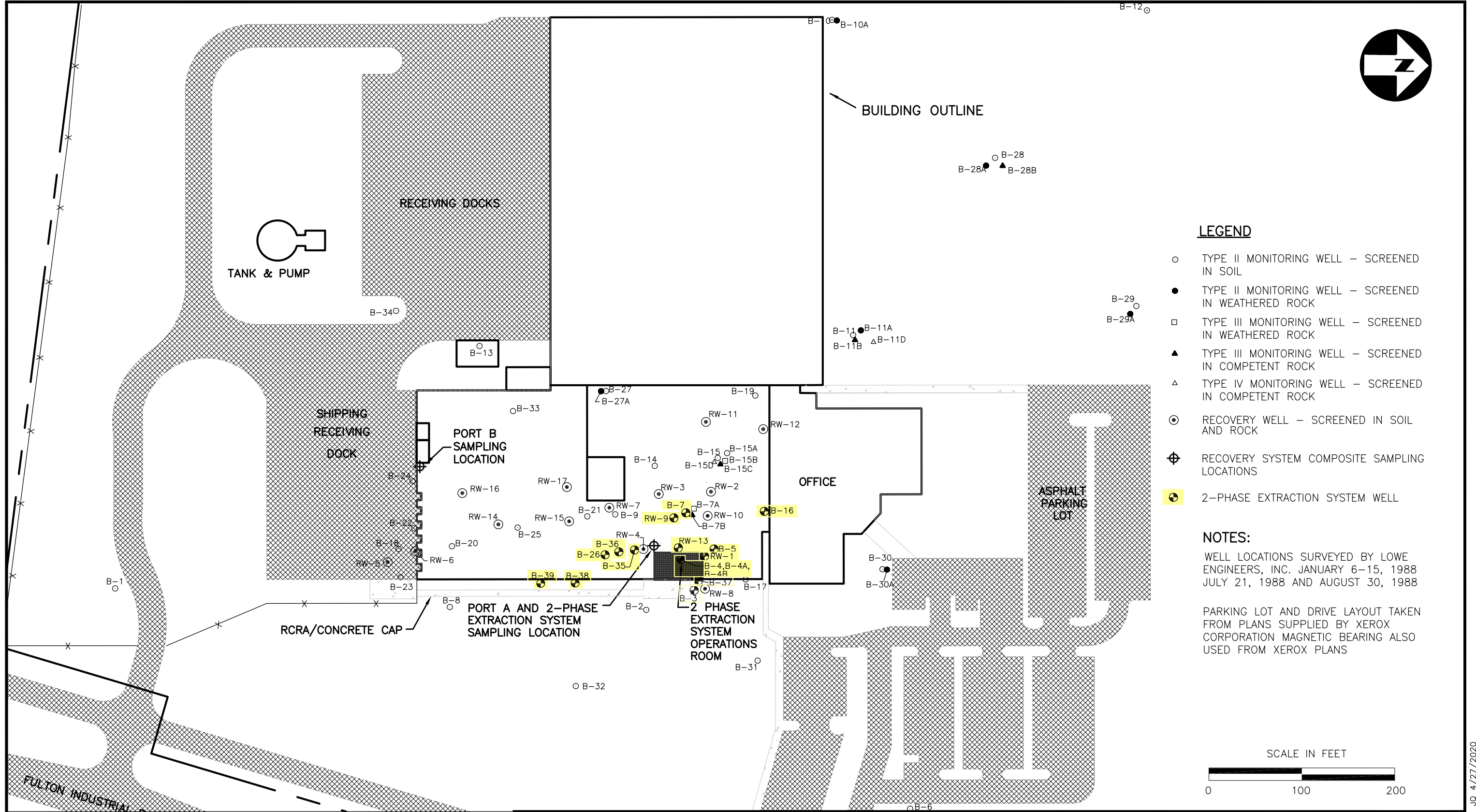
SCALE IN FEET  
 0 100 200

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ESTIMATED GROUND-WATER CAPTURE ZONES  
 JUNE 23, 1998  
 JOB NO. 6122110362  
 FIGURE E-10

PREPARED BY/DATE JG 7/3/2020  
 CHECKED BY/DATE ADA 7/3/2020



**LEGEND**

- TYPE II MONITORING WELL - SCREENED IN SOIL
- TYPE II MONITORING WELL - SCREENED IN WEATHERED ROCK
- TYPE III MONITORING WELL - SCREENED IN WEATHERED ROCK
- ▲ TYPE III MONITORING WELL - SCREENED IN COMPETENT ROCK
- △ TYPE IV MONITORING WELL - SCREENED IN COMPETENT ROCK
- ⊙ RECOVERY WELL - SCREENED IN SOIL AND ROCK
- ⊕ RECOVERY SYSTEM COMPOSITE SAMPLING LOCATIONS
- ⊙ 2-PHASE EXTRACTION SYSTEM WELL

**NOTES:**

WELL LOCATIONS SURVEYED BY LOWE ENGINEERS, INC. JANUARY 6-15, 1988  
 JULY 21, 1988 AND AUGUST 30, 1988

PARKING LOT AND DRIVE LAYOUT TAKEN FROM PLANS SUPPLIED BY XEROX CORPORATION MAGNETIC BEARING ALSO USED FROM XEROX PLANS

SCALE IN FEET



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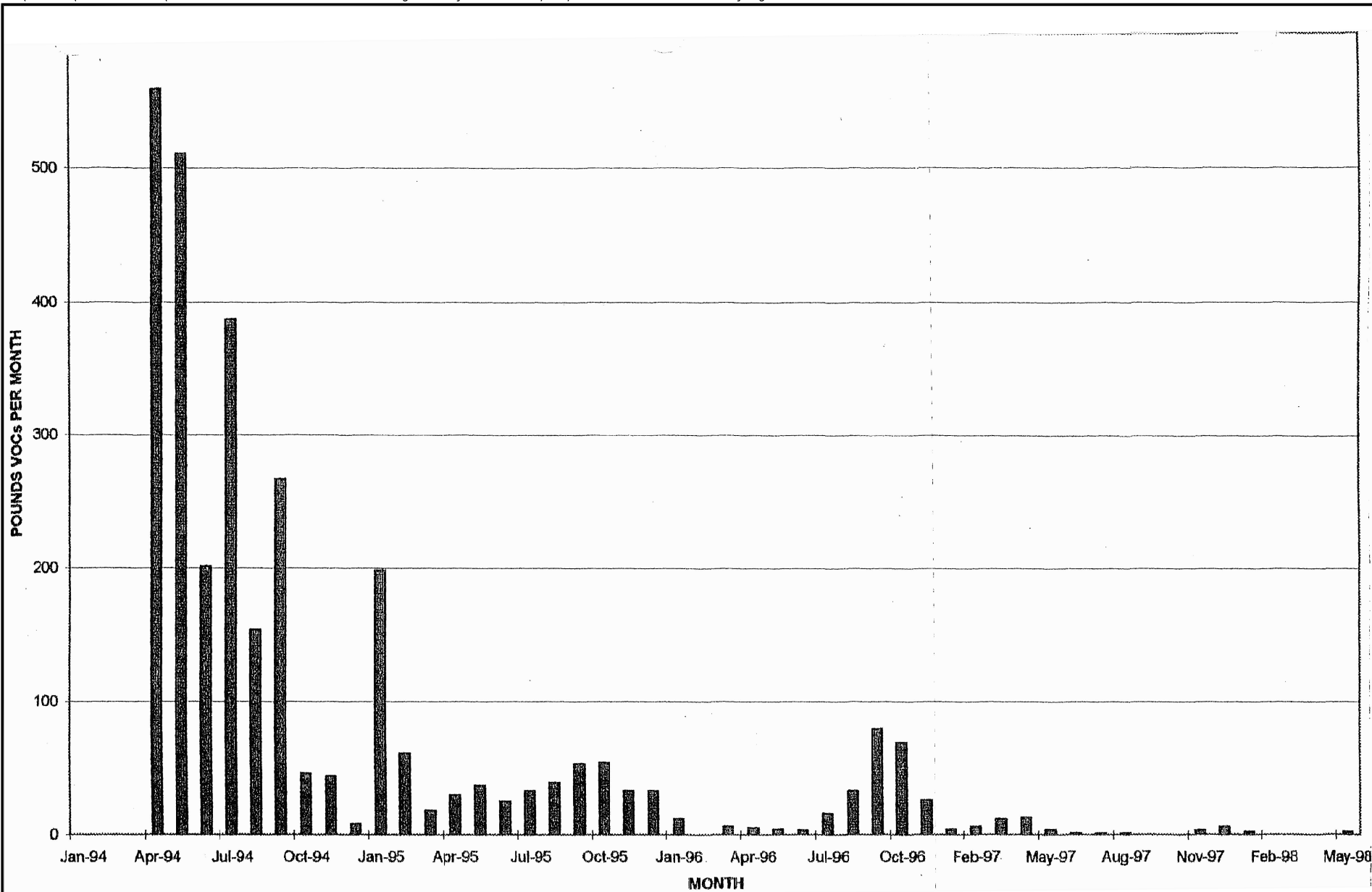
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2- PHASE EXTRACTION  
 WELL LOCATION MAP  
 1994-1998

JOB NO. 6122-11-0362

FIGURE E-11

PREPARED BY/DATE  
 CHECKED BY/DATE  
 JG 4/27/2020  
 DA 4/27/2020



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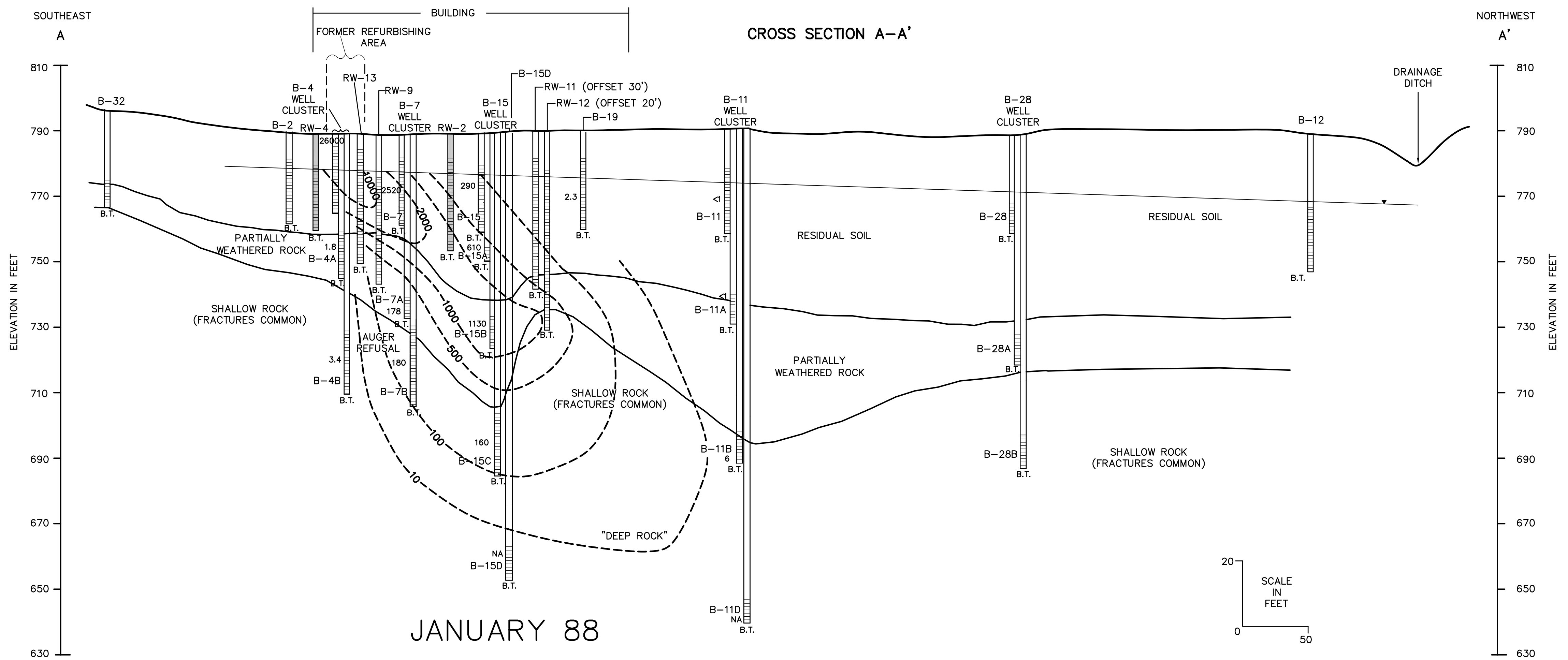
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2-PHASE  
 EXTRACTION CONTAMINANT  
 MASS RECOVERY

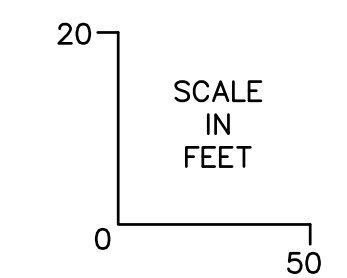
JOB NO. 6122110362

FIGURE E-12

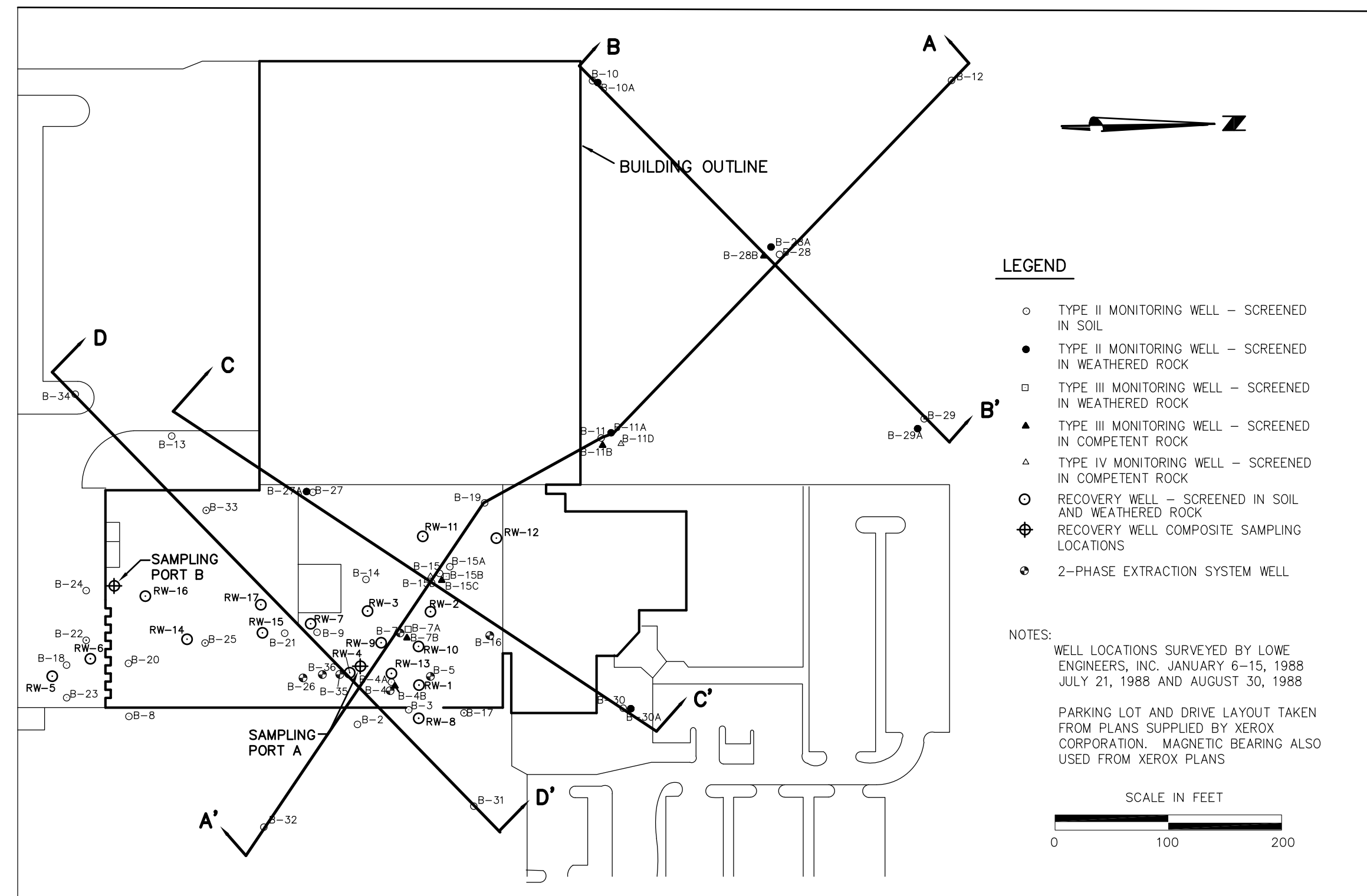
PREPARED BY/DATE JQ 4/22/2020  
 CHECKED BY/DATE DA 4/22/2020



- LEGEND**
- SCREENED INTERVAL
  - INTERPRETED GEOLOGIC CONTACT
  - B.T. BORING TERMINATED
  - MONITORING WELL IDENTIFICATION AND TETRACHLOROETHENE CONCENTRATION IN ug/L
  - OPERATING RECOVERY WELL



CROSS SECTION LOCATION MAP



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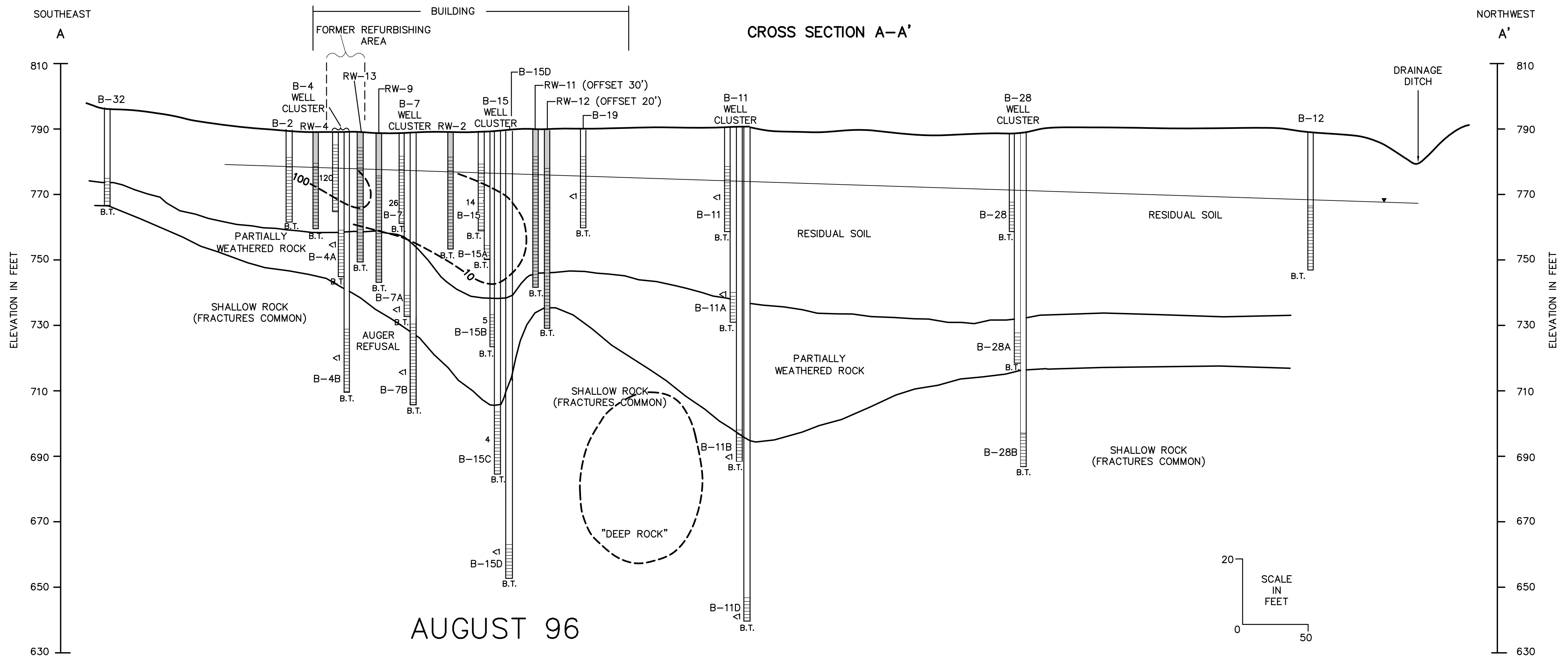
CROSS-SECTION A-A'  
WITH TETRACHLOROETHENE  
CONCENTRATIONS  
JANUARY 1988



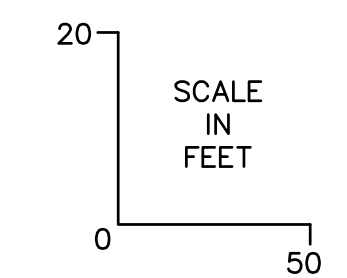




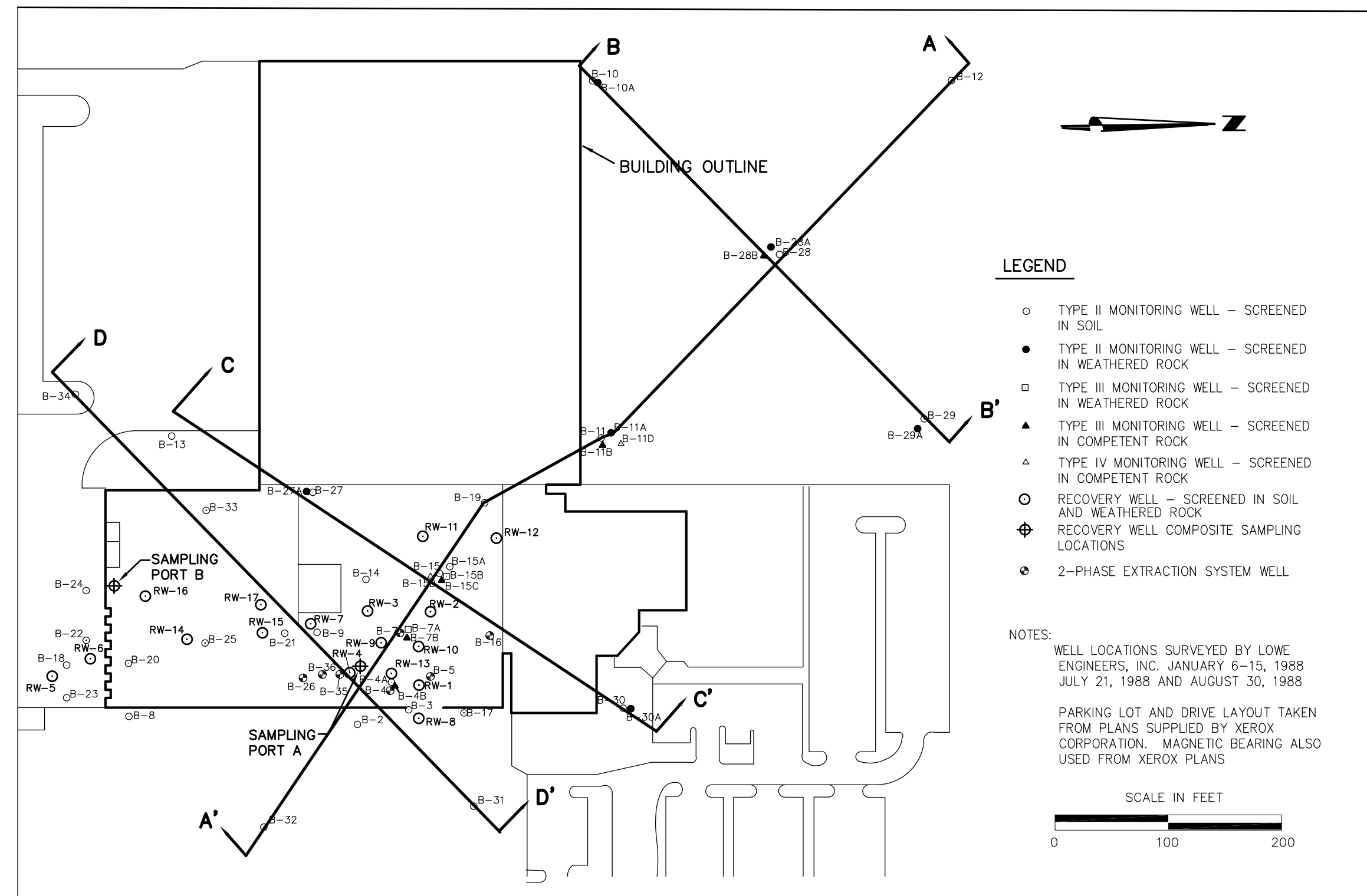




- LEGEND**
- SCREENED INTERVAL
  - INTERPRETED GEOLOGIC CONTACT
  - B.T. BORING TERMINATED
  - MONITORING WELL IDENTIFICATION AND TETRACHLOROETHENE CONCENTRATION IN ug/L
  - OPERATING RECOVERY WELL



CROSS SECTION LOCATION MAP

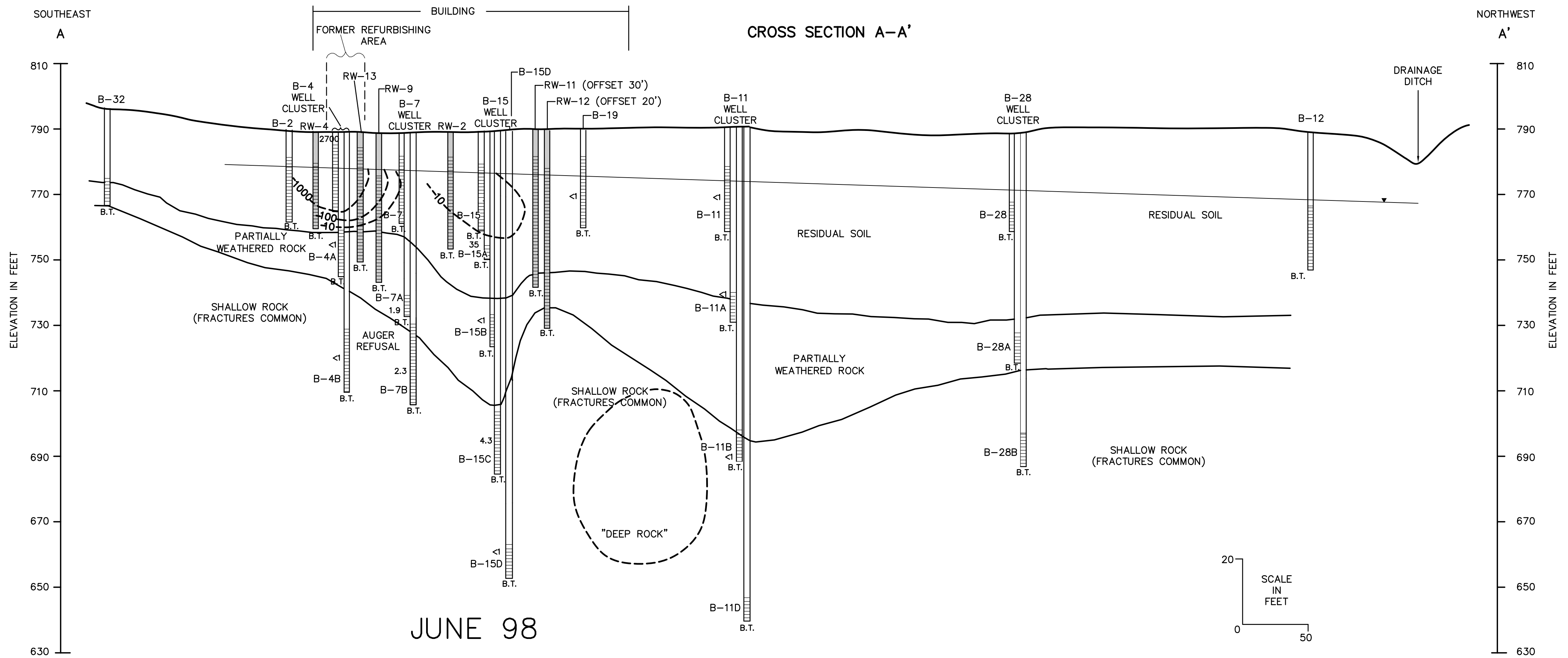


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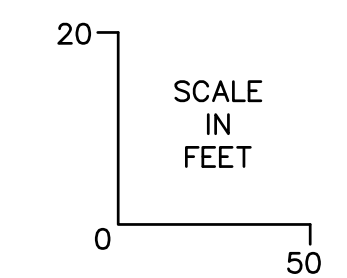
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CROSS-SECTION A-A'  
 WITH TETRACHLOROETHENE  
 CONCENTRATIONS  
 AUGUST 1996

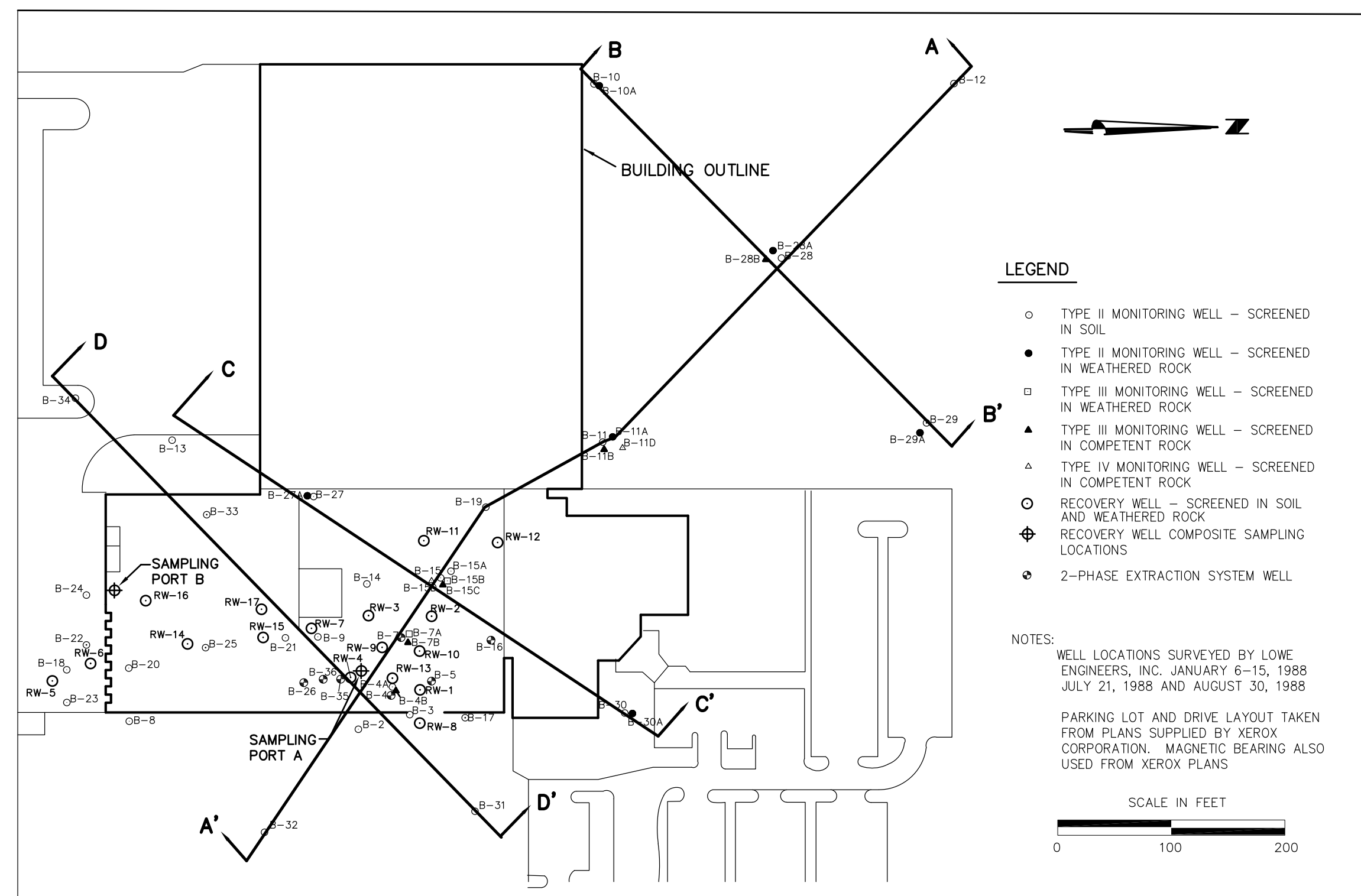




- LEGEND**
- SCREENED INTERVAL
  - INTERPRETED GEOLOGIC CONTACT
  - B.T. BORING TERMINATED
  - MONITORING WELL IDENTIFICATION AND TETRACHLOROETHENE CONCENTRATION IN ug/L
  - OPERATING RECOVERY WELL



CROSS SECTION LOCATION MAP



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CROSS-SECTION A-A'  
 WITH TETRACHLOROETHENE  
 CONCENTRATIONS  
 JUNE 1998  
 JOB NO. 6122110362 FIGURE: E-131

**APPENDIX E-1**

**CONTINGENT CORRECTIVE ACTION PLAN, NOVEMBER 17, 1998**

**CONTINGENT CORRECTIVE ACTION PLAN**  
**XEROX FACILITY**  
**ATLANTA, GEORGIA**

**NOVEMBER 1998**

## 1.0 BACKGROUND

Electrical copiers were repaired, refurbished and remanufactured at the Xerox Corporation Central Refurbishing Center (CRC) facility from 1974 to 1983. As part of this operation, a solvent blend used to clean copier parts was stored in two underground tanks. During closure of the tanks and associated piping in 1984, soil contamination was observed. After removal of the contaminated source area soils, several phases of assessment were subsequently performed to evaluate the lateral and vertical extent of ground-water contamination. Hazardous Waste Permit No. HW-070(D) (Permit) was issued to Xerox by the Georgia Environmental Protection Division (EPD) on November 8, 1988 (with amendments to the Permit effective September 29, 1989 and March 31, 1994).

Prior to September 1989, 49 ground-water monitoring wells and five recovery wells were installed and operated at the site. In accordance with the amended Permit (September 29, 1989), two deep rock monitoring wells and 12 additional recovery wells were installed. The expanded Corrective Action System consisting of 17 ground-water recovery wells became operational in March 1990.

In October 1993, a Class III Permit Modification Application was submitted to the Georgia EPD to expand the Corrective Action System to allow for the installation and operation of a 2-PHASE Extraction System. The Class III Permit Modification became effective on March 31, 1994. Since startup of the 2-PHASE Extraction System in April 1994, six pre-existing ground-water monitoring wells (B-3, B-4, B-5, B-7, B-16 and B-26), five newly installed extraction wells (B-35, B-36, B-37, B-38 and B-39) and three pre-existing recovery wells (RW-1, RW-9 and RW-13) have been modified and placed on-line with the 2-PHASE Extraction System. Less than 10 wells are used concurrently for 2-PHASE extraction. The locations of the monitoring and recovery wells and the 2-PHASE Extraction wells are shown on Figure CCAP-1.

Following evaluation of a pump cycling program conducted in 1996, a pump pulsing program was initiated in August 1997. This on-going program consists of periods where all ground-water recovery and 2-PHASE extraction operations were turned off to allow ground-water levels to rebound and ground-water quality to be assessed, alternating with periods where selected

ground-water recovery and 2-PHASE extraction wells are operated to focus contaminant removal at locations where higher constituent concentrations remain.

Since the initiation of the Corrective Action System there has been a significant reduction in the number of detected constituents and in constituent concentrations with time. Beginning in 1987, 10 of the 23 site specific constituents were detected at concentrations exceeding their respective MCLs. Tetrachloroethene (PCE) is the only constituent now detected on a regular basis in the residual ground-water plume at concentrations exceeding MCLs.

Figures CCAP-2, 3 and 4 show the distribution of total volatile organic compound concentrations (1985 and 1993) and PCE concentrations (April 1998) in ground water at the facility and illustrate the effectiveness of the remedial actions undertaken to date. Contaminants that remain are restricted to an area immediately adjacent to and beneath the eastern side of the building, in the former source area(s).

Figures CCAP-5, 6, 7, 8 and 9 demonstrate historic PCE concentrations at monitoring wells located along the axis of the plume, beginning with the area where the copier parts were cleaned with solvent blend (monitoring well cluster B-4) and extending downgradient to monitoring well B-11, located outside the northwestern side of the building. These graphs illustrate the historic vertical distribution and concentration of PCE and the effectiveness of remediation with time in all hydrogeologic zones.

For over 12 years, aggressive remediation has been performed on the residual soil, partially weathered rock, and shallow fractured rock zones beneath the facility at a cost of over 6.3 million dollars. Almost 3500 pounds of contaminants have been removed from soil and ground water since 1993 using innovative technology (Figure CCAP-10). However, despite these exhaustive conventional and innovative remedial efforts, substantive improvements in ground-water quality and in contaminant mass recovery are no longer being achieved. As a result, the relative cost of remedial efforts are increasing at near exponential rates (Figures CCAP-11 and 12).

The contaminants remaining in ground water beneath the facility pose no substantial threat to human health or to the environment. Factors considered in assessing these potential threats,

beyond the limited residual concentration and distribution of contaminants remaining in ground water beneath the building, are the following:

- The site is located in an industrial park developed in the 1960s and 1970s, in an area zoned for industrial development. No residential (or likely future residential) properties are present downgradient from the site.
- There are no known areas of soil contamination at the site.
- There is no threat to surface water features, i.e., ground water flows beneath the drainage ditch located along the western property boundary and discharges 4000 feet downgradient to the Chattahoochee River. It is unlikely that site-related constituents, if any, would adversely impact surface water quality.
- No drinking water supply wells have been identified within three miles of the site.
- A modification to the notation on the deed to the property will state that ground water beneath the property should not be used as a source of drinking water.

The Xerox facility was constructed and initially operated as a manufacturing facility. Since detection of subsurface releases during closure of the underground tank system in 1984, remediation (Corrective Action) activities have involved the installation of 51 monitoring wells, 17 ground-water recovery wells and five 2-PHASE extraction wells. The majority of these wells and their associated electrical/mechanical and control systems are located inside the building. All require access for scheduled monitoring, sampling and periodic maintenance. The presence of these systems and the associated sampling and maintenance requirements have significantly impacted the utility and perceived value of the building and surrounding property.

The residual ground-water concentrations at the facility do not pose a danger to public health or the environment. The exhaustive remediation conducted over the past 12 years has now gone beyond the practical limit for achieving any further substantive improvements in ground-water quality or contaminant mass removal. These facts, in combination with Xerox' desire to maximize the facility's beneficial use, have caused Xerox to transition to a monitoring-based program to replace the existing Corrective Actions.

This program establishes an alternate compliance point located outside and adjacent to the downgradient (west) side of the building with monitoring-based criteria for evaluating potential

contingent actions. Operations of the current remedial systems will cease; ground-water recovery and extraction wells will be properly closed; and all remediation equipment will be decommissioned and removed from the site. The ground-water monitoring wells not required for the continuing monitoring program will also be closed.

## 2.0 GROUND-WATER MONITORING PROGRAM

This plan provides for designation of a new monitoring location (compliance point) exterior of the Xerox building. The B-11 monitoring well cluster is proposed as the compliance point to monitor for the migration of residual constituents in ground water from beneath the building (Figure CCAP-13). This well cluster is ideally located just outside the northwestern side of the building and downgradient from the historic source area(s). At the same time, the cluster is located sufficiently upgradient from the property boundary (approximately 600 feet) so that there will be time to evaluate and implement, if necessary, remedial measures to prevent contaminant migration beyond the property boundary.

The B-11 well cluster has wells screened in all four hydrogeologic zones beneath the site:

- Well B-11 - Residual Soil
- Well B-11A - Partially Weathered Rock
- Well B-11B - Shallow (fractured) Rock
- Well B-11D - Deep (competent) Rock

Monitoring wells B-11, B-11A and B-11B were installed in 1987; B-11D was installed in 1990. While trichloroethene and tetrachloroethene were initially detected at single digit ug/l concentrations, they have not been detected in these wells in samplings conducted over the past five to seven years.

This proposed plan provides for monitoring and for evaluation of potential contingent actions such that ground water containing contaminants will not migrate off site. The following outlines the proposed plan:

- Following cessation of operation of the on-going corrective actions (ground-water recovery and 2-PHASE extraction), the B-11 cluster wells will be purged, sampled, and analyzed on an annual basis. The results of these analyses will be reported to EPD within 30 days of their receipt and confirmation .
- The samples will be analyzed for site-specific volatile organic compounds (VOCs) by EPA Methods 8021B or 8260B.
- This sampling schedule will be in effect until the expiration of this permit renewal or until such time that any of these VOCs are detected above their



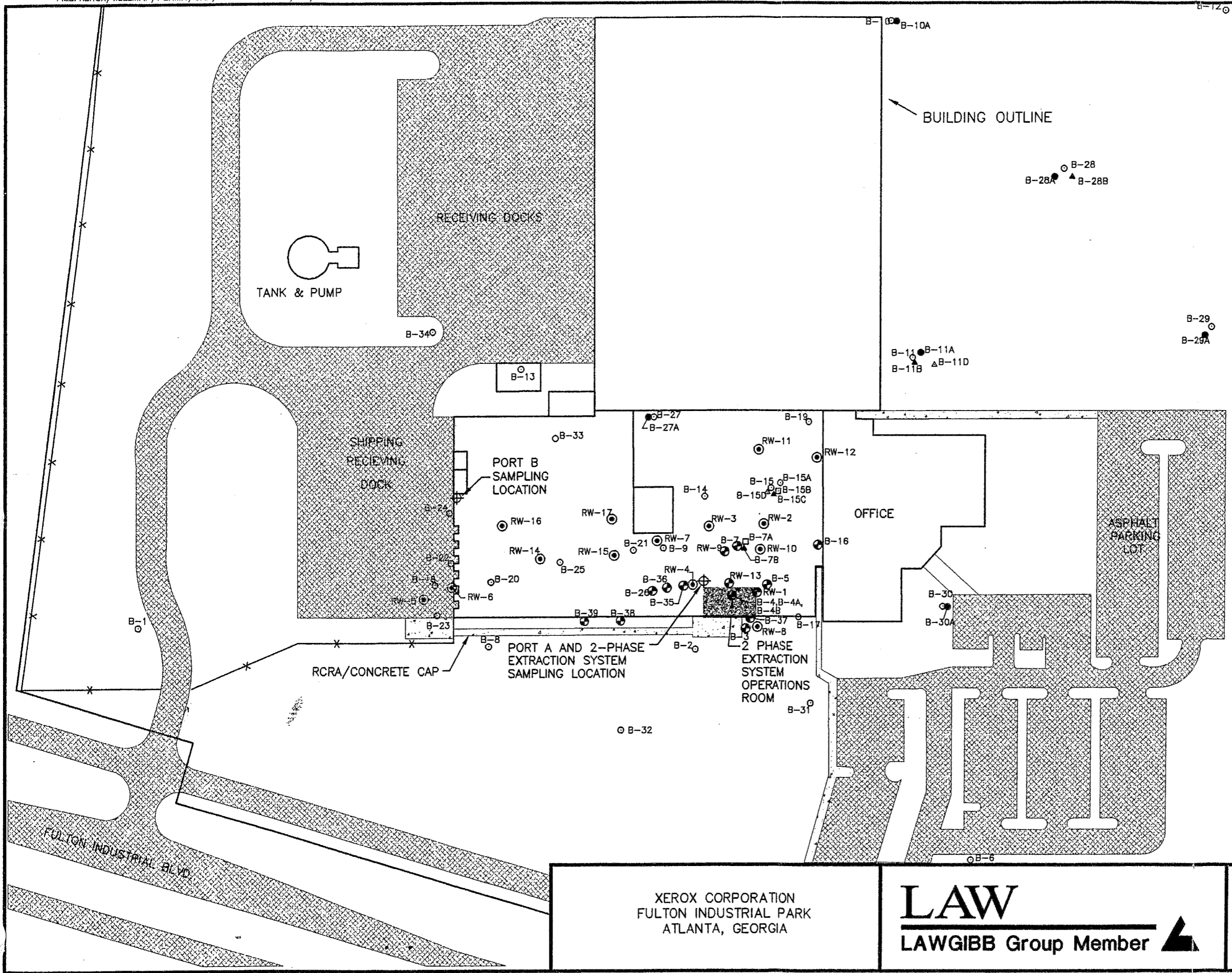
respective MCLs. If after a number of years the VOCs are not detected at the B-11 cluster, or are detected at concentrations not approaching their respective MCLs, or as may appear warranted by conditions not specified above, Xerox may submit a permit modification application to EPD requesting to discontinue monitoring.

- If any of these VOCs are detected in any of the B-11 cluster wells above their respective MCLs, all B-11 wells will be resampled within 30 days of receipt of these analytical data for confirmation.
- If any VOCs are confirmed by the resampling exceeding their respective MCLs, the frequency of sampling at the B-11 cluster will be increased to quarterly for a period of one year.
- If any VOCs continue to be detected at levels exceeding their respective MCLs, Xerox will evaluate alternative actions for assuring that ground water containing detectable constituents will not migrate off site. Actions proposed by Xerox based on this evaluation will be reported to EPD within 120 days of the fourth quarterly sampling.

Figure CCAP-14 shows the location of an easement which will be incorporated as a part of any sale of the property to provide for monitoring and, if necessary, installation of recovery wells as may be required to control constituent migration. The easement will remain in effect for the period that the permit remains in effect.



LAYER/LEVEL



**LEGEND**

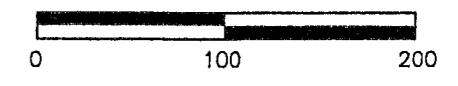
- TYPE II MONITORING WELL - SCREENED IN SOIL
- TYPE II MONITORING WELL - SCREENED IN WEATHERED ROCK
- ◻ TYPE III MONITORING WELL - SCREENED IN WEATHERED ROCK
- ▲ TYPE III MONITORING WELL - SCREENED IN COMPETENT ROCK
- △ TYPE IV MONITORING WELL - SCREENED IN COMPETENT ROCK
- ⊙ RECOVERY WELL - SCREENED IN SOIL AND ROCK
- ⊕ RECOVERY SYSTEM COMPOSITE SAMPLING LOCATIONS
- ⊗ 2-PHASE EXTRACTION SYSTEM WELL

**NOTES:**

WELL LOCATIONS SURVEYED BY LOWE ENGINEERS, INC. JANUARY 6-15, 1988  
 JULY 21, 1988 AND AUGUST 30, 1988

PARKING LOT AND DRIVE LAYOUT TAKEN FROM PLANS SUPPLIED BY XEROX CORPORATION MAGNETIC BEARING ALSO USED FROM XEROX PLANS

SCALE IN FEET



XEROX CORPORATION  
 FULTON INDUSTRIAL PARK  
 ATLANTA, GEORGIA

**LAW**  
 LAWGIBB Group Member

WELL LOCATION MAP

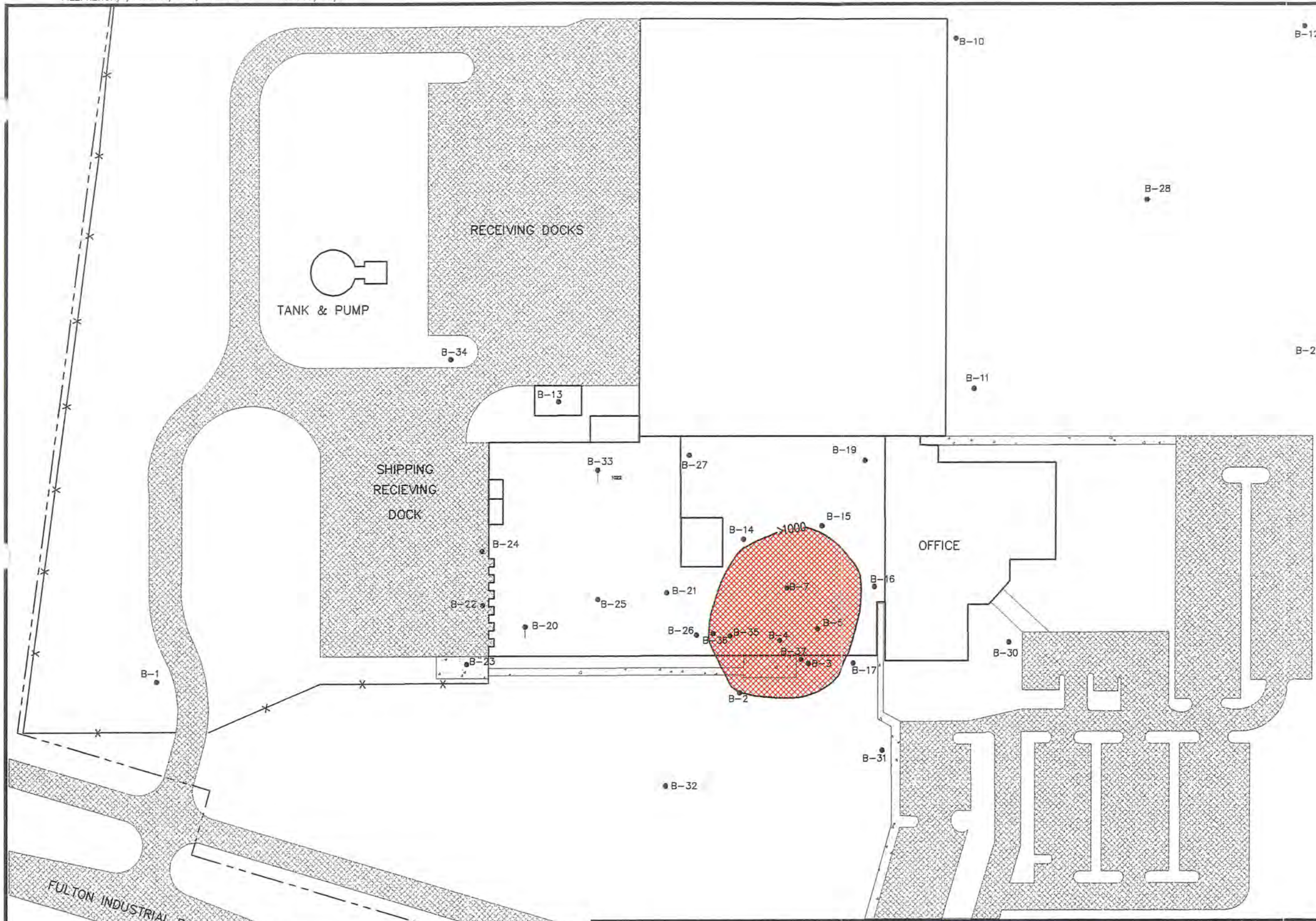
JOB NO. 12000-8-0019

FIGURE: CCAP-1

PREPARED BY/DATE J.E.B. 2-13-97  
 CHECKED BY/DATE ADA 6/30/98



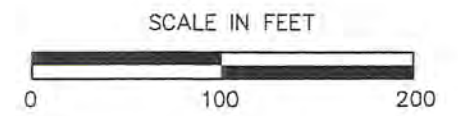
LAYER/LEVEL



**LEGEND**

- TYPE II MONITORING WELL—SCREENED IN SOIL
- 1000— CONCEPTUAL LINE OF EQUAL VOC CONCENTRATION (mg/l)

- NOTES:**
1. TOTAL PCE CONCENTRATIONS IN MICROGRAMS/LITER (ug/l)
  2. WELL LOCATIONS SURVEYED BY LOWE ENGINEERS, INC. JANUARY 6-15, 1988 JULY 21, 1988 AND AUGUST 30, 1988
  3. PARKING LOT AND DRIVE LAYOUT TAKEN FROM PLANS SUPPLIED BY XEROX CORPORATION MAGNETIC BEARING ALSO USED FROM XEROX PLANS



XEROX CORPORATION  
FULTON INDUSTRIAL PARK  
ATLANTA, GEORGIA

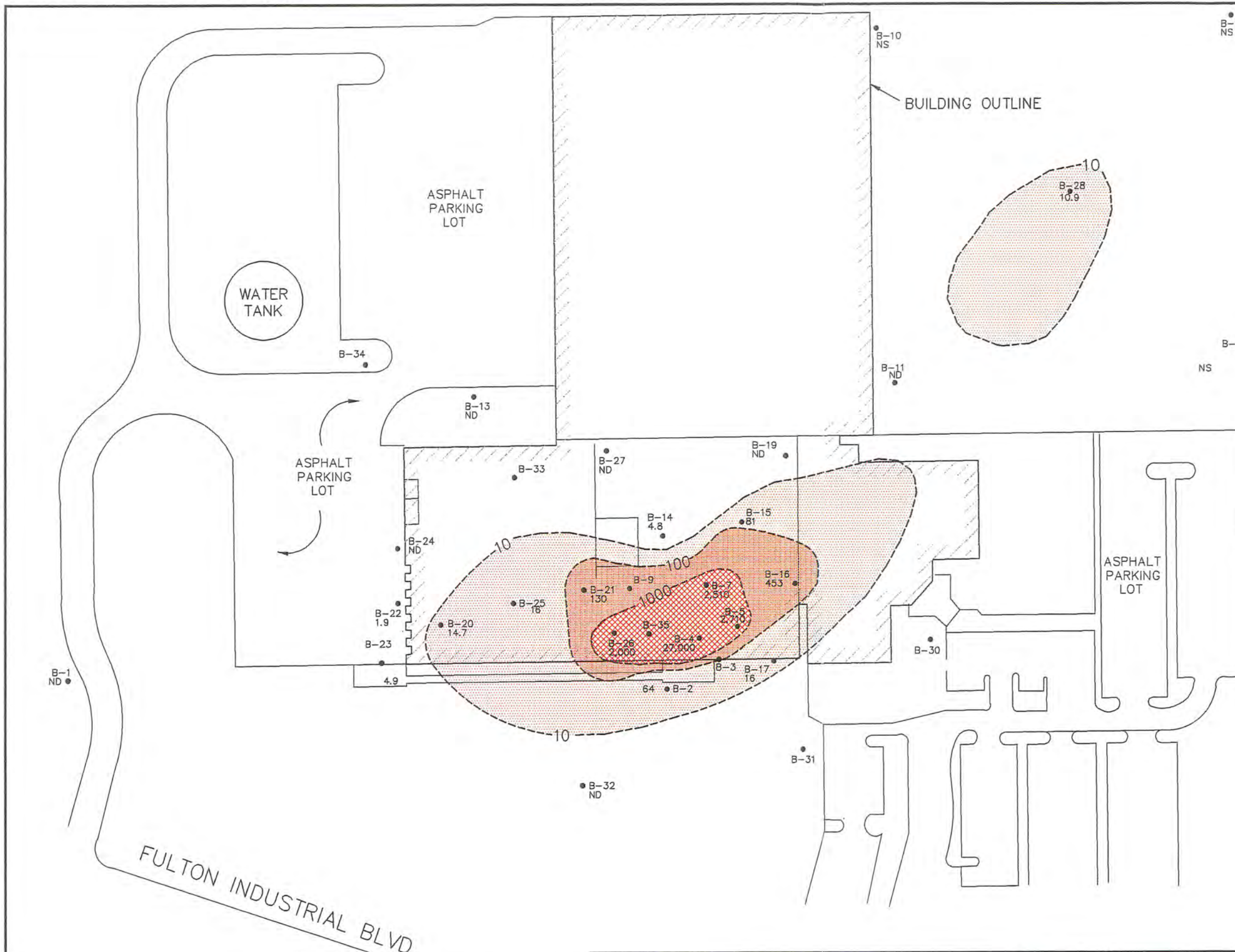


TOTAL VOC ISOCONCENTRATION MAP  
SOIL WELLS  
SEPTEMBER 6, 1985

JOB NO. 12000-8-0019 FIGURE: CCAP-2

PREPARED BY/DATE WFL 03/10/98  
CHECKED BY/DATE NAM 03/10/98



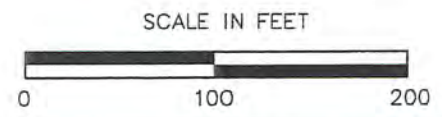


**LEGEND**

- TYPE II MONITORING WELL - SCREENED IN SOIL
- 10--- CONCEPTUAL LINE OF EQUAL VOC CONCENTRATION (ug/l)
- 4.1 TOTAL DETECTED VOC CONCENTRATION (ug/l) IN GROUND-WATER SAMPLES COLLECTED FROM MONITORING WELLS NOVEMBER 15-16, 1993

ND NOT DETECTED  
NS NOT SAMPLED

**NOTES:**  
TOTAL VOC CONCENTRATIONS IN MICROGRAMS/LITER (ug/l) PARKING LOT AND DRIVE LAYOUT TAKEN FROM PLANS SUPPLIED BY XEROX CORPORATION MAGNETIC BEARING ALSO USED FROM XEROX PLANS



FULTON INDUSTRIAL BLVD.

XEROX CORPORATION  
FULTON INDUSTRIAL PARK  
ATLANTA, GEORGIA

**LAW**  
LAWGIBB Group Member

TOTAL VOC ISOCONCENTRATIONS MAP  
SOIL WELLS  
NOVEMBER 1993  
JOB NO. 12000-8-0019 FIGURE: CCAP-3

PREPARED BY/DATE: 12/94/95  
CHECKED BY/DATE: 12/13/95





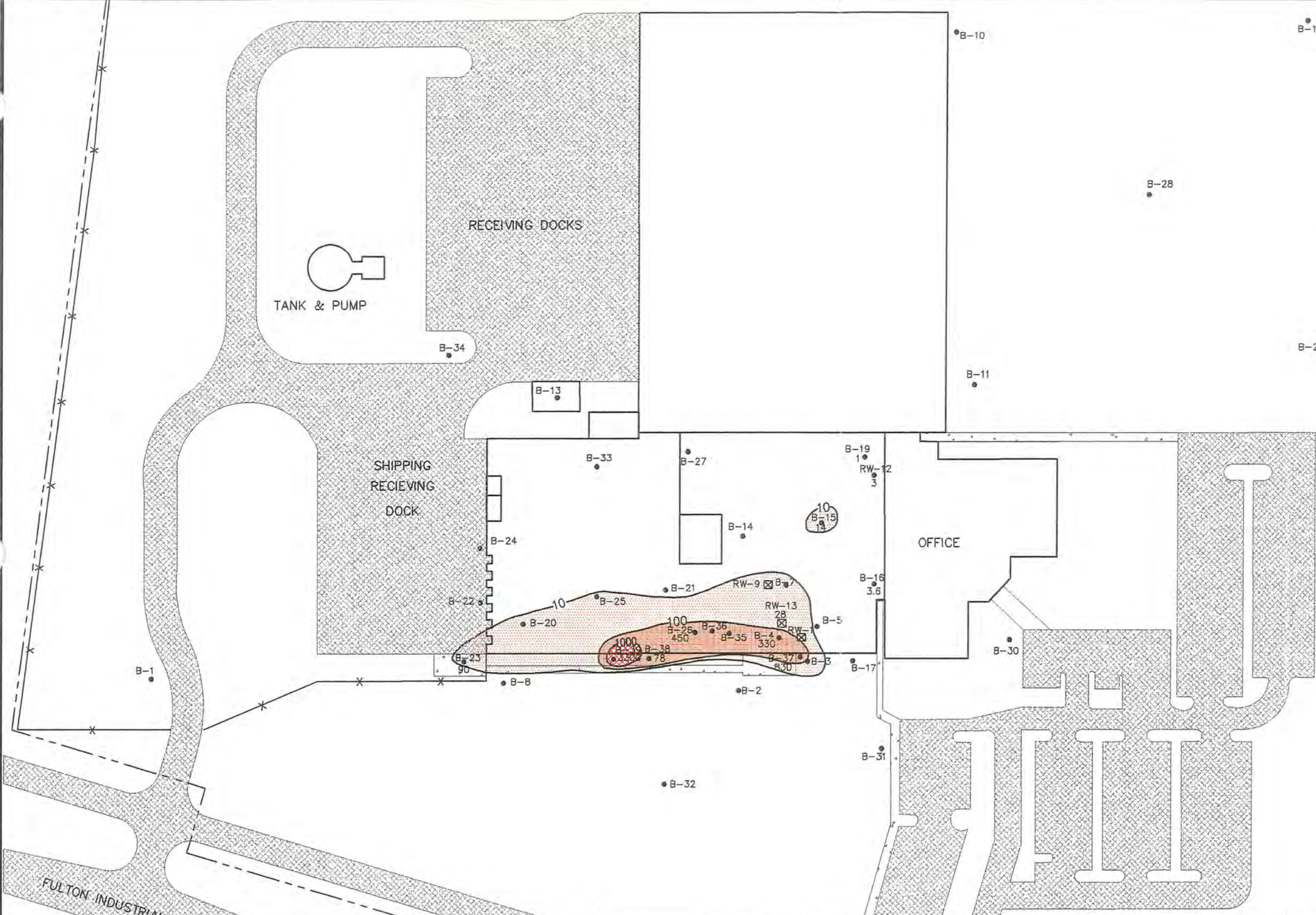
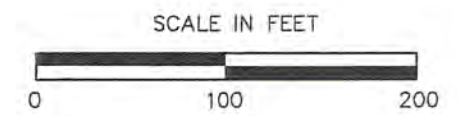
LAYER/LEVEL

**LEGEND**

- TYPE II MONITORING WELL—SCREENED IN SOIL
- ☒ RECOVERY WELL SCREEN IN SOIL
- 10— CONCEPTUAL LINE OF EQUAL PCE CONCENTRATION (ug/L)
- 3.6 PCE CONCENTRATION (ug/L) IN GROUND-WATER SAMPLES

**NOTES:**

1. TOTAL PCE CONCENTRATIONS IN MICROGRAMS/LITER (ug/L)
2. WELL LOCATIONS SURVEYED BY LOWE ENGINEERS, INC. JANUARY 6-15, 1988 JULY 21, 1988 AND AUGUST 30, 1988
3. PARKING LOT AND DRIVE LAYOUT TAKEN FROM PLANS SUPPLIED BY XEROX CORPORATION MAGNETIC BEARING ALSO USED FROM XEROX PLANS



FULTON INDUSTRIAL BLVD.

XEROX CORPORATION  
FULTON INDUSTRIAL PARK  
ATLANTA, GEORGIA

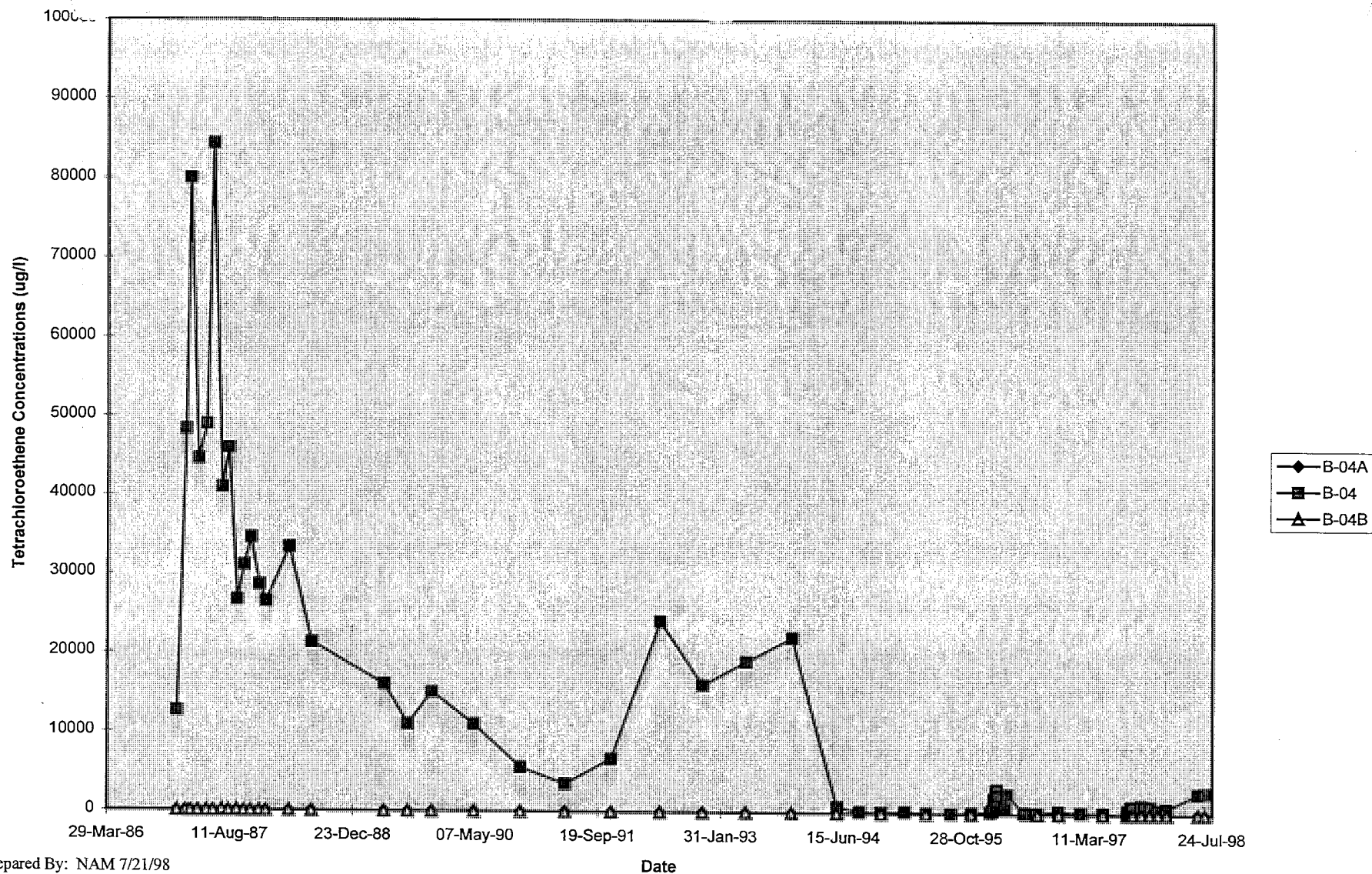
**LAW**  
LAWGIBB Group Member

TETRACHLOROETHENE ISOCONCENTRATION  
MAP  
RESIDUAL SOIL WELLS  
APRIL 14 AND 27, 1998

JOB NO. 12000-8-0019      FIGURE: CCAP-4

PREPARED BY/DATE: NAM 6/12/98  
CHECKED BY/DATE: ERS 6/15/98



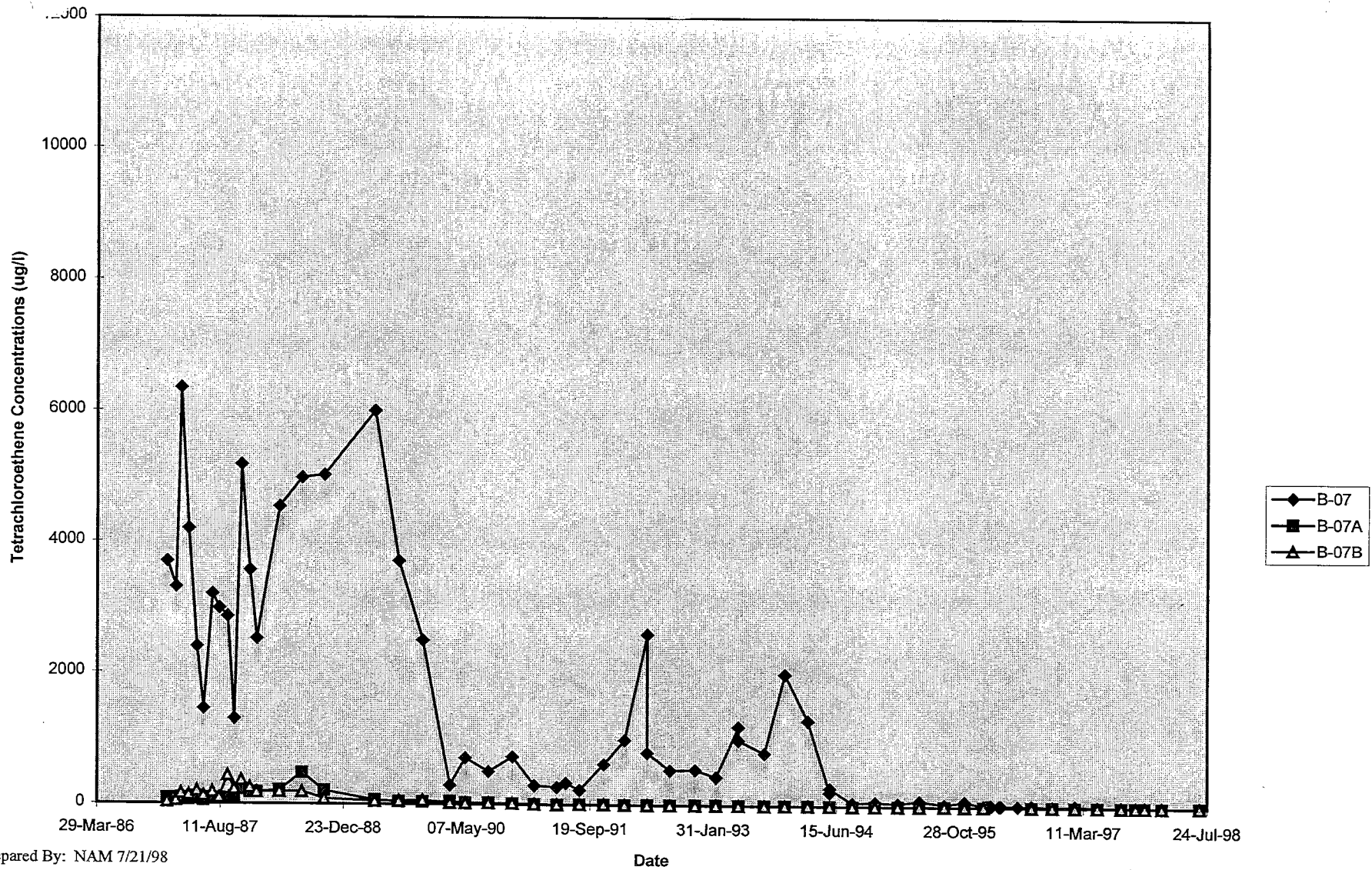


Prepared By: NAM 7/21/98  
 Checked By: ADA 7/22/98

Xerox Corporation  
 Fulton Industrial Park  
 Atlanta, Georgia

**LAW**  
 LAWGIBB Group Member

PCE Concentrations  
 B-4 Cluster

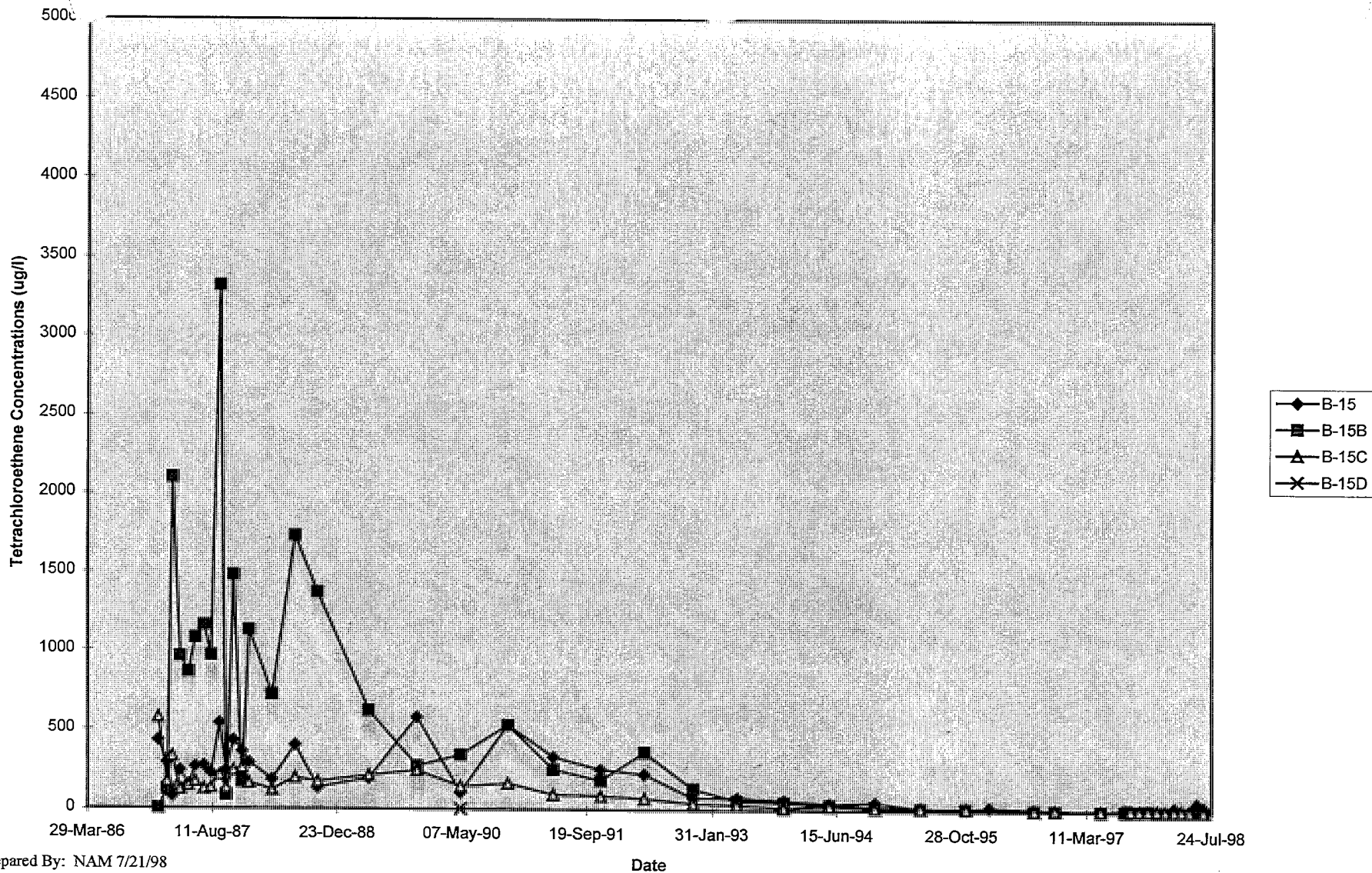


Prepared By: NAM 7/21/98  
 Checked By: ADA 7/22/98

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 Atlanta, Georgia

**LAW**  
 LAWGIBB Group Member 

PCE Concentrations  
 B-7 Cluster



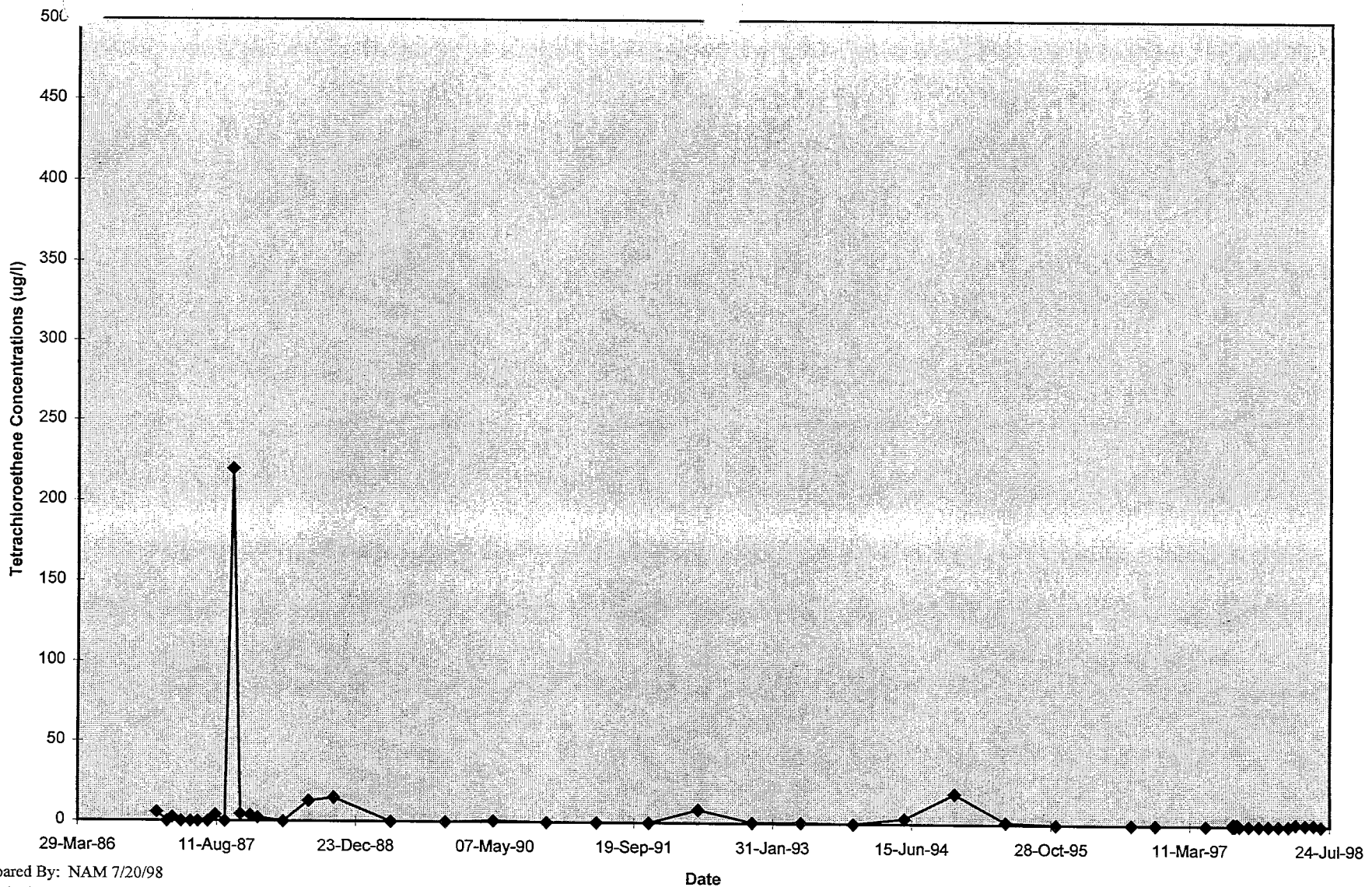
Prepared By: NAM 7/21/98  
 Checked By: ADA 7/22/98

Xerox Corporation  
 Fulton Industrial Park  
 Atlanta, Georgia

**LAW**  
 LAWGIBB Group Member 

PCE Concentrations  
 B-15 Cluster



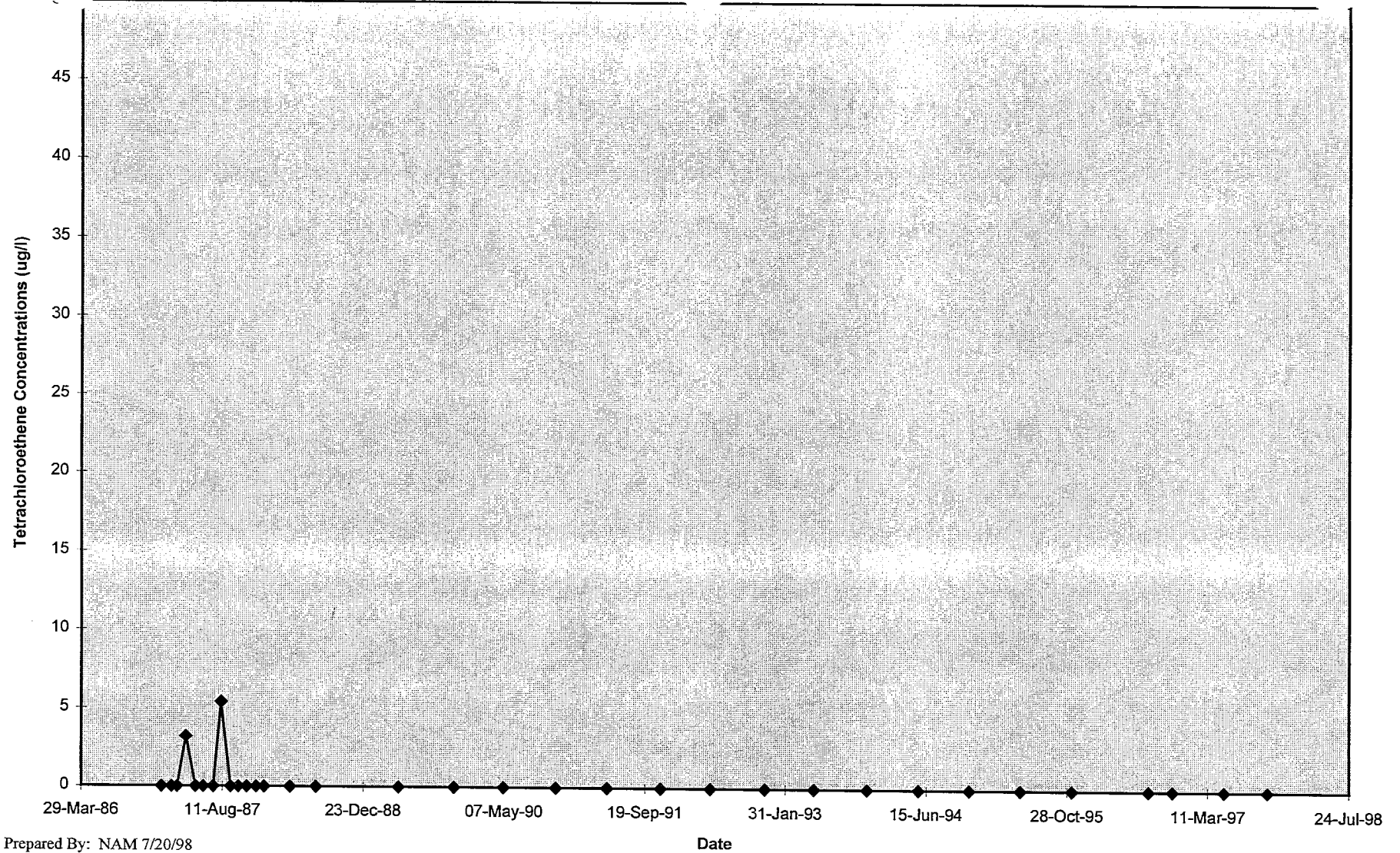


Prepared By: NAM 7/20/98  
 Checked By: ADA 7/22/98

Xerox Corporation  
 Fulton Industrial Park  
 Atlanta, Georgia

**LAW**  
 LAWGIBB Group Member

**PCE Concentrations  
 B-19**

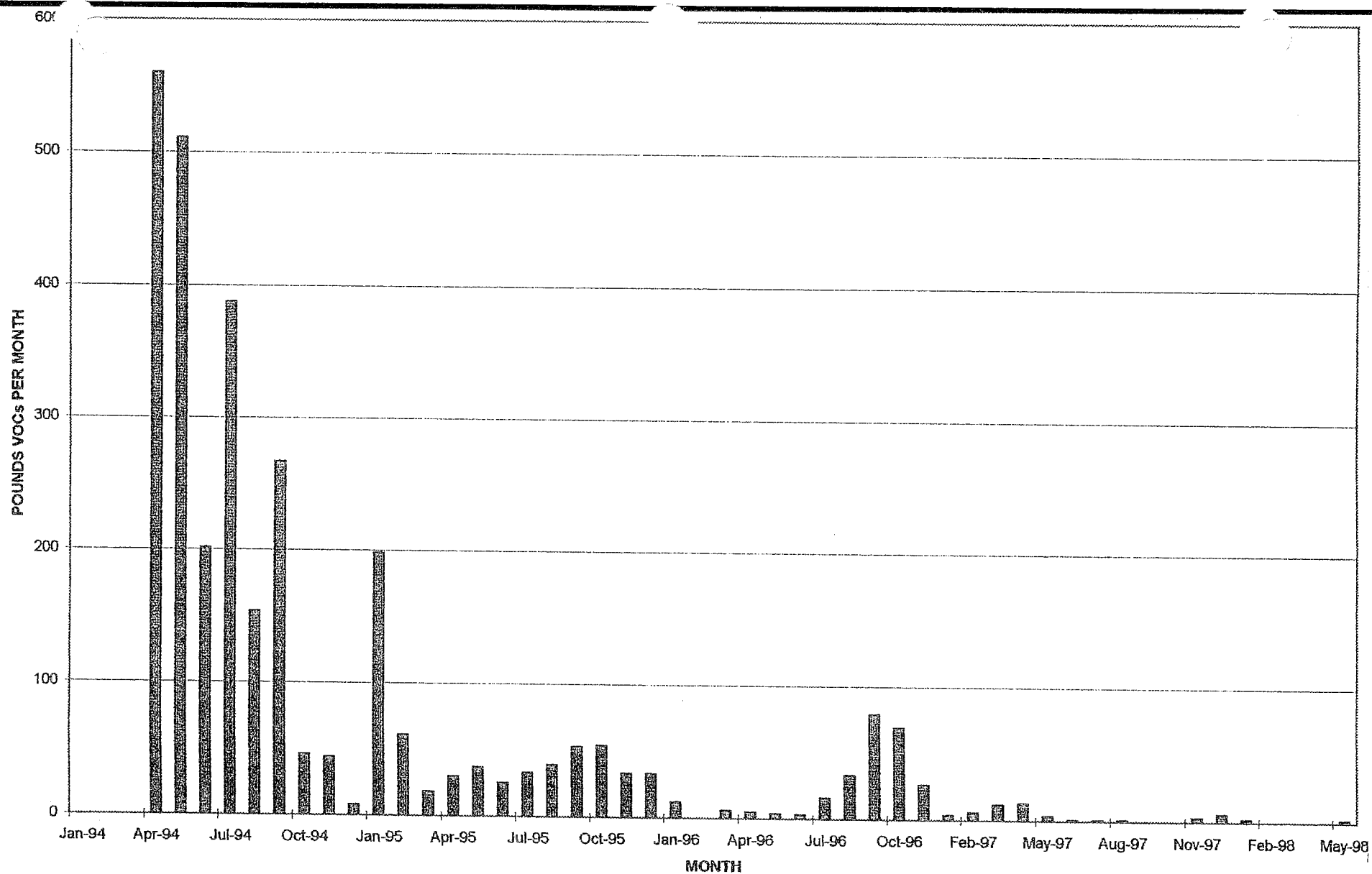


Prepared By: NAM 7/20/98  
 Checked By: ADA 7/22/98

Xerox Corporation  
 Fulton Industrial Park  
 Atlanta, Georgia

**LAW**  
 LAWGIBB Group Member

PCE Concentrations  
 B-11



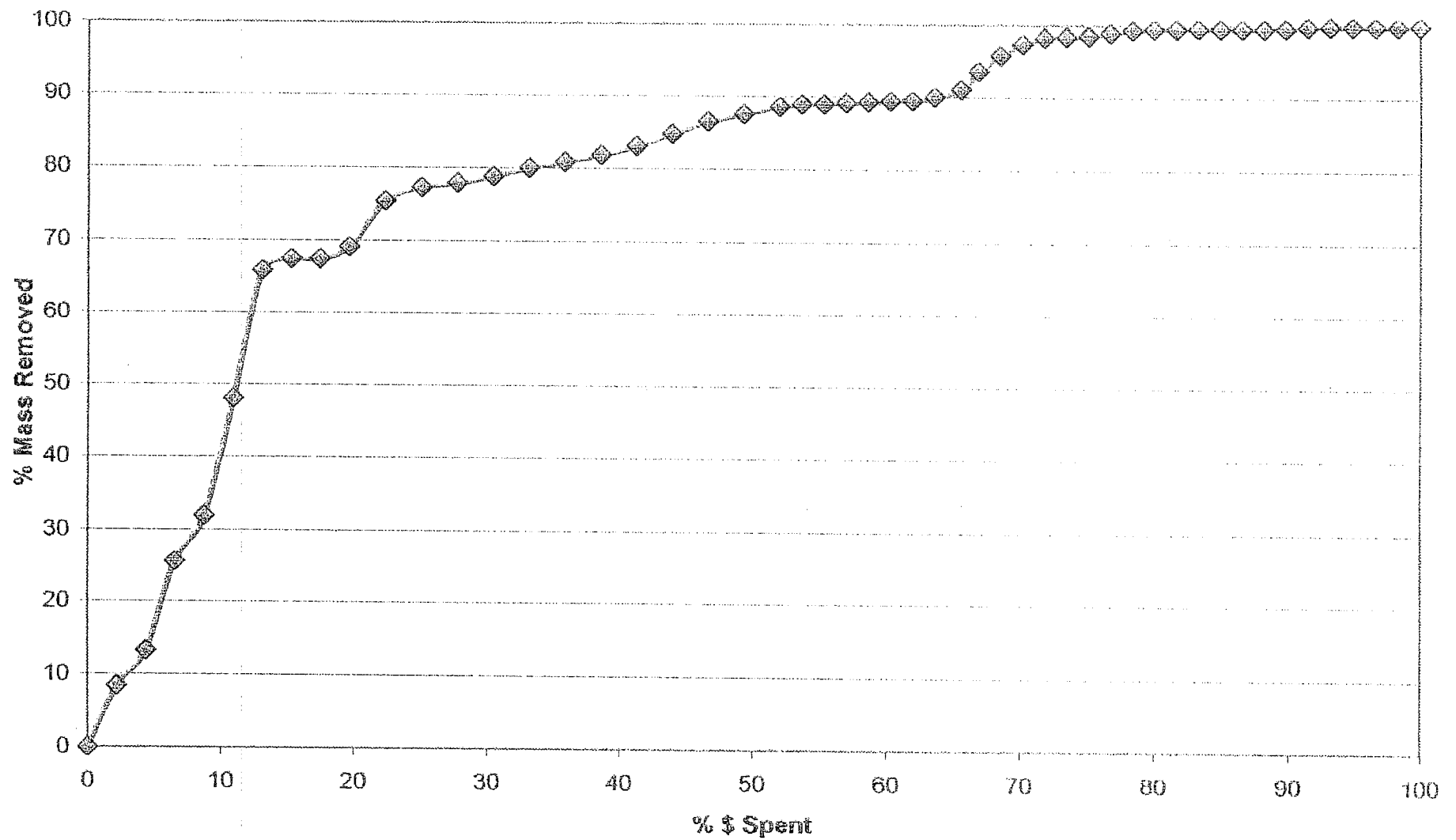
Xerox Corporation  
 Fulton Industrial Park  
 Atlanta, Georgia

**LAW**

LAWGIBB Group Member



2-PHASE Extraction  
 Contaminant Mass Recovery

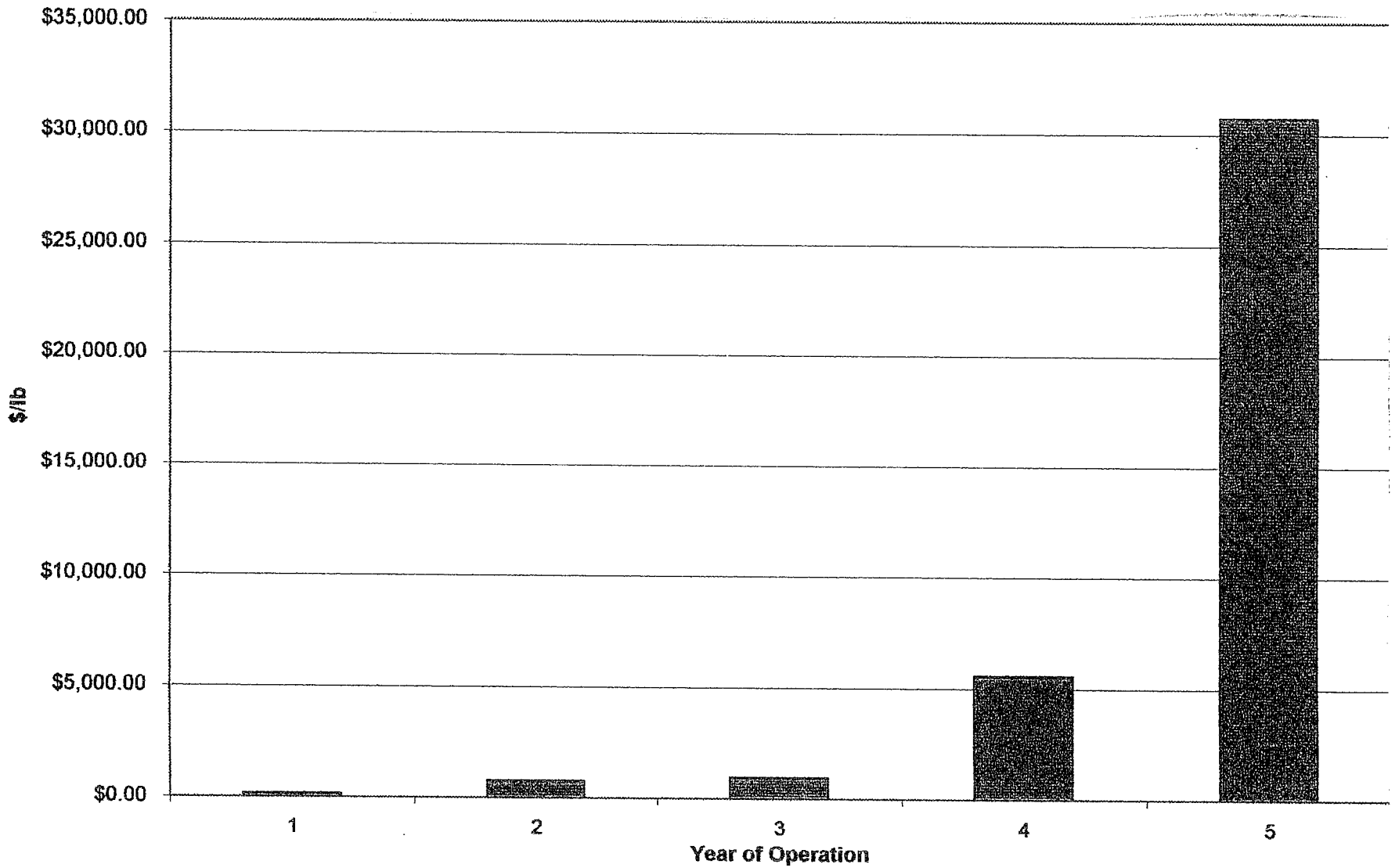


Xerox Corporation  
 Fulton Industrial Park  
 Atlanta, Georgia

**LAW**

LAWGIBB Group Member 

2-PHASE Extraction  
 % Mass Recovered  
 vs.  
 % Dollar Spent



Xerox Corporation  
 Fulton Industrial Park  
 Atlanta, Georgia

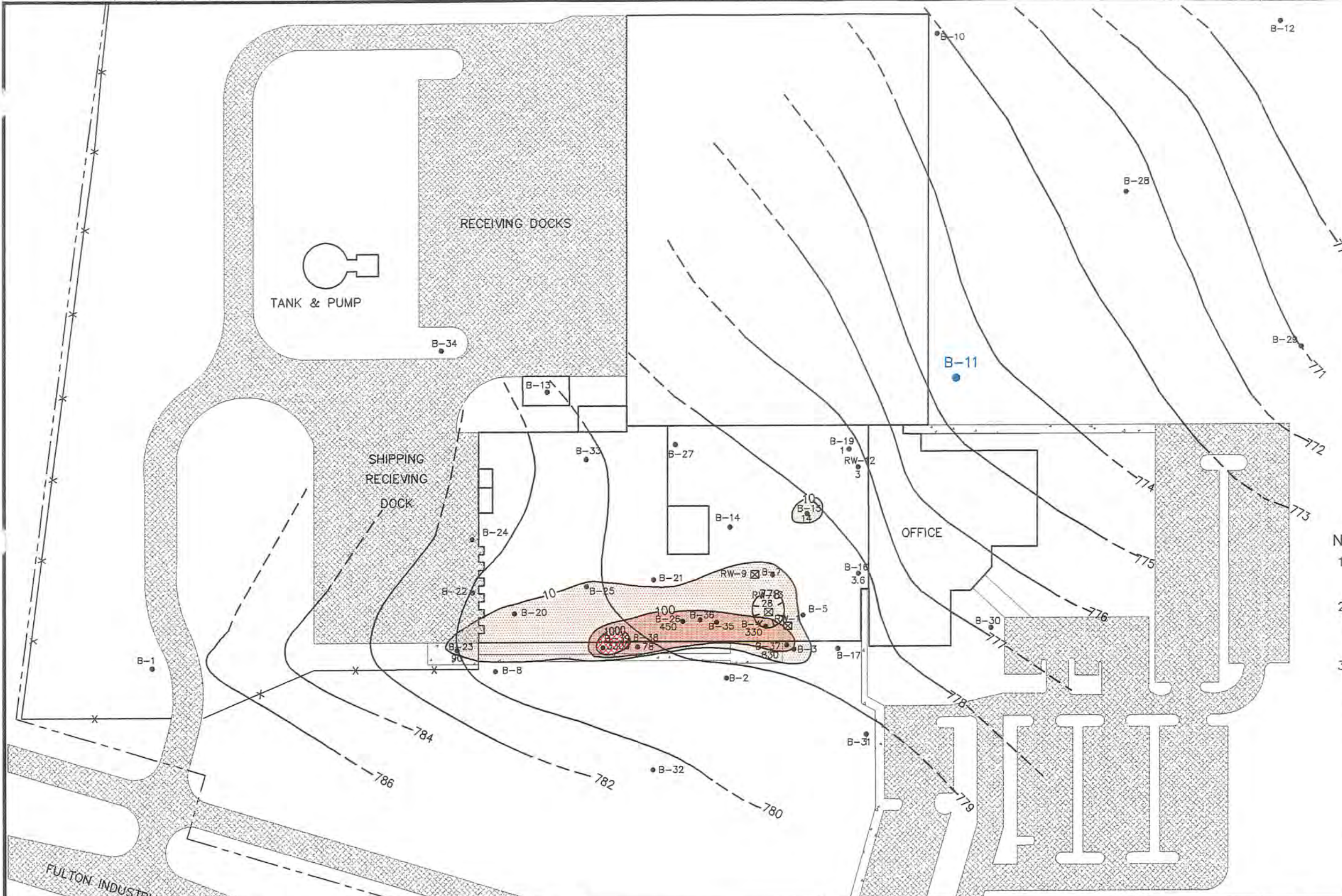
**LAW**  
 LAWGIBB Group Member 

2-PHASE Extraction  
 \$/lb Mass Recovery





LAYER/LEVEL



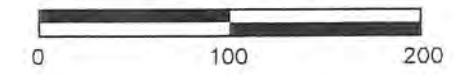
**LEGEND**

- PROPOSED COMPLIANCE POINT
- TYPE II MONITORING WELL-SCREENED IN SOIL
- ⊠ RECOVERY WELL SCREEN IN SOIL
- 10— CONCEPTUAL LINE OF EQUAL PCE CONCENTRATION (ug/L)
- 3.6 PCE CONCENTRATION (ug/L) IN GROUND-WATER SAMPLES FROM APRIL 14 AND 27, 1998
- 774— GROUND-WATER ELEVATION CONTOUR (APRIL 27, 1998)

**NOTES:**

1. TOTAL PCE CONCENTRATIONS IN MICROGRAMS/LITER (ug/L)
2. WELL LOCATIONS SURVEYED BY LOWE ENGINEERS, INC. JANUARY 6-15, 1988 JULY 21, 1988 AND AUGUST 30, 1988
3. PARKING LOT AND DRIVE LAYOUT TAKEN FROM PLANS SUPPLIED BY XEROX CORPORATION MAGNETIC BEARING ALSO USED FROM XEROX PLANS

SCALE IN FEET



FULTON INDUSTRIAL BLVD.

XEROX CORPORATION  
FULTON INDUSTRIAL PARK  
ATLANTA, GEORGIA

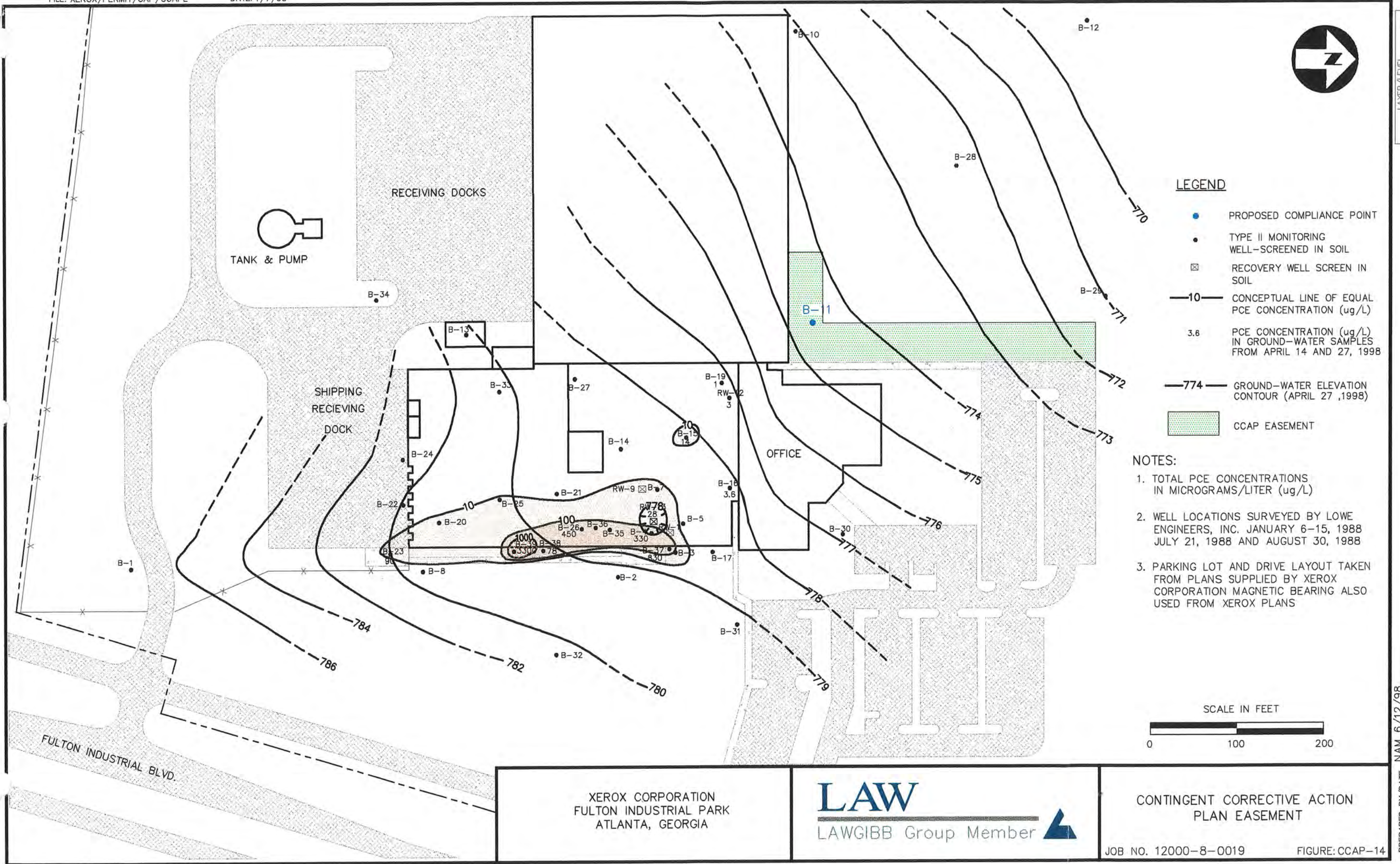
**LAW**  
LAWGIBB Group Member

PROPOSED COMPLIANCE POINT  
B-11 WELL CLUSTER

JOB NO. 12000-8-0019      FIGURE: CCAP-13

PREPARED BY/DATE: NAM 6/12/98  
CHECKED BY/DATE: ERS 6/15/98



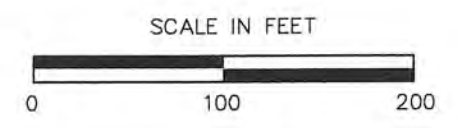


LEGEND

- PROPOSED COMPLIANCE POINT
- TYPE II MONITORING WELL-SCREENED IN SOIL
- ☒ RECOVERY WELL SCREEN IN SOIL
- 10— CONCEPTUAL LINE OF EQUAL PCE CONCENTRATION (ug/L)
- 3.6 PCE CONCENTRATION (ug/L) IN GROUND-WATER SAMPLES FROM APRIL 14 AND 27, 1998
- 774— GROUND-WATER ELEVATION CONTOUR (APRIL 27, 1998)
- ▨ CCAP EASEMENT

NOTES:

1. TOTAL PCE CONCENTRATIONS IN MICROGRAMS/LITER (ug/L)
2. WELL LOCATIONS SURVEYED BY LOWE ENGINEERS, INC. JANUARY 6-15, 1988  
JULY 21, 1988 AND AUGUST 30, 1988
3. PARKING LOT AND DRIVE LAYOUT TAKEN FROM PLANS SUPPLIED BY XEROX CORPORATION MAGNETIC BEARING ALSO USED FROM XEROX PLANS



XEROX CORPORATION  
FULTON INDUSTRIAL PARK  
ATLANTA, GEORGIA

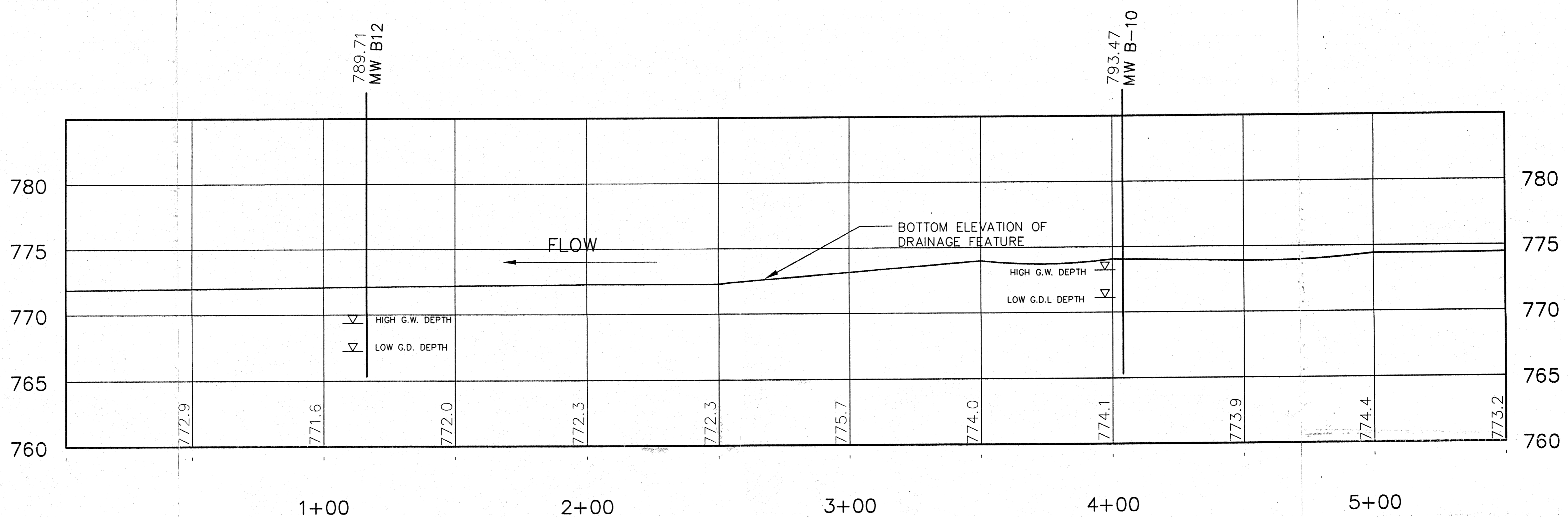
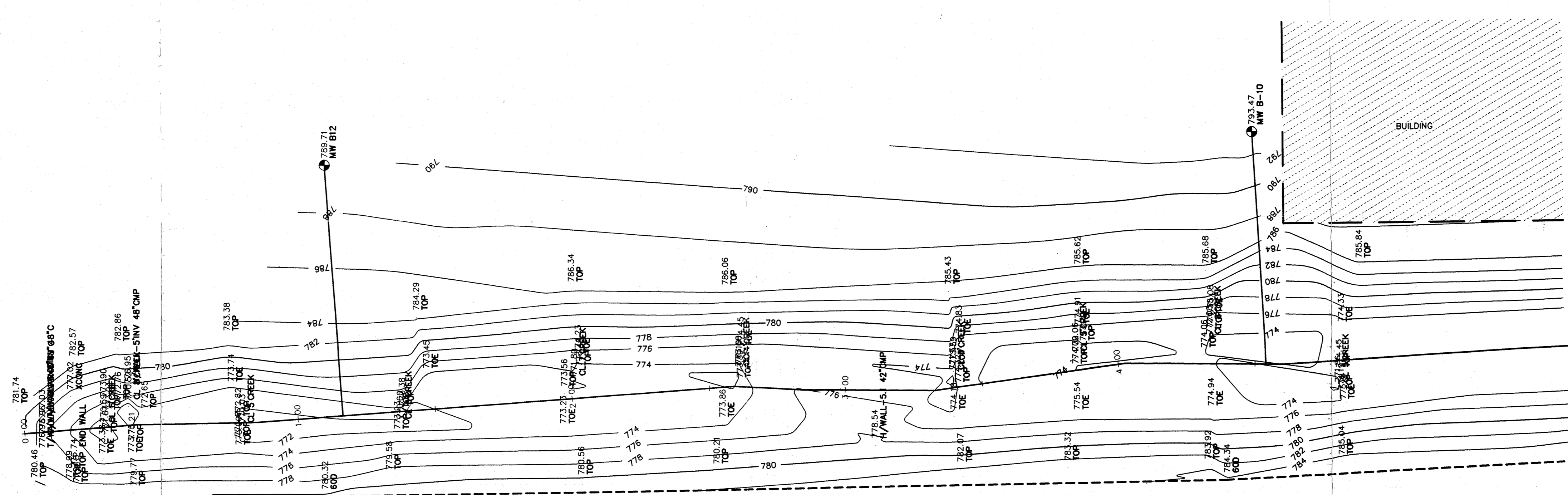


CONTINGENT CORRECTIVE ACTION  
PLAN EASEMENT



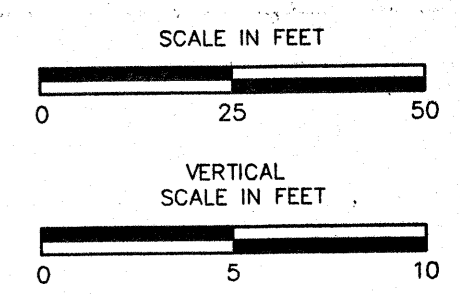
N

S



SOURCE: SURVEY PERFORMED BY W.L. JORDEN & CO., INC.  
ATLANTA, GA. DATED 2/16/98

BASED ON GROUND WATER DATA COLLECTED  
FROM APRIL 1989 THROUGH JANUARY 1998



© COPYRIGHT LAW ENGINEERING & ENVIRONMENTAL SERVICES, INC.

XREF: CADD FILE: XEROX/CRKPLPRF.DWG  
PLOT DATE: 4/30/98

REV	DATE	BY	SUBAPP	DESCRIPTION	REV	DATE	BY	SUBAPP	DESCRIPTION	DATE

**XEROX**

DESIGNED	
DRAWN	
CHECKED	
IN CHARGE	
DATE	
SUBMITTED	
APPROVED	

**DRAINAGE DITCH SURVEY**

SCALE	
CONTRACT	
<b>12000-8-0019</b>	
DWG. NO.	REV. PAGE NO.
CCAP-15	0

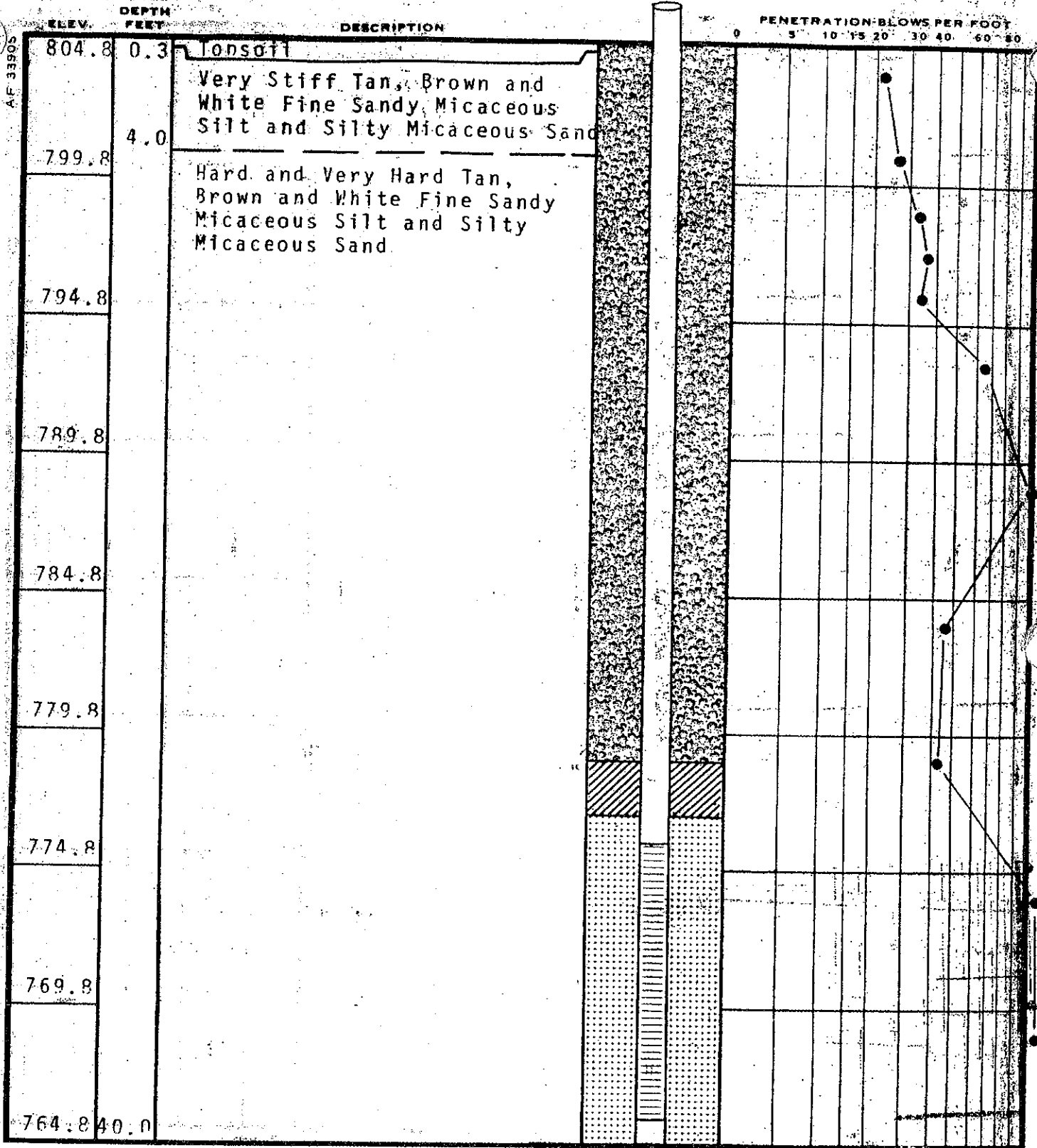


**APPENDIX E-2**

**TEST BORING AND WELL COMPLETION RECORDS**

TEST BORING RECORD

Riser Stickup is 1.90 Feet



REMARKS:

DRILLED BY W.M.  
 LOGGED BY W.M.  
 CHECKED BY K.S.

BORING NUMBER B-1  
 DATE STARTED 10-18-50  
 DATE COMPLETED 10-18-50  
 JOB NUMBER MA-4333

# TEST BORING RECORD

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT																	
			0	5	10	15	20	30	40	50	60	80	100							
764.8	41.0	* Boring Terminated																		
759.8																				
		* Hard and Very Hard Tan Brown and White Fine Sandy Micaceous Silt and Silty Micaceous Sand																		

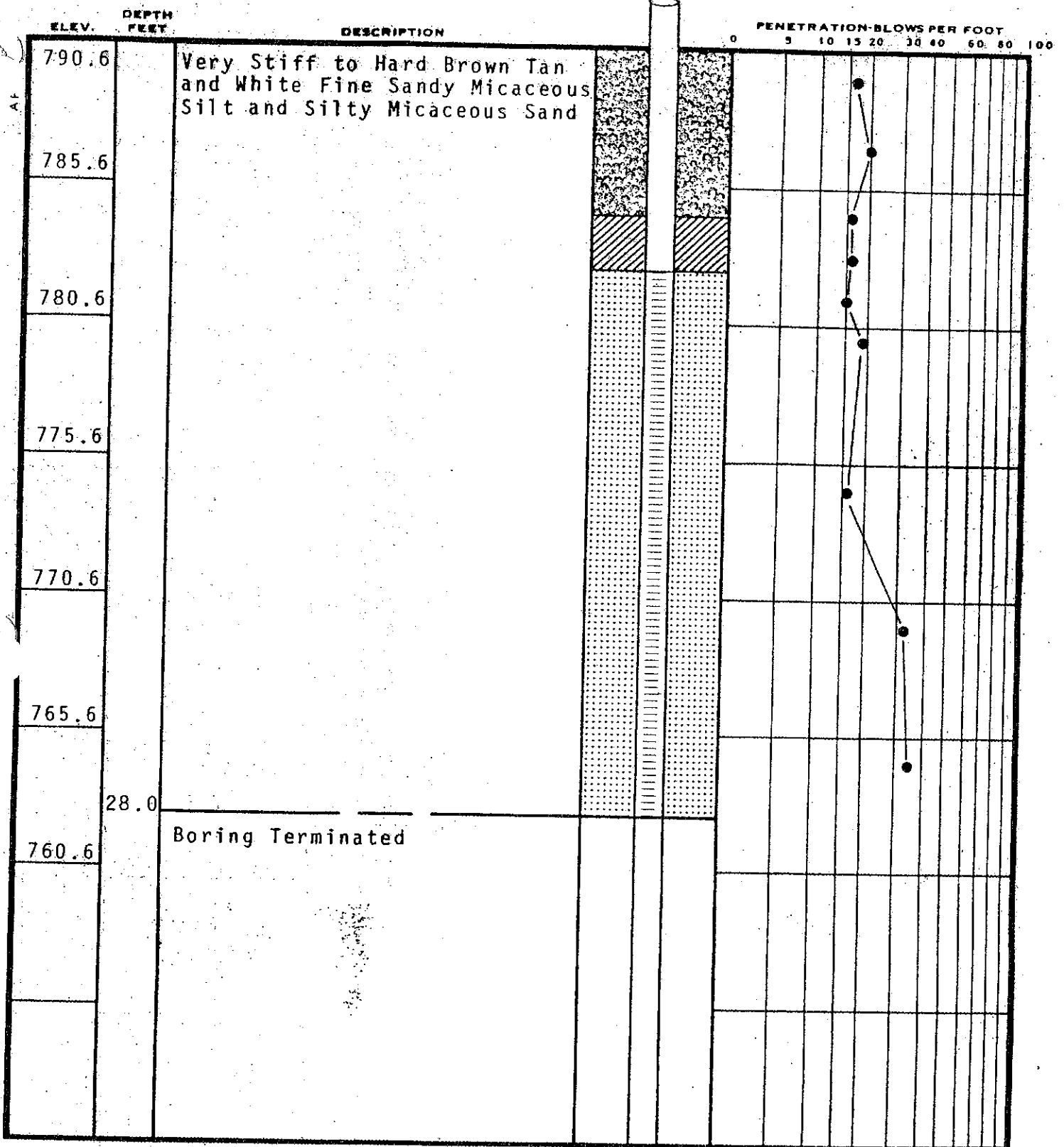
**REMARKS:**

DRILLED BY W.M.  
 LOGGED BY W.M.  
 CHECKED BY K.S.

BORING NUMBER B-1  
 DATE STARTED 10-18-84  
 DATE COMPLETED 10-18-84  
 JOB NUMBER MA-4333

# TEST BORING RECORD

Riser Stickup is 2.68 Feet



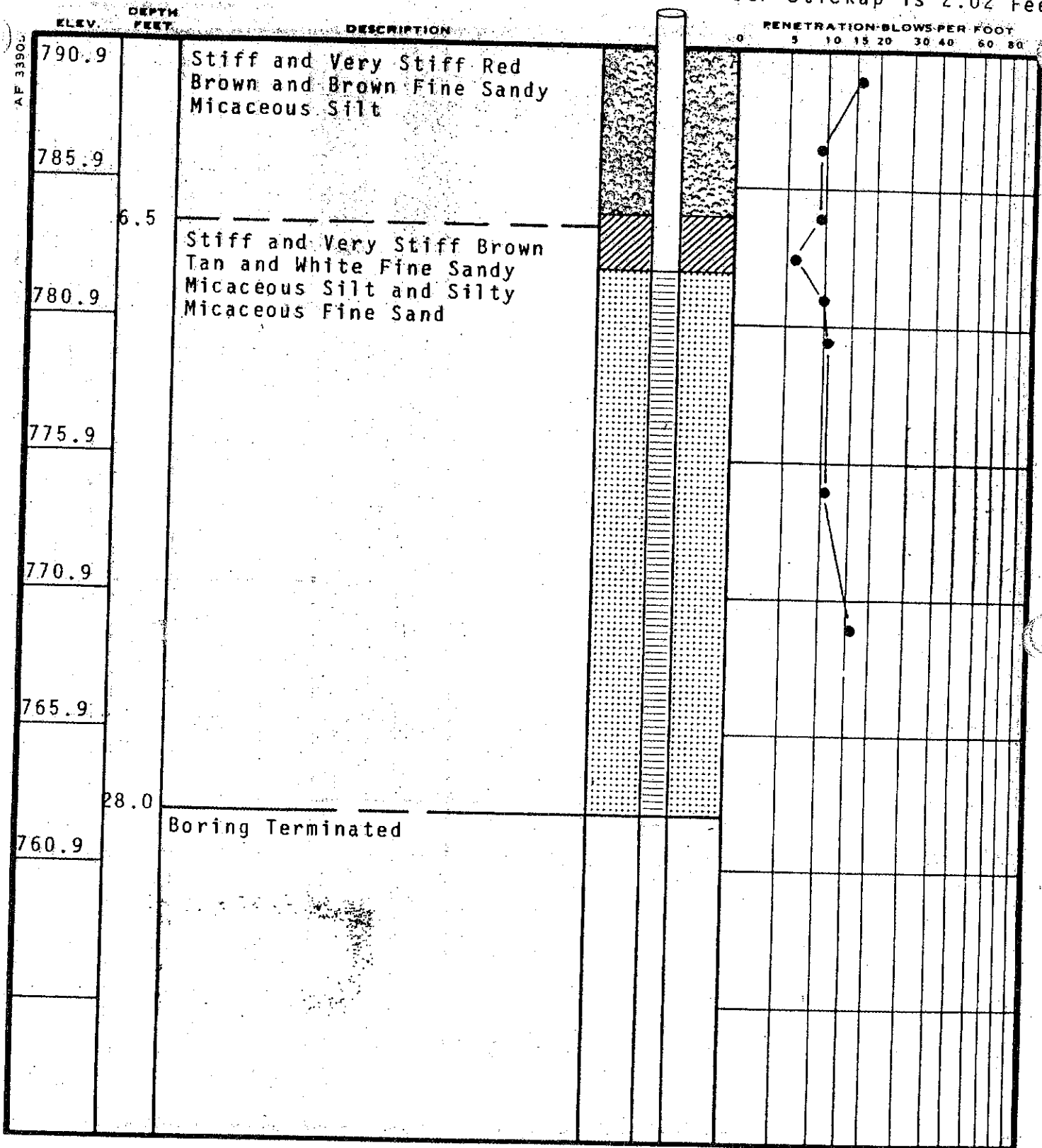
REMARKS:

DRILLED BY W.M.  
 LOGGED BY W.M.  
 CHECKED BY K.S.

BORING NUMBER B-2  
 DATE STARTED 10-19-84  
 DATE COMPLETED 10-19-84  
 JOB NUMBER MA-4333

# TEST BORING RECORD

Riser Stickup is 2.02 Feet



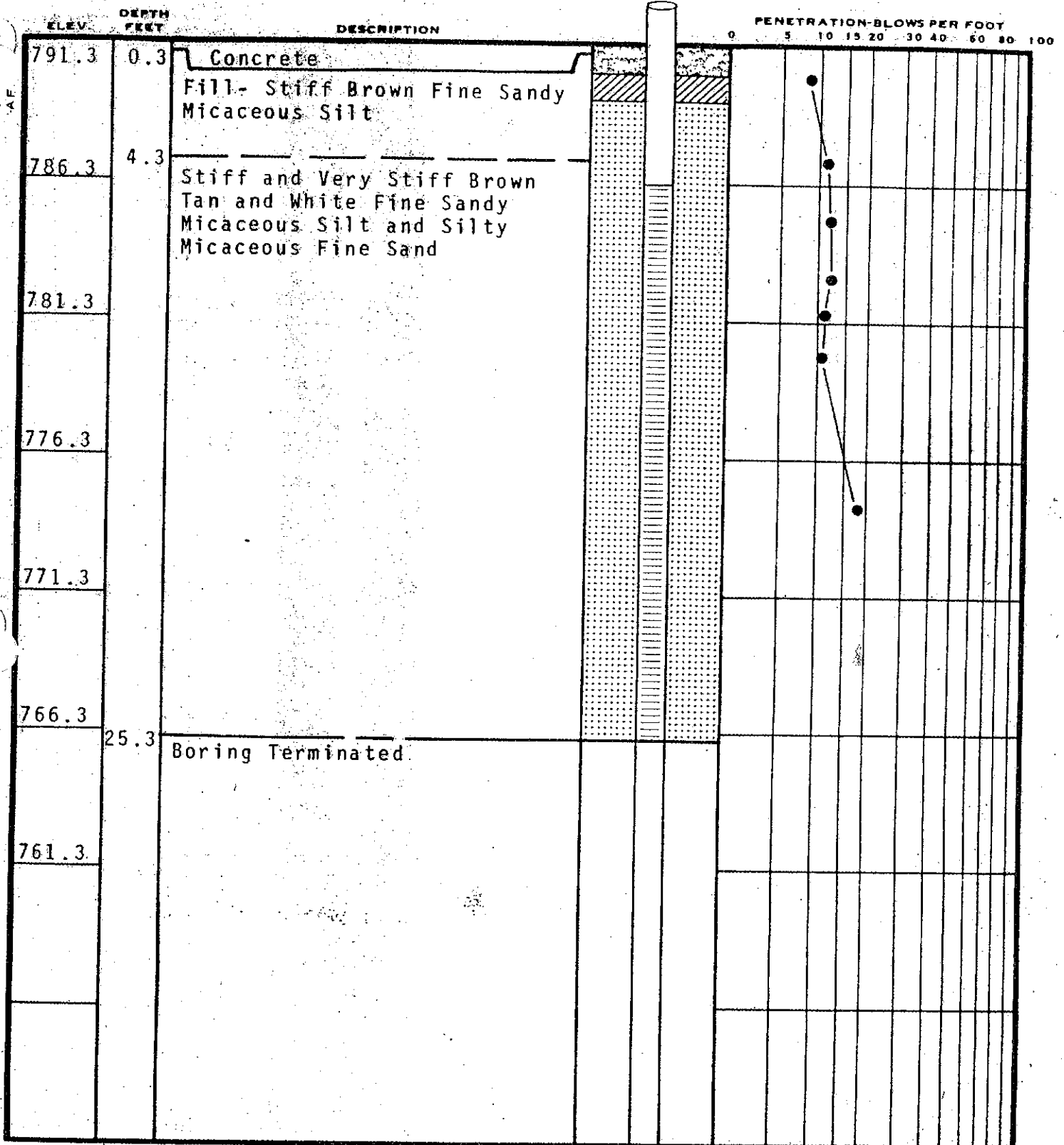
REMARKS:

DRILLED BY J.O.  
 LOGGED BY J.O.  
 CHECKED BY K.S.

BORING NUMBER B-3  
 DATE STARTED 10-19-84  
 DATE COMPLETED 10-20-84  
 JOB NUMBER MA-4333

TEST BORING RECORD

Riser Stickup is .05 Feet



REMARKS:

DRILLED BY C.I.  
 LOGGED BY C.I.  
 CHECKED BY K.S.

BORING NUMBER B-4  
 DATE STARTED 10-19-84  
 DATE COMPLETED 10-20-84  
 JOB NUMBER MA-4333

# TEST BORING RECORD

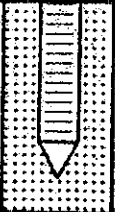
ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT																				
			0	5	10	15	20	30	40	50	60	80	100										
791.3		From 0 - 30 feet. See boring Record B-4 for Lithology.																					
786.3																							
781.3																							
776.3																							
771.3																							
766.3																							
761.3	30.0																						
756.3													Very Dense Brown Tan and White Fine Sandy Micaceous Silt and Silty Fine to Coarse Sand.										
751.3																							

**REMARKS:**

DRILLED BY J. O.  
 LOGGED BY D. A.  
 CHECKED BY MM

BORING NUMBER B-4A  
 DATE STARTED 7/19/85  
 DATE COMPLETED 7/22/85  
 JOB NUMBER MA-4333

# TEST BORING RECORD

ELEV.	DEPTH FEET	DESCRIPTION		PENETRATION-BLOWS PER FOOT												
				0	5	10	15	20	30	40	50	60	80	100		
746.3	45.5	Boring Terminated														
741.3																

REMARKS:

DRILLED BY           J.O.            
 LOGGED BY           D.A.            
 CHECKED BY                           

BORING NUMBER           B-4A            
 DATE STARTED           7/19/85            
 DATE COMPLETED           7/22/85            
 JOB NUMBER           MA-4333



# TEST BORING RECORD

Riser capacity is  
-0.5 feet.

PENETRATION BLOWS PER FOOT  
0 5 10 15 20 25 30 40 50 60

Approx. ELEV.	DEPTH FEET	DESCRIPTION	
792.3	0.75	Concrete.	
786.3		No split-spoon samples taken. Soil encountered in wash consisted of micaceous sand.	
781.3			
776.3			
771.3			
766.3			
761.3			
756.3			
751.3			

**REMARKS:**

- \* Water level on 12/16/86.
- Wash drilled with 7 7/8 inch roller bit to 46.5 feet.
- Developed by air-lift pumping 12/12/86.

DRILLED BY             
 LOGGED BY             
 CHECKED BY           

BORING NUMBER B-4B  
 DATE STARTED 12/9/86  
 DATE COMPLETED 12/26/86  
 JOB NUMBER

# TEST BORING RECORD

Approx. ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT										
			0	1	2	3	4	5	6	7	8	9	10
746.3													
	46.5	Top of rock.											
741.3		White to dark gray quartz biotite gneiss.											
		Cored (HK)											
		Run 1 46.5'-54.5'											
		Rec. 0' RQD 0%											
736.3		Run 2 54.5'-64.5'											
		Rec. 7.1' RQD 57%											
		Run 3 64.5'-74.5'											
		Rec. 9.2' RQD 30%											
731.3		Run 4 74.5'-80.5'											
		Rec. 4.95' RQD 66%											
726.3													
721.3													
716.3													
711.3													

**REMARKS:**

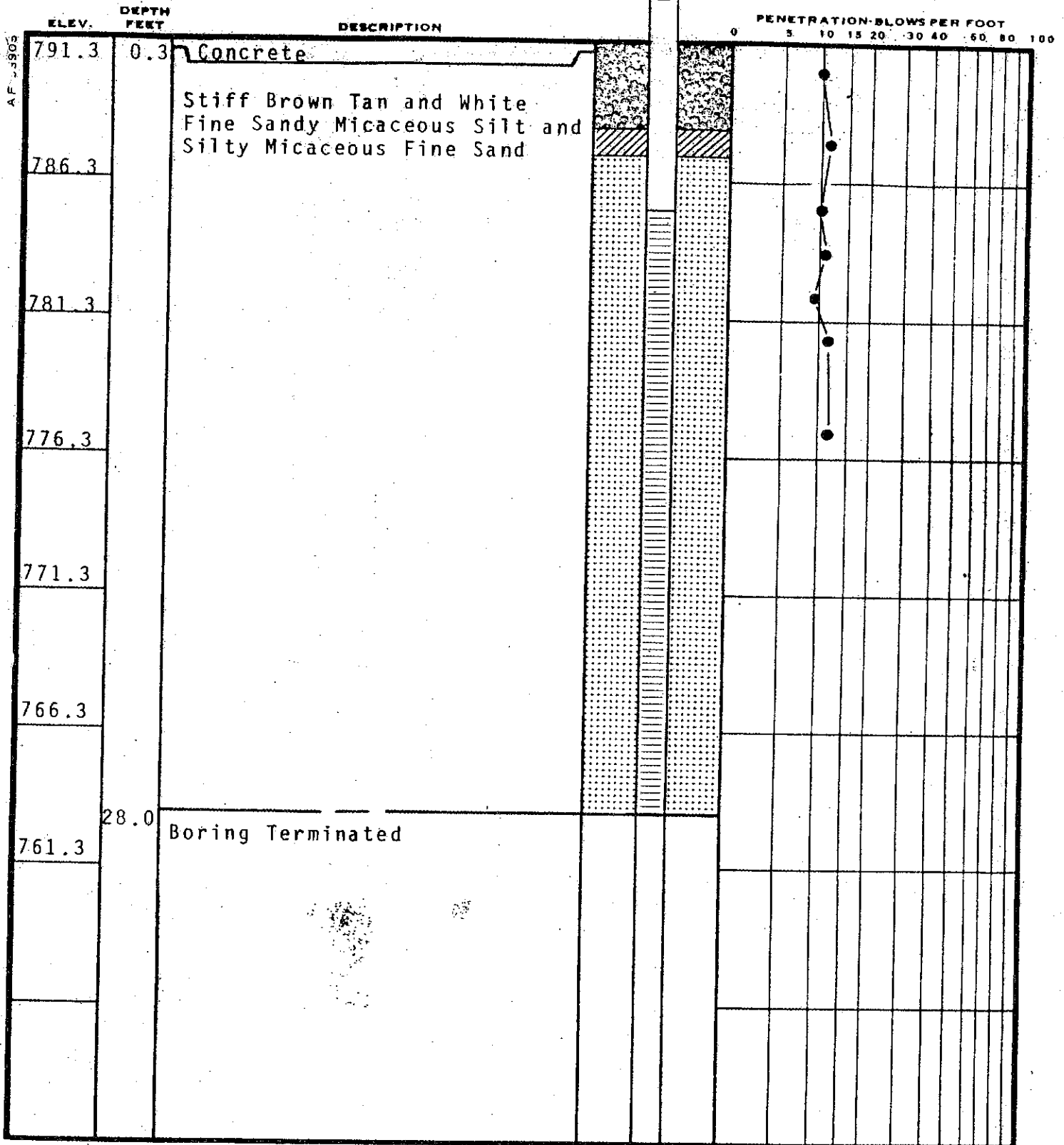
DRILLED BY                       
 LOGGED BY                       
 CHECKED BY                     

BORING NUMBER B-4B  
 DATE STARTED 10/3/56  
 DATE COMPLETED 10/3/56  
 JOB NUMBER 11-4000



TEST BORING RECORD

Riser Stickup is .16 Feet



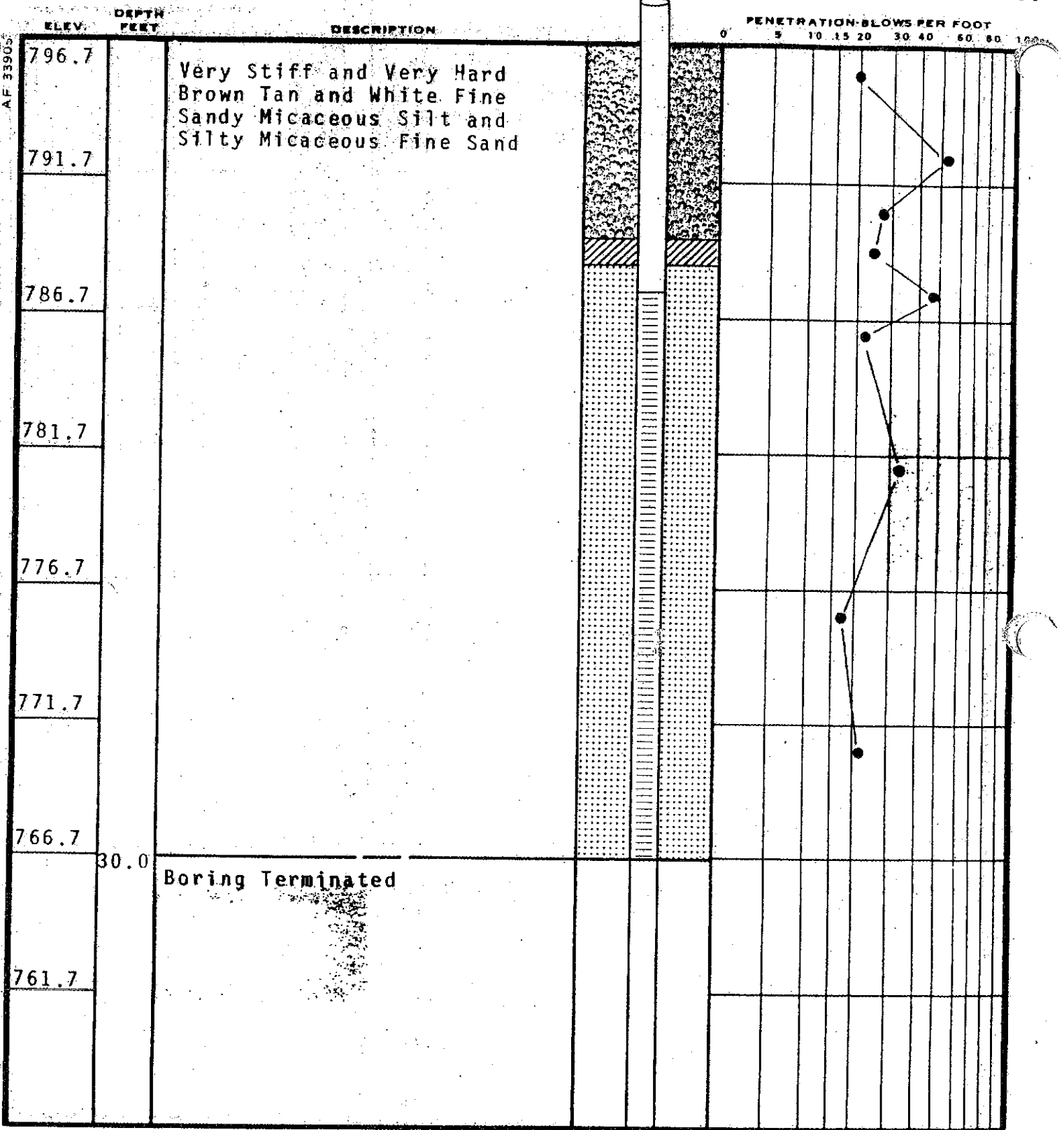
REMARKS:

DRILLED BY C.I.  
 LOGGED BY C.I.  
 CHECKED BY K.S.

BORING NUMBER B-5  
 DATE STARTED 10-20-84  
 DATE COMPLETED 10-21-84  
 JOB NUMBER MA-4333

TEST BORING RECORD

Riser Stickup is .95 Feet



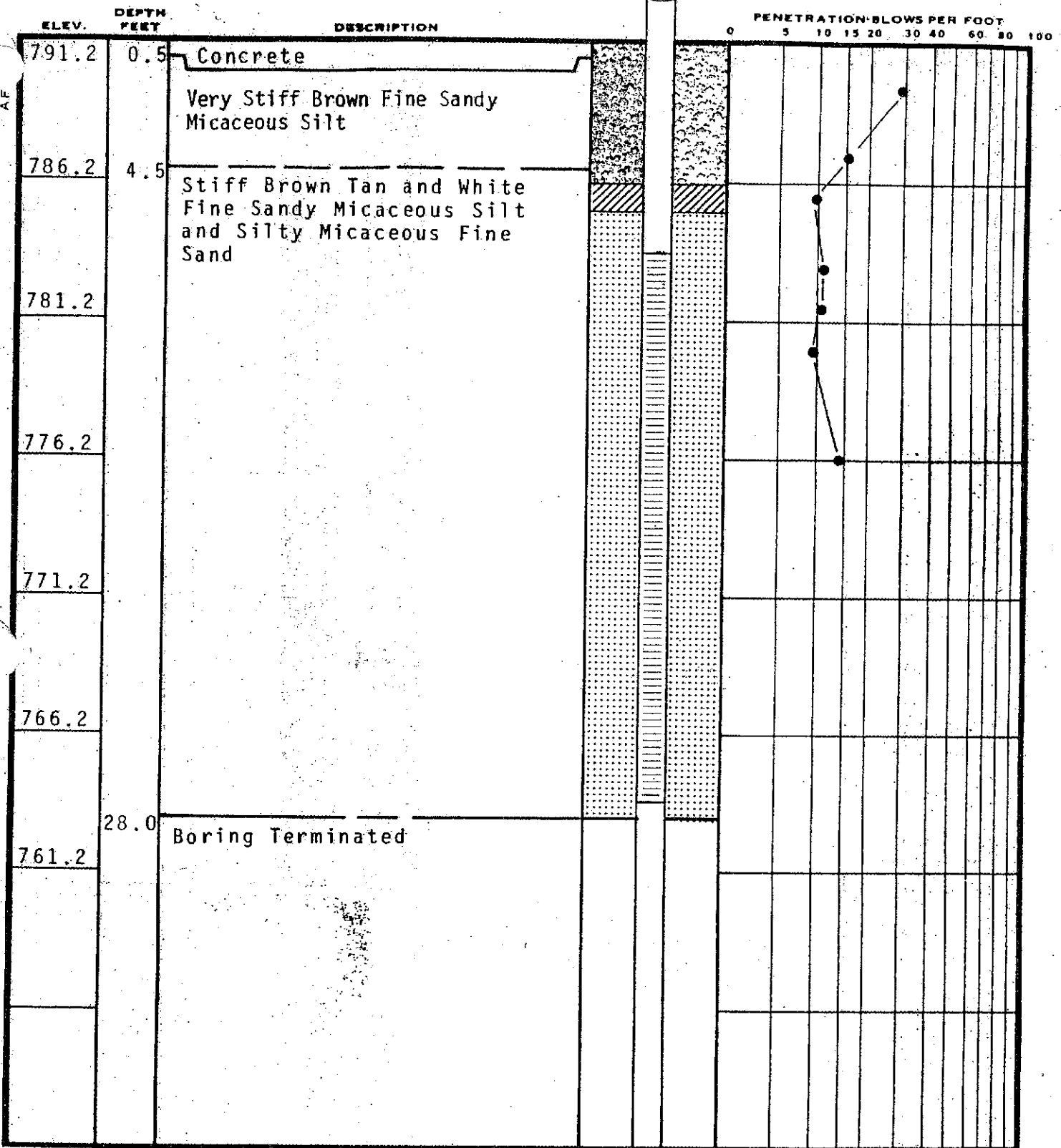
REMARKS:

DRILLED BY J.O.  
 LOGGED BY J.O.  
 CHECKED BY K.S.

BORING NUMBER B-6  
 DATE STARTED 10-20-87  
 DATE COMPLETED 10-20-87  
 JOB NUMBER MA-4333

TEST BORING RECORD

Riser Stickup is .17 Feet



REMARKS:

DRILLED BY C.I.  
 LOGGED BY C.I.  
 CHECKED BY K.S.

BORING NUMBER B-7  
 DATE STARTED 10-21-84  
 DATE COMPLETED 10-21-84  
 JOB NUMBER MA-4333

# TEST BORING RECORD

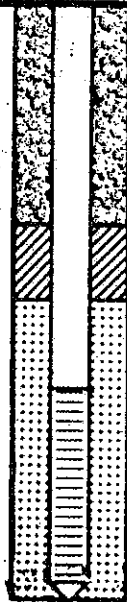
ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT																		
			0	5	10	15	20	30	40	50											
791.3		From 0 - 30 Feet See Boring Record B-7 For Lithology																			
786.3																					
781.3																					
776.3																					
771.3																					
766.3																					
761.3																					
756.3	30.0		Firm To Very Dense Brown, Tan And White Fine Sandy Micaceous Silt and Silty Micaceous Fine to Medium Sand																		
751.3																					

REMARKS:

DRILLED BY W.M.  
 LOGGED BY D.A.  
 CHECKED BY MM

BORING NUMBER B-7A  
 DATE STARTED 7/11/95  
 DATE COMPLETED 7/17/95  
 JOB NUMBER MA-4333

# TEST BORING RECORD

ELEV.	DEPTH FEET	DESCRIPTION		PENETRATION-BLOWS PER FOOT
746.3				0 5 10 15 20 30 40 50 60 70 80 90 100
741.3				
736.3	55.2			
731.3		Boring Terminated		

REMARKS:

DRILLED BY W.M.  
 LOGGED BY D.A.  
 CHECKED BY MM

BORING NUMBER B-7A  
 DATE STARTED 7/11/85  
 DATE COMPLETED 7/17/85  
 JOB NUMBER MA-4333



# TEST BORING RECORD

Riser Stickup is  
-0.5 feet.  
PENETRATION-BLOWS PER FOOT  
5 10 15 20 30 40 50

Approx. DEPTH ELEV. FEET	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT
791.3	0.5	Concrete.	
786.3		No split-spoon samples taken. Soil encountered in wash consisted of micaceous sand.	
781.3			
776.3			
771.3			
766.3			
761.3			
756.3			
751.3			

**REMARKS:**

- # Water level on 12/10/86.
- Wash drilled with 7 7/8 inch roller bit to 57.0 feet.
- Developed by air-lift pumping 12/11/86.

**DRILLED BY** \_\_\_\_\_  
**LOGGED BY** \_\_\_\_\_  
**CHECKED BY** \_\_\_\_\_

**BORING NUMBER** B-7B  
**DATE STARTED** 12/5/86  
**DATE COMPLETED** 12/11/86  
**JOB NUMBER** 12-1552

# TEST BORING RECORD

Approx. ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT												
			0	5	10	15	20	30	40	50	60	70	80	90	100
746.3															
741.3															
736.3															
	57.0	Top of rock.													
731.3		White to dark gray quartz biotite gneiss.													
		Cored (NX)													
726.3		Run 1 57.0'-67.0' Rec. 5.5' RQD 48%													
		Run 2 67.0'-77.0' Rec. 6.35' RQD 40%													
721.3		Run 3 77.0'-79.0' Rec. 2.0' RQD 55%													
		Run 4 79.0'-84.0' Rec. 2.2' RQD 20%													
716.3															
711.3															

**REMARKS:**

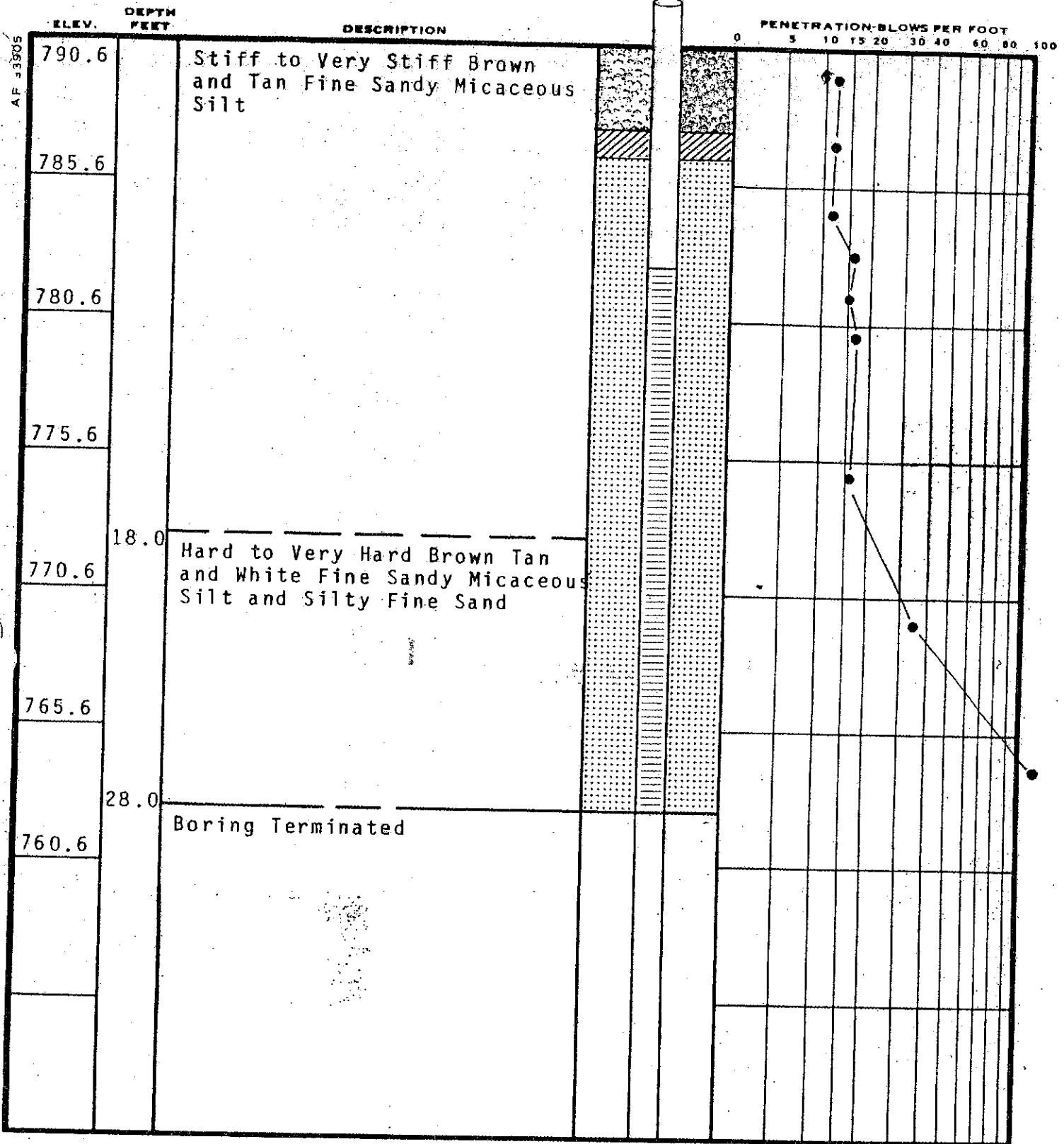
DRILLED BY RE  
 LOGGED BY TCB  
 CHECKED BY TCB

BORING NUMBER B-7B  
 DATE STARTED 12/5/56  
 DATE COMPLETED 12/5/56  
 JOB NUMBER 101-4-200



# TEST BORING RECORD

Riser Stickup is 2.70 Feet



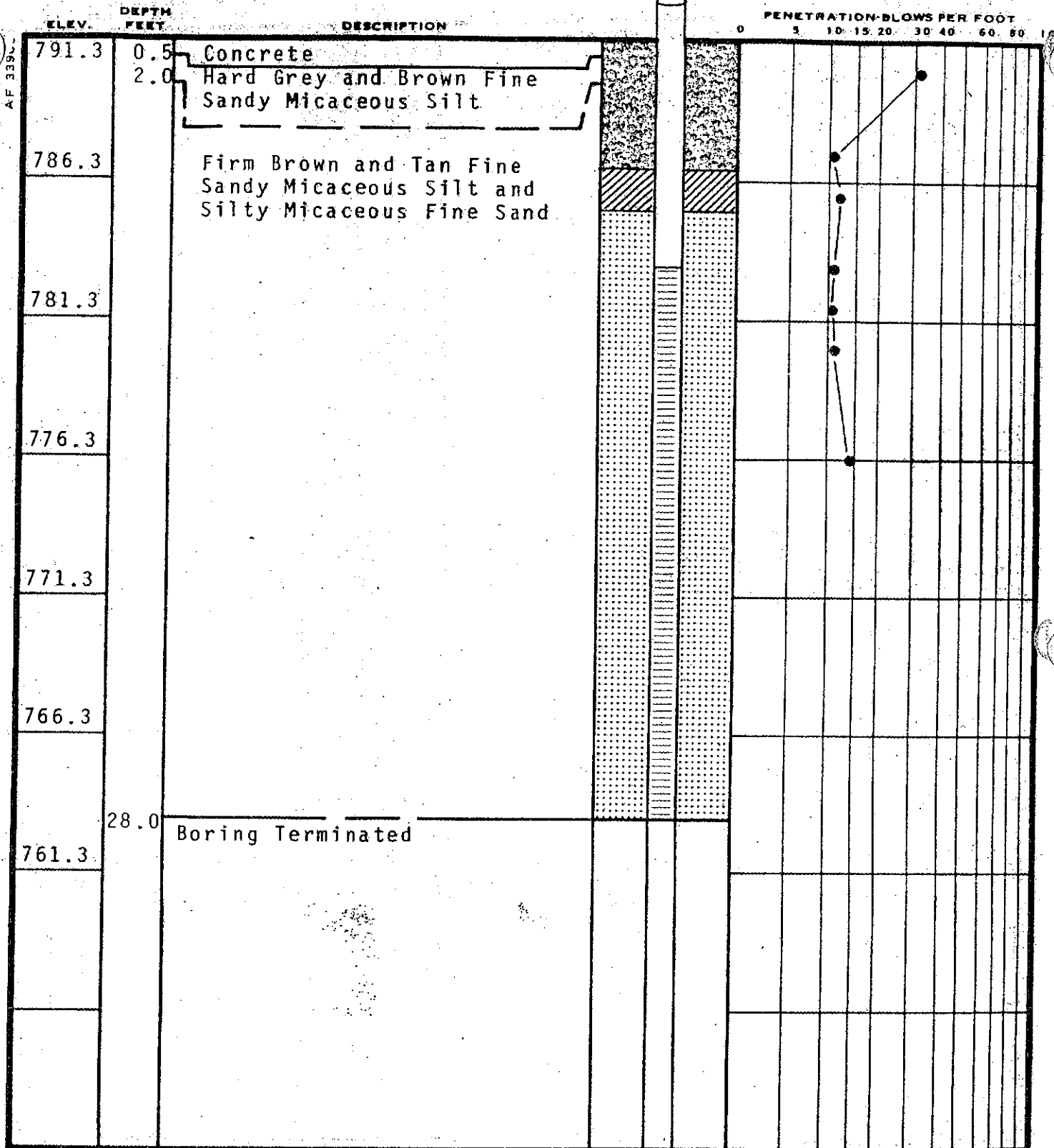
**REMARKS:**

DRILLED BY J.O.  
 LOGGED BY J.O.  
 CHECKED BY K.S.

BORING NUMBER B-8  
 DATE STARTED 10-21-84  
 DATE COMPLETED 10-21-84  
 JOB NUMBER MA-4333

TEST BORING RECORD

Riser Stickup is .22 Feet



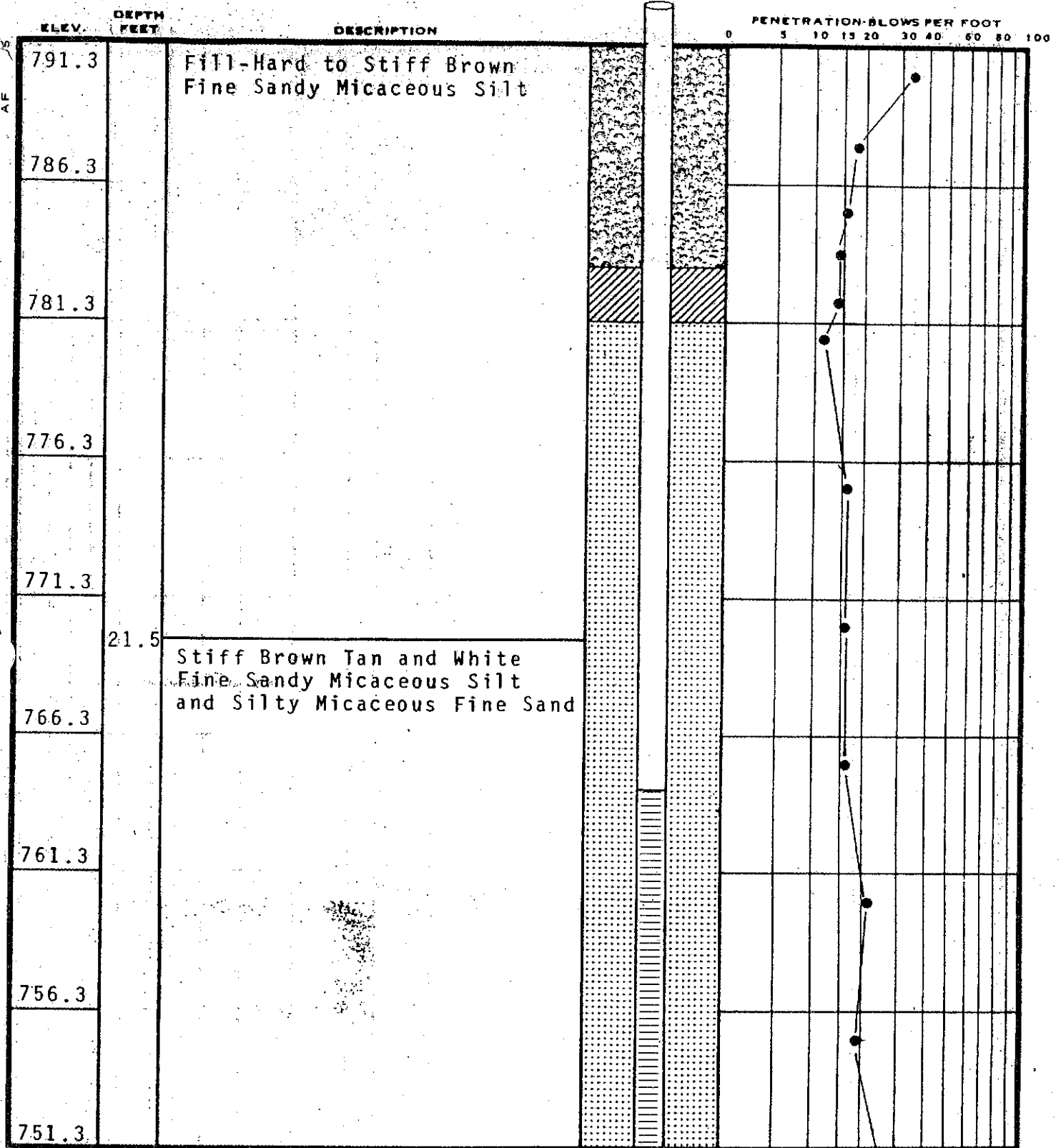
REMARKS:

DRILLED BY C.I.  
 LOGGED BY C.I.  
 CHECKED BY K.S.

BORING NUMBER B-9  
 DATE STARTED 10-22-84  
 DATE COMPLETED 10-22-84  
 JOB NUMBER MA-4333

TEST BORING RECORD

Riser Stickup is 2.60 Feet



REMARKS:

DRILLED BY J.O.  
 LOGGED BY J.O.  
 CHECKED BY K.S.

BORING NUMBER B-10  
 DATE STARTED 10-21-84  
 DATE COMPLETED 10-21-84  
 JOB NUMBER MA-4333

# TEST BORING RECORD

	ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT											
				0	5	10	15	20	30	40	50	60	70	80	
AF 33905	751.3		Stiff Brown Tan and White Fine Sandy Micaceous Silt and Silty Fine Sandy Silt												
	746.3														
		47.0	Boring Terminated												
	741.3														

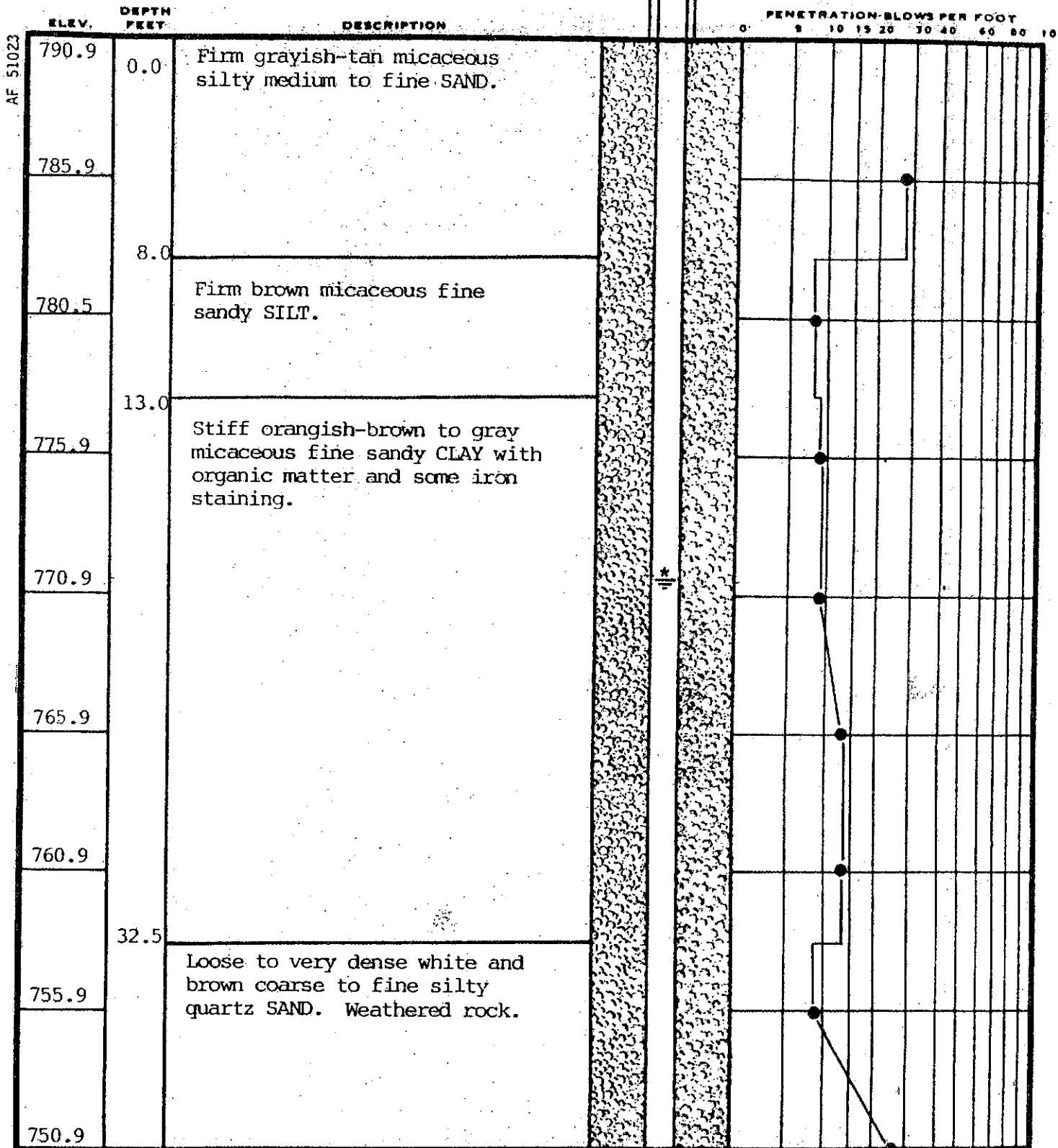
REMARKS:

DRILLED BY J.O.  
 LOGGED BY J.O.  
 CHECKED BY K.S.

BORING NUMBER B-10  
 DATE STARTED 10-21-87  
 DATE COMPLETED 10-21-87  
 JOB NUMBER MA-4333

TEST BORING RECORD

Riser Stickup is 1.76 feet



REMARKS:

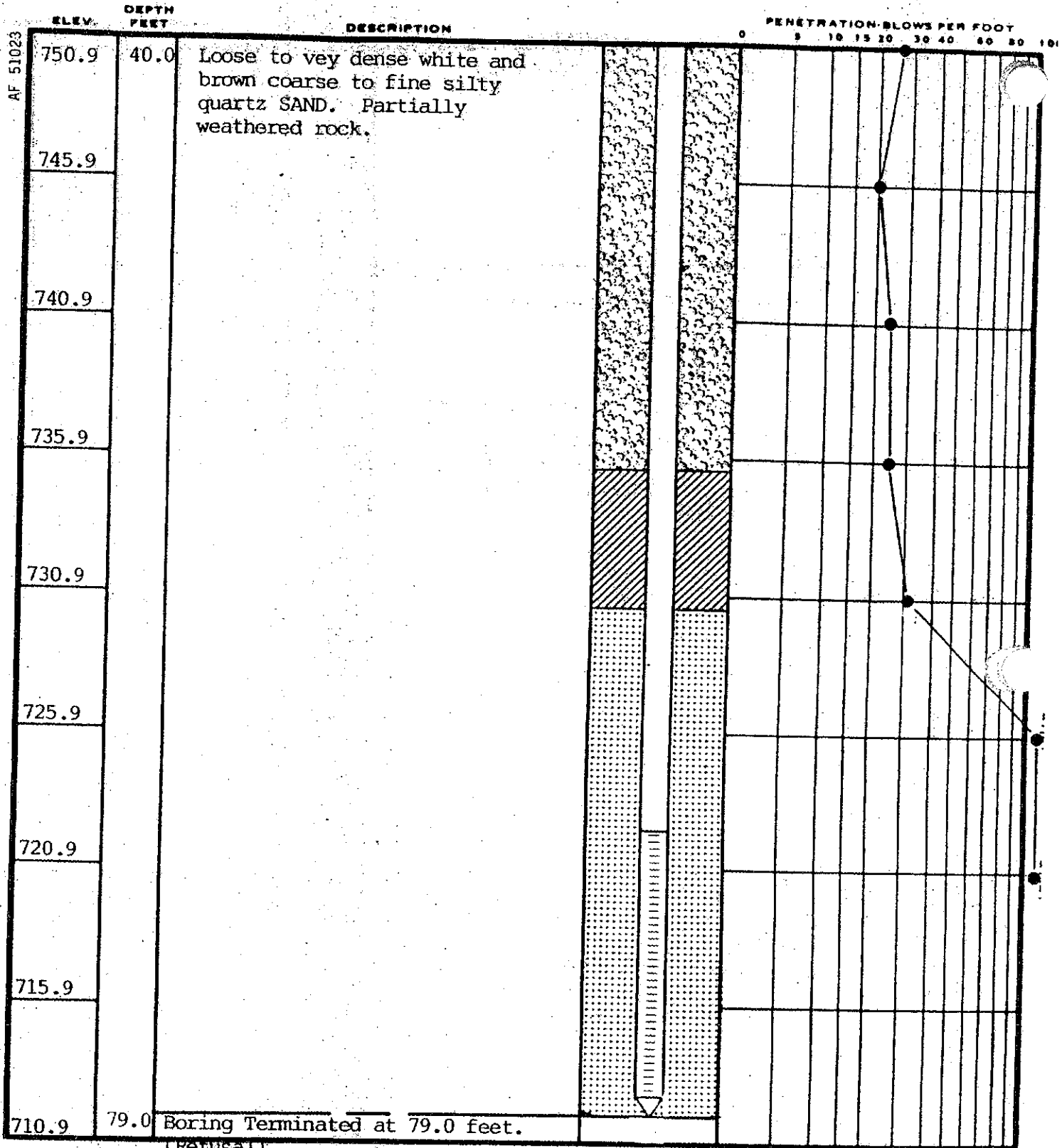
Method of Drilling: wash boring  
 Method of Development: air lift pumping on 7-20-88.  
 \* Water level measured on 8-31-88.

DRILLED BY LAW-Atlanta  
 LOGGED BY R.S. Ribes  
 CHECKED BY K.J. Kessler

BORING NUMBER B-10A  
 DATE STARTED 7/5/88  
 DATE COMPLETED 7/5/88  
 JOB NUMBER 55-4333



# TEST BORING RECORD



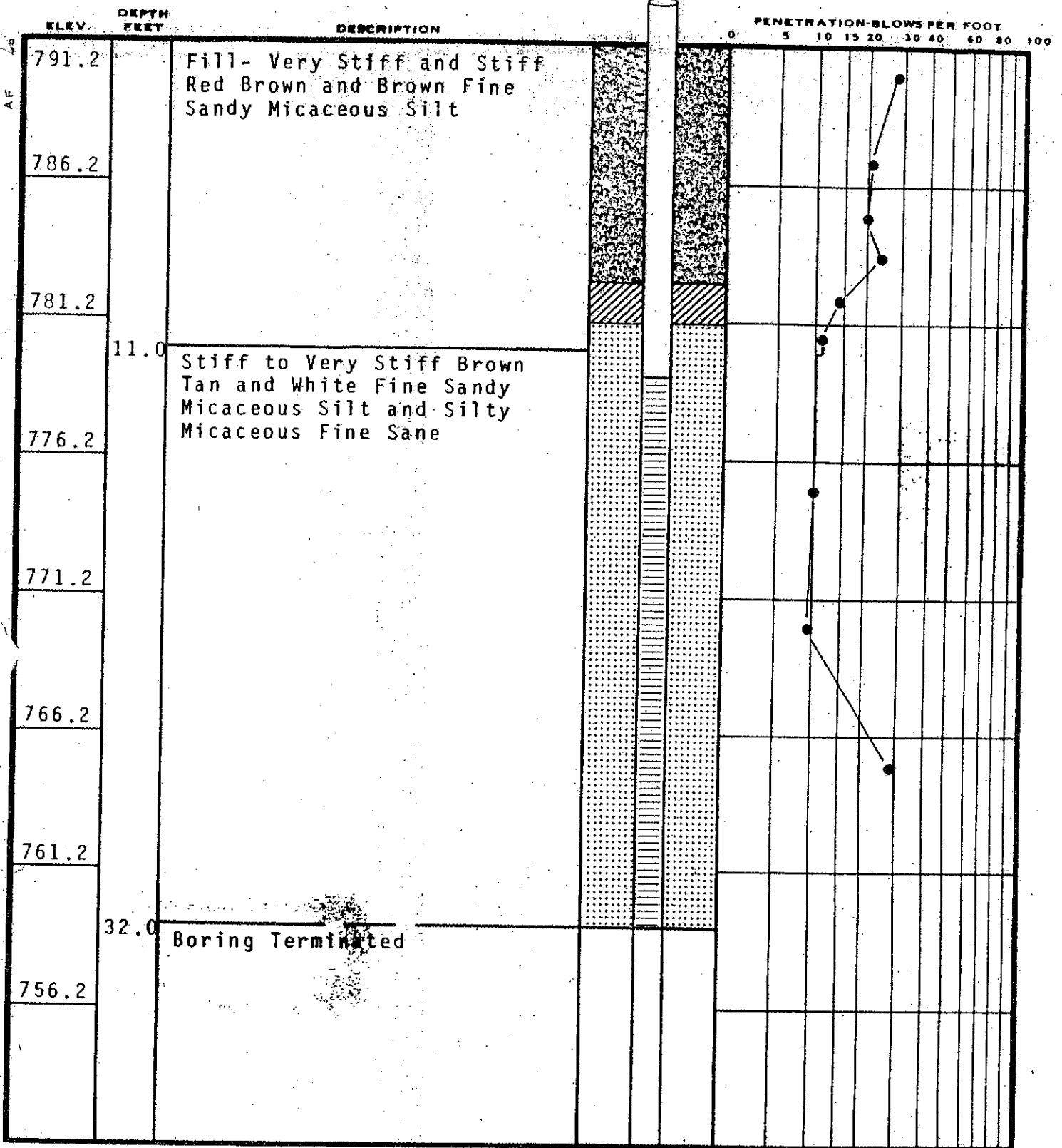
REMARKS:

DRILLED BY LAW-Atlanta  
 LOGGED BY R.S. Ribes  
 CHECKED BY K.J. Kessler

BORING NUMBER B-10A  
 DATE STARTED 7/5/88  
 DATE COMPLETED 7/5/88  
 JOB NUMBER 55-43

TEST BORING RECORD

Riser Stickup is 2.41 Feet



REMARKS:

DRILLED BY J.O.  
 LOGGED BY J.O.  
 CHECKED BY K.S.

BORING NUMBER B-11  
 DATE STARTED 10-22-84  
 DATE COMPLETED 10-22-84  
 JOB NUMBER MA-4333

TEST BORING RECORD

Riser Stickup is 2.70 feet

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT																		
			0	5	10	15	20	30	40	60	80										
791.0	0.0	From 0 - 60 feet see Boring Record B-11B for Lithology.																			
786.0																					
781.0																					
776.0																					
771.0																					
766.0																					
761.0																					
756.0																					
751.0	40.0																				

REMARKS:

- \* Water level measured on 11-30-87.
- Pilot hole drilled with 3 7/8 inch roller
- Wash drilled with 7 7/8 inch roller to 59.7 feet.
- Developed by air-lift pumping on 12-1-87.

DRILLED BY Law-Atlanta  
 LOGGED BY R.Scott Ribes  
 CHECKED BY Kirk J. Kessler

BORING NUMBER B-11A  
 DATE STARTED 11-25-87  
 DATE COMPLETED 11-25-87  
 JOB NUMBER 55-4333

# TEST BORING RECORD

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT																		
			0	5	10	15	20	30	40	60	80	100									
751.0																					
746.0																					
741.0																					
736.0																					
731.0	59.7	Boring Terminated at 59.7 feet.																			

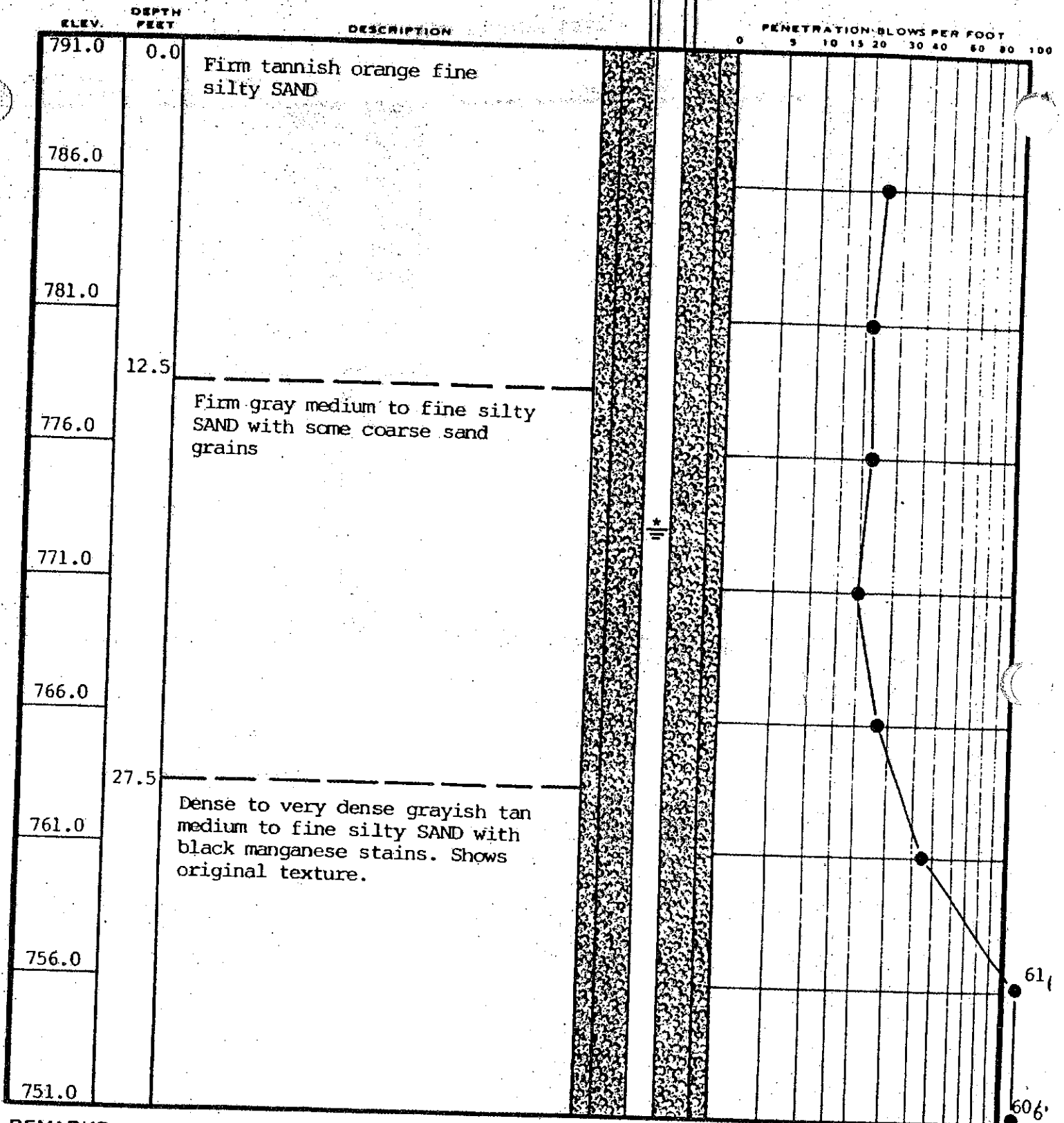
REMARKS:

DRILLED BY Law-Atlanta  
 LOGGED BY R. Scott Ribes  
 CHECKED BY Kirk J. Kessler

BORING NUMBER B-11A  
 DATE STARTED 11-25-87  
 DATE COMPLETED 11-25-87  
 JOB NUMBER 55-4333

TEST BORING RECORD

Riser Stickup is 2.54 feet



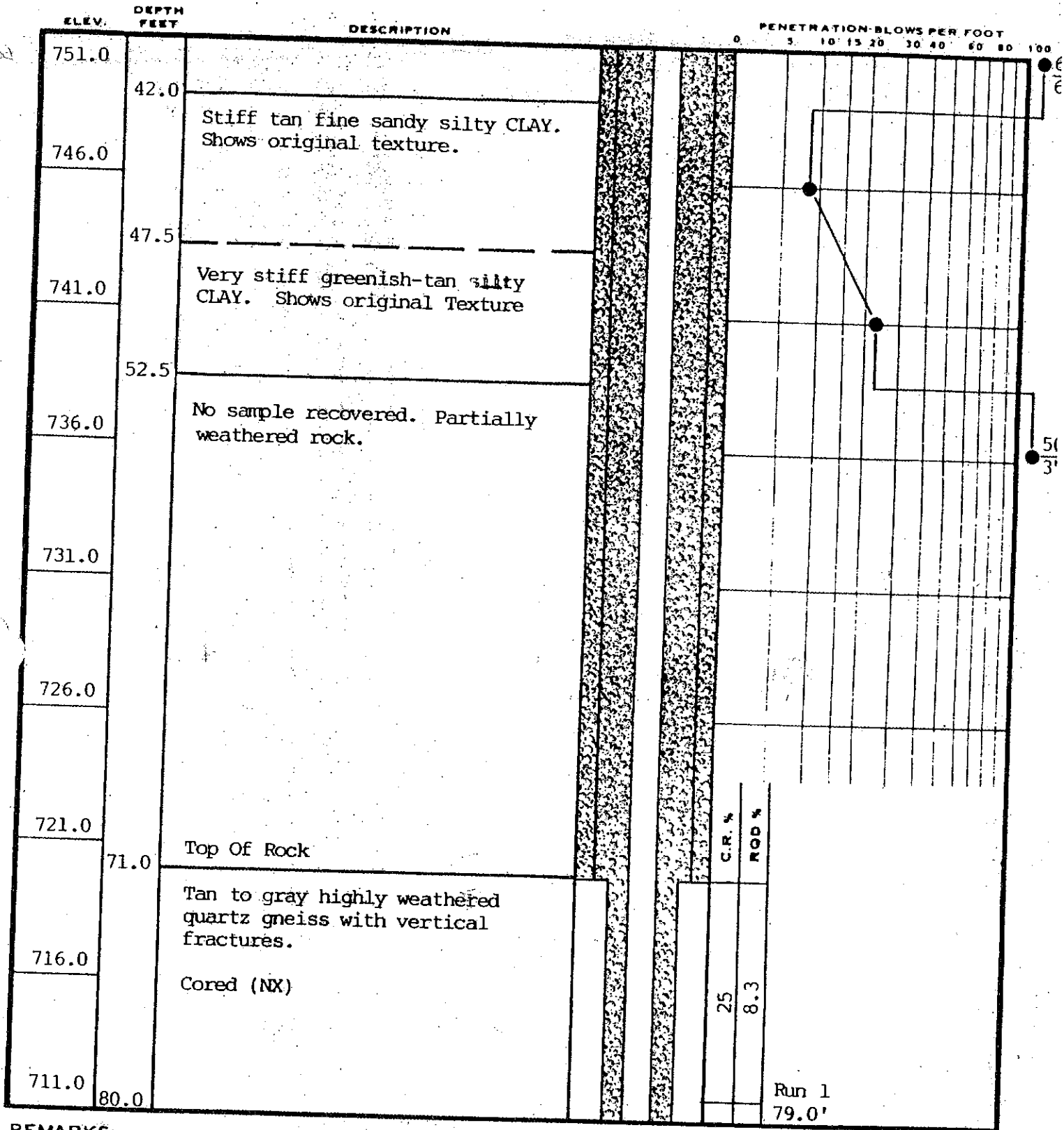
REMARKS:

- \* Water level measured on 11-30-87.
- Pilot hole drilled with 3 7/8 inch roller.
- Wash drilled with 7 7/8 inch roller bit to 71.0 feet.
- Developed by air-lift pumping on 12-2-87.

DRILLED BY Law-Atlanta  
 LOGGED BY R. Scott Ribes  
 CHECKED BY Kirk J. Kessler

BORING NUMBER B-11B  
 DATE STARTED 11-20-87  
 DATE COMPLETED 11-25-87  
 JOB NUMBER 55-4333

# TEST BORING RECORD



**REMARKS:**

- NX Core from 71.0 to 102.5 feet.

DRILLED BY Law-Atlanta  
 LOGGED BY R.Scott Ribes  
 CHECKED BY Kirk J. Kessler

BORING NUMBER B-11B  
 DATE STARTED 11-20-87  
 DATE COMPLETED 11-25-87  
 JOB NUMBER 55-4333

# TEST BORING RECORD

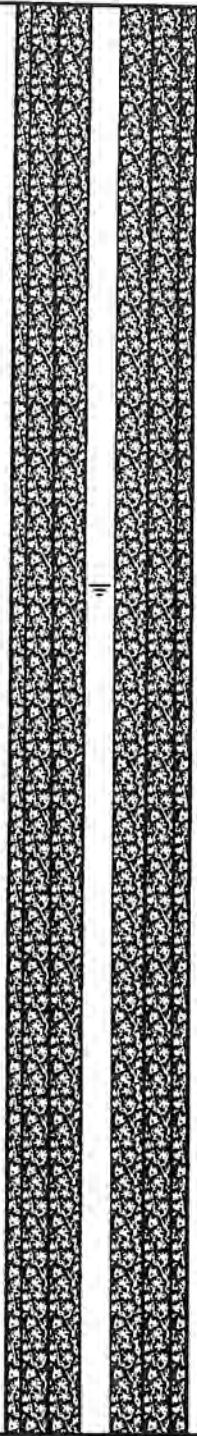
ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT	PENETRATION-BLOWS PER FOOT
				10 15 20 30 40 50 60 70 80 90 100
711.0	80.0	Tan to gray highly weathered quartz gneiss with vertical fractures.		Run 2
				81.0'
706.0		Cored (NX)		Run 3
				84.0'
				Run 4
				86.0'
701.0			71	Run 5
			57.5	90.0'
696.0			100	
			73.3	Run 6
691.0				97.5'
102.5			40	
686.0		Boring Terminated at 102.5 feet	0.0	Run 7
				102.5'
			C.R. %	
			RQD %	

REMARKS:

DRILLED BY Law-Atlanta  
 LOGGED BY R. Scott Ribes  
 CHECKED BY Kirk J. Kessler

BORING NUMBER B-11B  
 DATE STARTED 11-20-87  
 DATE COMPLETED 11-25-87  
 JOB NUMBER 55-4333

# TEST BORING RECORD

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM
		No split spoon samples taken. Soils consist of micaceous sand and silt	

**REMARKS:**

Wash bore to 69.0 feet using 10.0 inch tricone bit. 6-inch I.D. PVC casing grouted to 69.0 feet. Cored rock from 69.0 to 137.6 feet using HW 5½ core barrel. 4" I.D. PVC casing pressure grouted to 137.6 feet. Cored from 137.6 to 187.0 feet using HQ 3½" core barrel. Well backfilled with sand to 150.0 feet and set at 150.0 feet with 2-inch I.D. PVC well screen and riser pipe.

DRILLED BY LE-ATL  
 LOGGED BY PNV  
 CHECKED BY PER



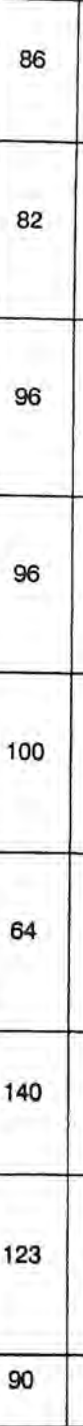
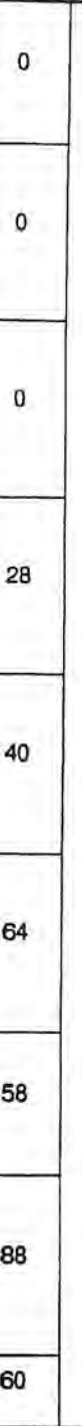
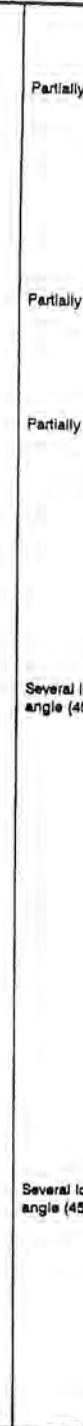
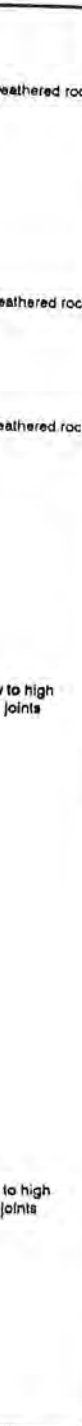


BORING NUMBER B-11D  
 DATE STARTED 1-17-90  
 DATE COMPLETED 2-28-90  
 JOB NUMBER 55-433317







# TEST BORING RECORD

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	% REC	% ROD	Joints	REMARKS
		Partially weathered rock		86	0		Partially weathered rock
				82	0		Partially weathered rock
				96	0		Partially weathered rock
	94.0	Granite		96	28		
				100	40		Several low to high angle (45°) joints
				64	64		
				140	58		
				123	88		Several low to high angle (45°) joints
				90	60		

REMARKS:

DRILLED BY	LE-ATL	BORING NUMBER	B-11D
LOGGED BY	PNV	DATE STARTED	1-17-90
CHECKED BY	PER	DATE COMPLETED	2-28-90
		JOB NUMBER	55-433317



# TEST BORING RECORD

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	% REC	% RQD	Joints	REMARKS		
		Granite		90	60		<p>Several low to high angle fractures with iron oxide staining and soft yellow deposits</p> <p>Several low to high angle (45°) fractures with iron oxide staining</p> <p>-146' to 147' highly fractured Possible water producing zone</p> <p>Several low to high angle (45°) fractures with iron oxide staining</p>		
				112	50				
				106	84				
				92	86				
				102	75				
				100	50				
				106	61				
				88	26				
	150.0			Total depth of well installation					

REMARKS:

DRILLED BY	LE-ATL	BORING NUMBER	B-11D
LOGGED BY	PNV	DATE STARTED	1-17-90
CHECKED BY	PER	DATE COMPLETED	2-28-90
		JOB NUMBER	55-433317



# TEST BORING RECORD

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	% REC	% RQD	Joints	REMARKS
		Granite	[Well Diagram]	100	60		Several high to low angle (45°) fractures with some iron oxide staining
				100	80		
				100	59		Several high to low angle (45°) fractures with some iron oxide staining
				100	83		
				100	100		
	187.0	Coring terminated at 187.0 feet					

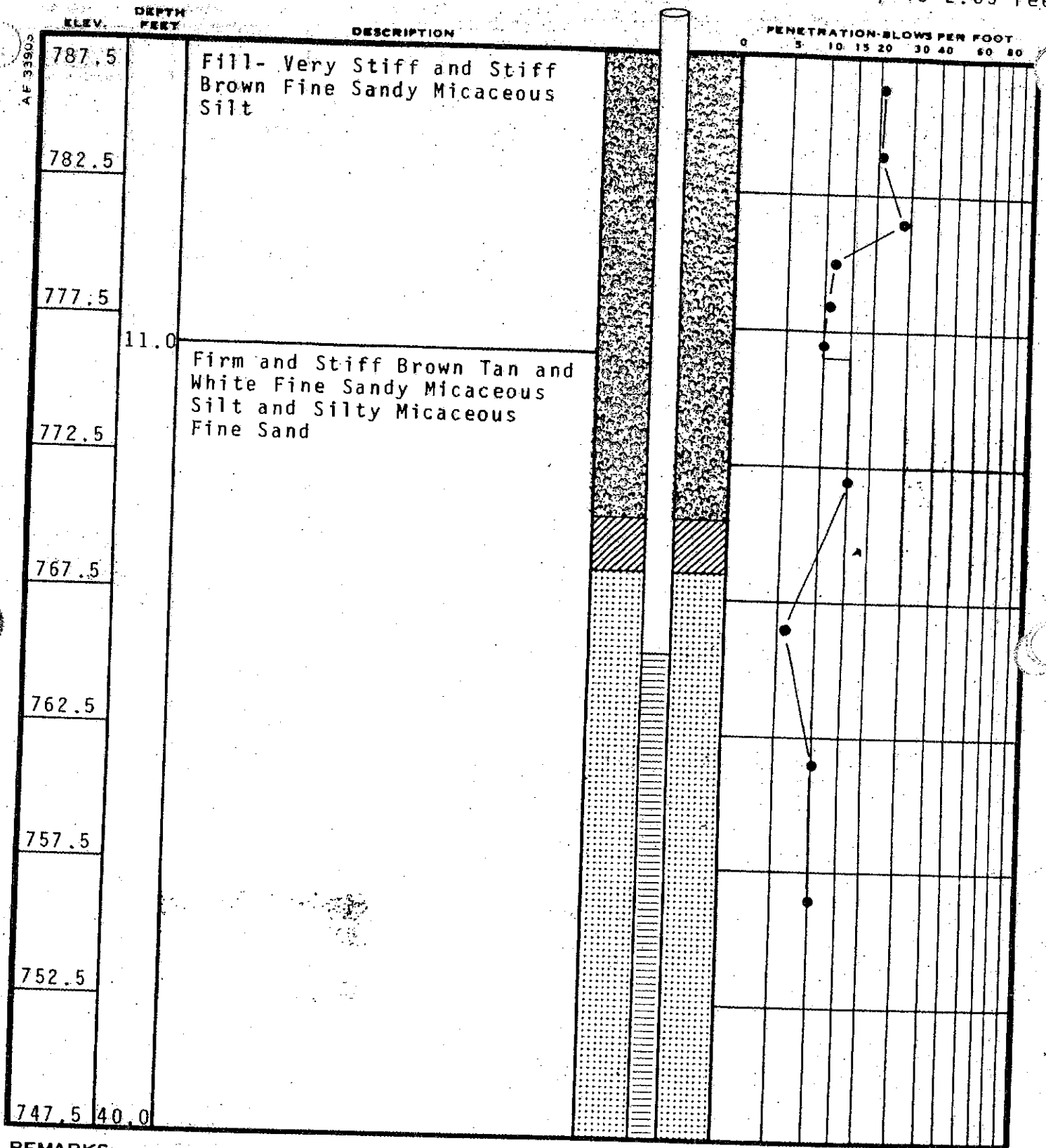
REMARKS:

DRILLED BY	LE-ATL	BORING NUMBER	B-11D
LOGGED BY	PNV	DATE STARTED	1-17-90
CHECKED BY	PER	DATE COMPLETED	2-28-90
		JOB NUMBER	55-433317



TEST BORING RECORD

Riser Stickup is 2.65 Feet



REMARKS:

DRILLED BY J.O.  
 LOGGED BY J.O.  
 CHECKED BY K.S.

BORING NUMBER B-12  
 DATE STARTED 10-23-81  
 DATE COMPLETED 10-23-81  
 JOB NUMBER MA-4333

# TEST BORING RECORD

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT										
			0	5	10	15	20	30	40	50	60	80	100
747.5		*											
	42.0	Boring Terminated											
742.5													
		* Firm and Stiff Brown Tan and White Fine Sandy Micaceous Silt and Silty Micaceous Fine Sand											

**REMARKS:**

DRILLED BY J.O.  
 LOGGED BY J.O.  
 CHECKED BY K.S.

BORING NUMBER B-12  
 DATE STARTED 10-23-84  
 DATE COMPLETED 10-23-84  
 JOB NUMBER MA-4333

# TEST BORING RECORD

Riser Stickup is 2.70 Feet

	ELEV	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT
CASE NO. AF 3395	788.2		Firm to Very Stiff Brown Tan and White Fine Sandy Micaceous Silt and Silty Micaceous Fine Sand	0 5 10 15 20 30 40 50 60 70 80
	783.2			
	778.2			
	773.2			
	768.2			
	763.2			
	758.2	28.0	Boring Terminated	

REMARKS:

DRILLED BY C.I.  
 LOGGED BY C.I.  
 CHECKED BY K.S.

BORING NUMBER B-13  
 DATE STARTED 10-24-84  
 DATE COMPLETED 10-24-84  
 JOB NUMBER MA-4333

# TEST BORING RECORD

	ELEV.	DEPTH FEET	DESCRIPTION		PENETRATION-BLOWS PER FOOT
					0 5 10 15 20 30 40 50 60 80 100
AF 51023		0.0	Firm to stiff orange-tan to tan fine sandy SILT.		
		20.5			
		33.0	Boring terminated at 33.0 feet (Refusal)		

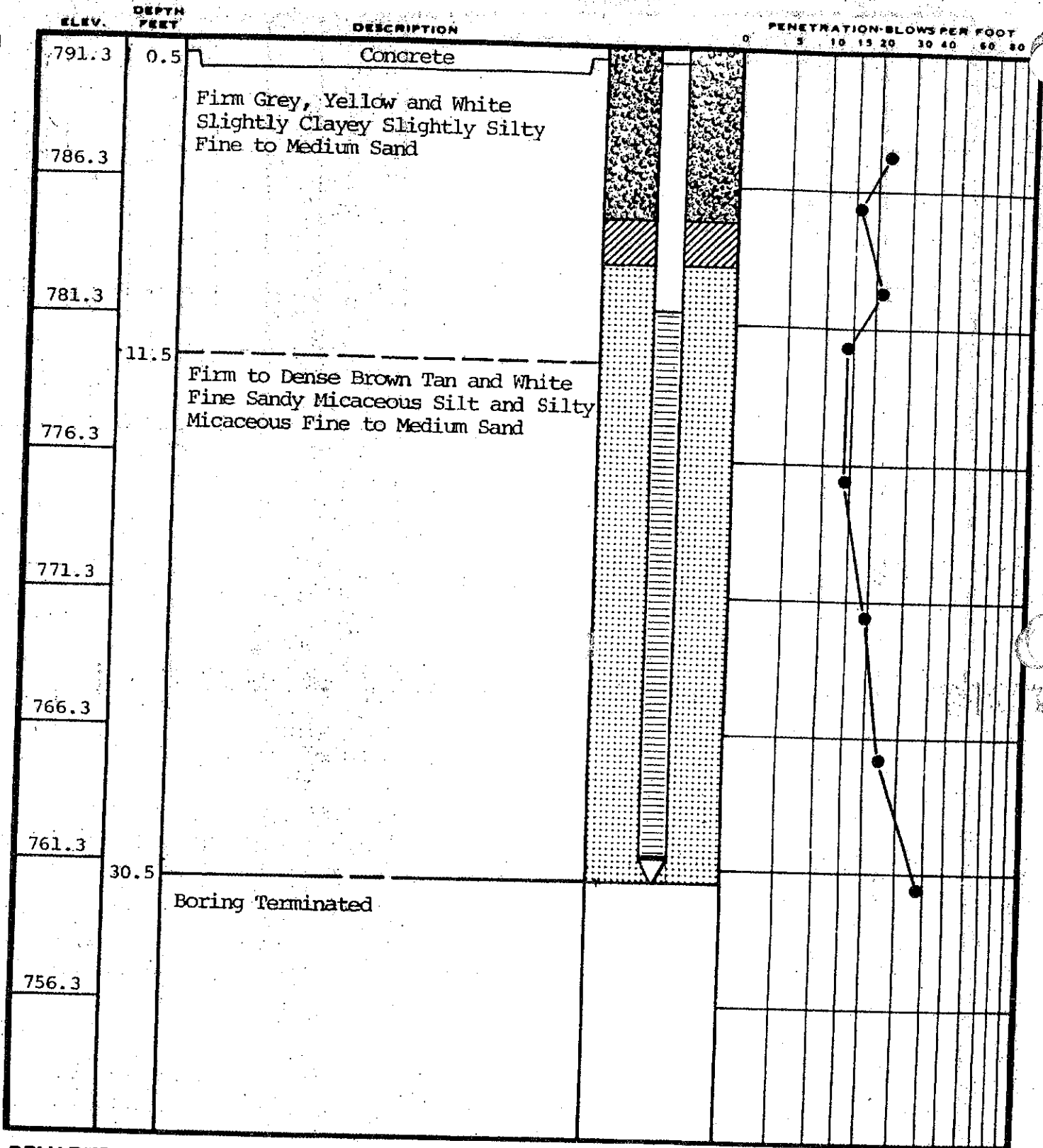
**REMARKS:**  
 Method of Drilling: hollow stem auger.  
 Sampling discontinued at 20.5 feet due to rig malfunction.  
 Borehole backfilled with site soil.

**DRILLED BY** LAW-Atlanta  
**LOGGED BY** R.S. Ribes  
**CHECKED BY** A.G. Levinson

**BORING NUMBER** B-13A  
**DATE STARTED** 7-15-88  
**DATE COMPLETED** 7-15-88  
**JOB NUMBER** 55-4333



TEST BORING RECORD Riser Stickup is -.5 Feet

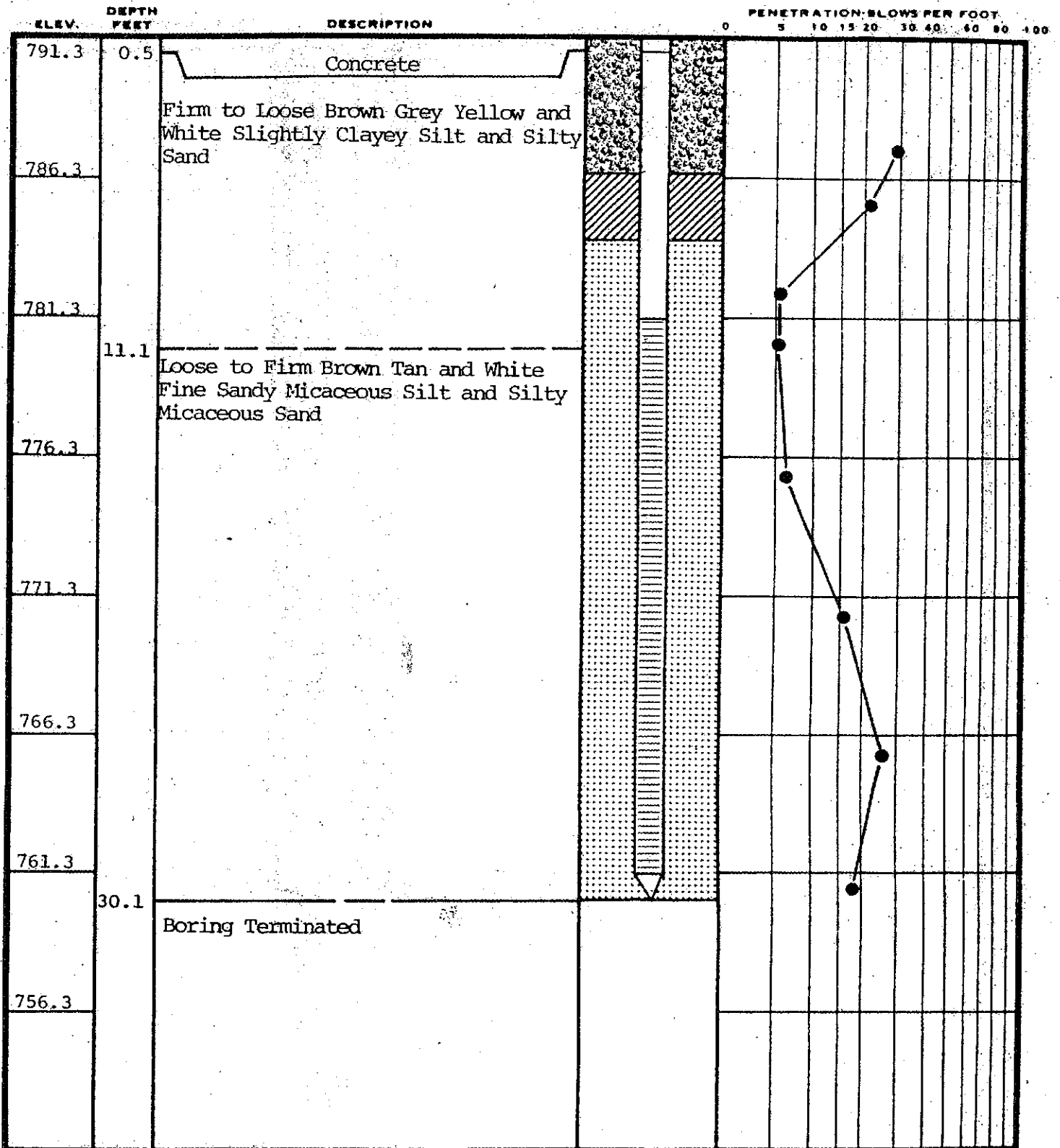


REMARKS:

DRILLED BY J.O.  
 LOGGED BY D.A.  
 CHECKED BY MM

BORING NUMBER B-14  
 DATE STARTED 7/22/85  
 DATE COMPLETED 7/23/85  
 JOB NUMBER MA-4333

TEST BORING RECORD Riser Stickup is -.5 Feet



REMARKS:

DRILLED BY J.O.  
 LOGGED BY D.A.  
 CHECKED BY MM

BORING NUMBER B-15  
 DATE STARTED 7/23/85  
 DATE COMPLETED 7/24/85  
 JOB NUMBER MA-4333

TEST BORING RECORD Riser Stickup is -.32

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT										
			0	5	10	15	20	30	40	50	60	80	
791.3	0.5	Concrete											
786.3		0-30' See Test Boring Record For B-15											
781.3													
776.3													
771.3													
766.3													
761.3													
756.3													
751.3	30.0		Very Dense Brown Tan and White Fine Sandy Micaceous Silt and Silty Micaceous Sand										

REMARKS: 40.4 Boring Terminated

Type III Well

DRILLED BY WH  
 LOGGED BY DA  
 CHECKED BY MM

BORING NUMBER B-15A  
 DATE STARTED 8/20/85  
 DATE COMPLETED 8/23/85  
 JOB NUMBER MA-4337

# TEST BORING RECORD

Riser Stickup is  
+0.5 feet.

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT										
			0	5	10	15	20	30	40	50	60	80	100
791.3	0.5	Concrete.											
786.3		No split-spoon samples taken. Soil encountered in wash consisted of micaceous sand.											
781.3													
776.3													
771.3													
766.3													
761.3													
756.3													
751.3													

**REMARKS:**

- \* Water level on 12/16/86.
- Wash drilled with 7 7/8 inch roller bit to 51.0 feet.
- Developed by air-lift pumping 12/9/86.

**DRILLED BY** KT  
**LOGGED BY** TCB  
**CHECKED BY** KJK

**BORING NUMBER** B-15B  
**DATE STARTED** 11/26/86  
**DATE COMPLETED** 12/01/86  
**JOB NUMBER** MA-4333

# TEST BORING RECORD

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT
			0 10 20 30 40 50 60 70 80 90 100
746.3			
741.3			
	51.0		
736.3		Partially weathered white, tan, gray quartz biolite gneiss.	
		Cored (IX)	
		RUN 1 51.0' - 70.0'	
		REC 0.0'	
731.3			
726.3			
	70.0		
721.3		Boring Terminated.	

**REMARKS:**

DRILLED BY KT  
 LOGGED BY TCB  
 CHECKED BY IKK

BORING NUMBER B-15B  
 DATE STARTED 11/20/56  
 DATE COMPLETED 12/07/56  
 JOB NUMBER 11-1353

# TEST BORING RECORD

Riser Stickup is  
-0.5 feet.  
PENETRATION-BLOWS PER FOOT  
5 10 15 20 25 30 35 40 45 50 55 60

Approx. ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT																	
791.3	0.5	Concrete.																		
786.3		No split-spoon samples taken. Soils encountered in wash consisted of micaceous sand.																		
781.3																				
776.3																				
771.3																				
766.3																				
761.3																				
756.3																				
751.3																				

**REMARKS:**

\* Water level on 12/16/86  
 - Wash drilled with 7 7/8  
 inch roller bit to 84.5 feet.  
 - Developed by air-lift  
 pumping 12/18/86.

DRILLED BY             
 LOGGED BY TCB  
 CHECKED BY           

BORING NUMBER B-15C  
 DATE STARTED 12/2/86  
 DATE COMPLETED 12/3/86  
 JOB NUMBER 12-4333

# TEST BORING RECORD

Approx.

Approx. ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT												
			5	10	15	20	25	30	40	50	60	70	80	90	100
746.3															
741.3															
736.3															
731.3															
726.3															
721.3															
716.3															
711.3															

REMARKS:

DRILLED BY             
 LOGGED BY             
 CHECKED BY           

BORING NUMBER B-15C  
 DATE STARTED             
 DATE COMPLETED             
 JOB NUMBER



# TEST BORING RECORD

Approx. ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION BLOWS PER FOOT
			0 5 10 15 20 30 40 50 60 100 166
706.3	84.5	Top of rock.	
		White to dark gray quartz biotite geniss.	
		Cored (NK)	
		Run 1 84.5'-86.3' Rec. 1.35' RQD 44%	
		Run 2 86.3'-96.0' Rec. 6.6' RQD 41%	
		Run 3 96.0'-103.4' Rec. 6.3' RQD 58%	
		Run 103.4'-106.3' Rec. 2.8' RQD 71%	
	105.5	Boring terminated.	

**REMARKS:**

DRILLED BY                       
 LOGGED BY           NCB            
 CHECKED BY           NJK          

BORING NUMBER           B-15C            
 DATE STARTED           12/2/86            
 DATE COMPLETED           12/2/86            
 JOB NUMBER           11A-0332



# TEST BORING RECORD

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM			
	71.4	Bit refusal		0	0	Partially weathered rock
		Dark yellow orange to light gray, partially weathered rock (PWR) containing orthoclase, quartz, biotite and muscovite		0	0	Partially weathered rock

**REMARKS:**

Cored from 110.9 to 137.5 feet using NQ and HQ sized core barrels. Well set at 137.5 feet with 2-inch ID PVC well screen and riser pipe.

DRILLED BY LE-ATL  
 LOGGED BY SRC  
 CHECKED BY PER

BORING NUMBER B-15D  
 DATE STARTED 11-20-89  
 DATE COMPLETED 12-22-89  
 JOB NUMBER 55-433317



# TEST BORING RECORD

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	% REC	% RQD	Joints	REMARKS
	81.0	Light to dark gray biotite gneiss		0	0		Partially weathered rock
				100	90		
				80	74		Low to high angle (45°) joints with some iron oxide staining
				100	94		
				94	90		
				90	70		Intensely weathered zone from 104 to 105 feet
				90	90		
				88	73		2-3 drilling breaks  Several low to high angle (45°) joints iron oxide staining in places

REMARKS:

DRILLED BY	LE-ATL	BORING NUMBER	B-15D
LOGGED BY	SRC	DATE STARTED	11-20-89
CHECKED BY	PER	DATE COMPLETED	12-22-89
		JOB NUMBER	55-433317



# TEST BORING RECORD

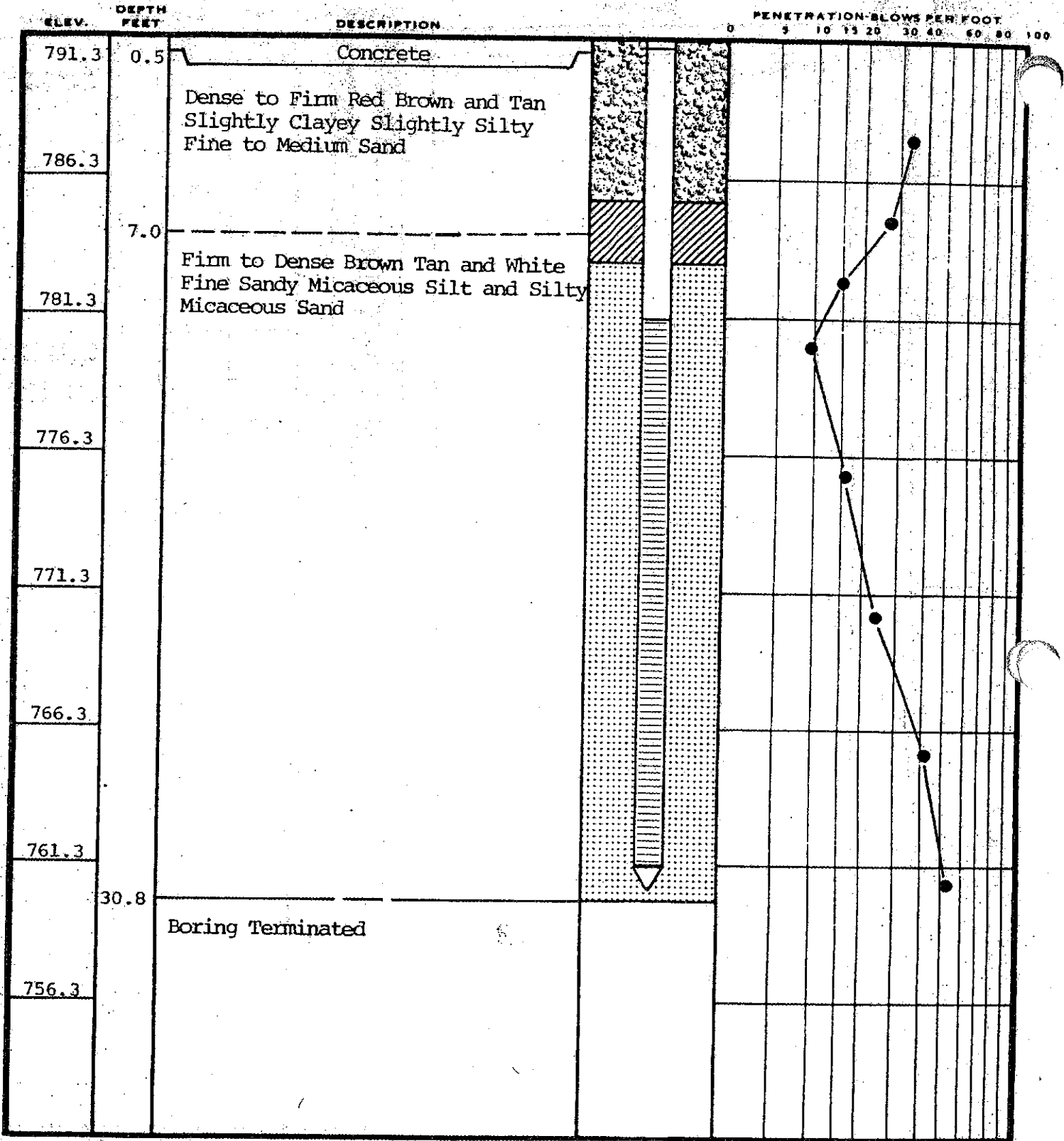
ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	% REC	% RQD	Joints	REMARKS
	121.0	Granitic gneiss		88	73		Several low to high angle (45°) joints
				99	88		
	130.9	Biotite gneiss		100	86		Several low to high angle (45°) joints Lower 18.0 inches appears tight
	137.5	Coring terminated at 137.5 feet					

REMARKS:

DRILLED BY	LE-ATL	BORING NUMBER	B-15D
LOGGED BY	SRC	DATE STARTED	11-20-89
CHECKED BY	PER	DATE COMPLETED	12-22-89
		JOB NUMBER	55-433317



TEST BORING RECORD Riser Stickup is -.30 Feet



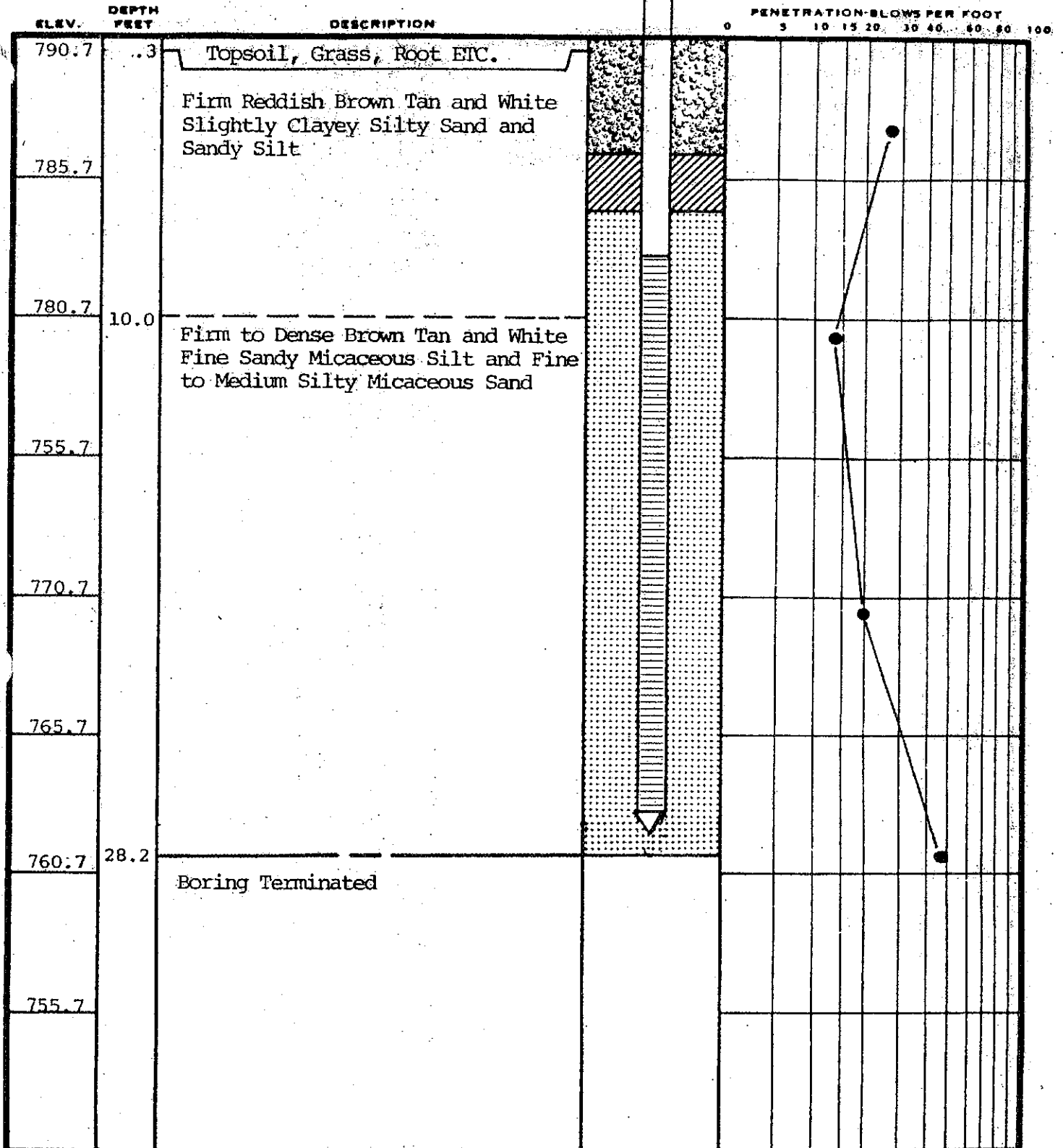
REMARKS:

DRILLED BY J.O.  
 LOGGED BY D.A.  
 CHECKED BY MM

BORING NUMBER B-16  
 DATE STARTED 7/24/85  
 DATE COMPLETED 7/25/85  
 JOB NUMBER MA-4333

TEST BORING RECORD

Riser Stickup is 2.3 Feet



REMARKS:

DRILLED BY J.O.  
 LOGGED BY D.A.  
 CHECKED BY MM

BORING NUMBER B-17  
 DATE STARTED 7/26/85  
 DATE COMPLETED 7/29/85  
 JOB NUMBER MA-4333



TEST BORING RECORD Riser Stickup is 0.0 Feet

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT																		
			0	5	10	15	20	30	40	50	60	80	100								
786.7	0.5	Concrete																			
781.7		Dense Brown Tan Pink and White, Fine Sandy Micaceous Silt and Silty Micaceous Fine to Medium Sand																			
776.7																					
771.7																					
766.7																					
761.7																					
756.7																					
751.7	30.5	Boring Terminated																			

REMARKS:

DRILLED BY J.O.  
 LOGGED BY D.A.  
 CHECKED BY MM

BORING NUMBER B-18  
 DATE STARTED 7/30/85  
 DATE COMPLETED 7/30/85  
 JOB NUMBER MA-4333

TEST BORING RECORD

Riser Stickup is -.45 Feet

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT																		
			0	5	10	15	20	30	40	60	80	100									
791.3	0.5	Concrete																			
786.3		Sandy Micaceous Silt and Silty Micaceous Sand																			
781.3																					
776.3																					
771.3																					
766.3																					
761.3																					
	30.9	Boring Terminated																			
756.3																					

REMARKS:

DRILLED BY WH  
 LOGGED BY DAA  
 CHECKED BY MM

BORING NUMBER B-19  
 DATE STARTED 8/26/85  
 DATE COMPLETED 8/27/85  
 JOB NUMBER MA-4333

# TEST BORING RECORD

Riser Stickup is -.5 Feet

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT									
			0	5	10	15	20	30	40	60	80	100
791.3	0.5	Concrete										
780.15		Sandy Micaceous Silt and Silty Micaceous Sand										
775.15												
770.15												
765.15												
760.15												
755.15												
750.15												
750.15	31.0	Boring Terminated										

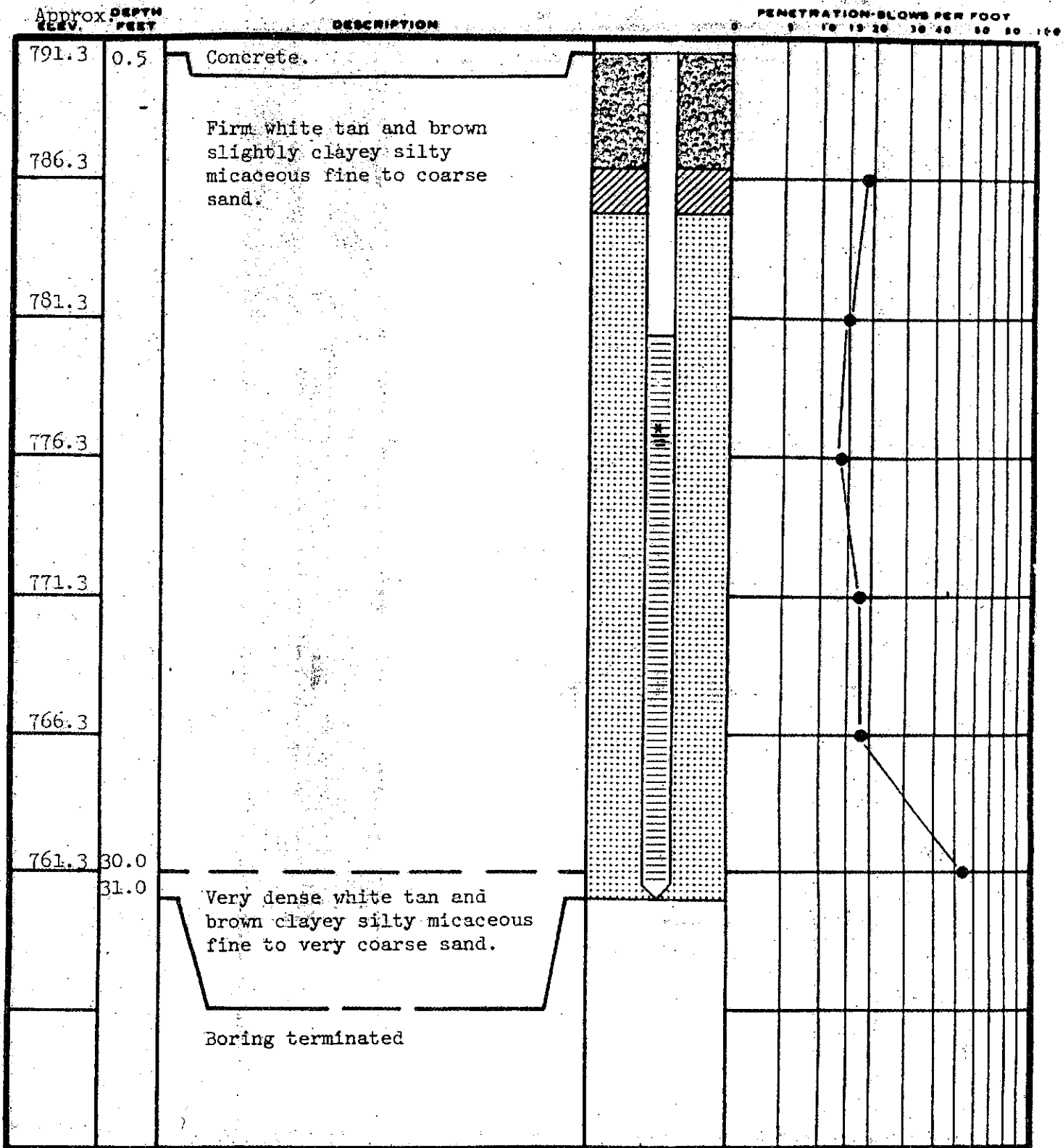
REMARKS:

DRILLED BY WH  
 LOGGED BY DAA  
 CHECKED BY MM

BORING NUMBER B-20  
 DATE STARTED 8/27/85  
 DATE COMPLETED 8/28/85  
 JOB NUMBER MA-4337

# TEST BORING RECORD

Riser Stickup is  
-0.5 feet.



**REMARKS:**

- \* Water level on 12/16/86.
- Wash drilled with 4 7/8 inch roller bit to 31.0 feet.
- Developed by air-lift pumping 12/9/86.

**DRILLED BY** KT  
**LOGGED BY** TCB  
**CHECKED BY** KJK

**BORING NUMBER** B-21  
**DATE STARTED** 11/25/86  
**DATE COMPLETED** 11/25/86  
**JOB NUMBER** MA-4333

# TEST BORING RECORD

Riser Sticking is

3 feet

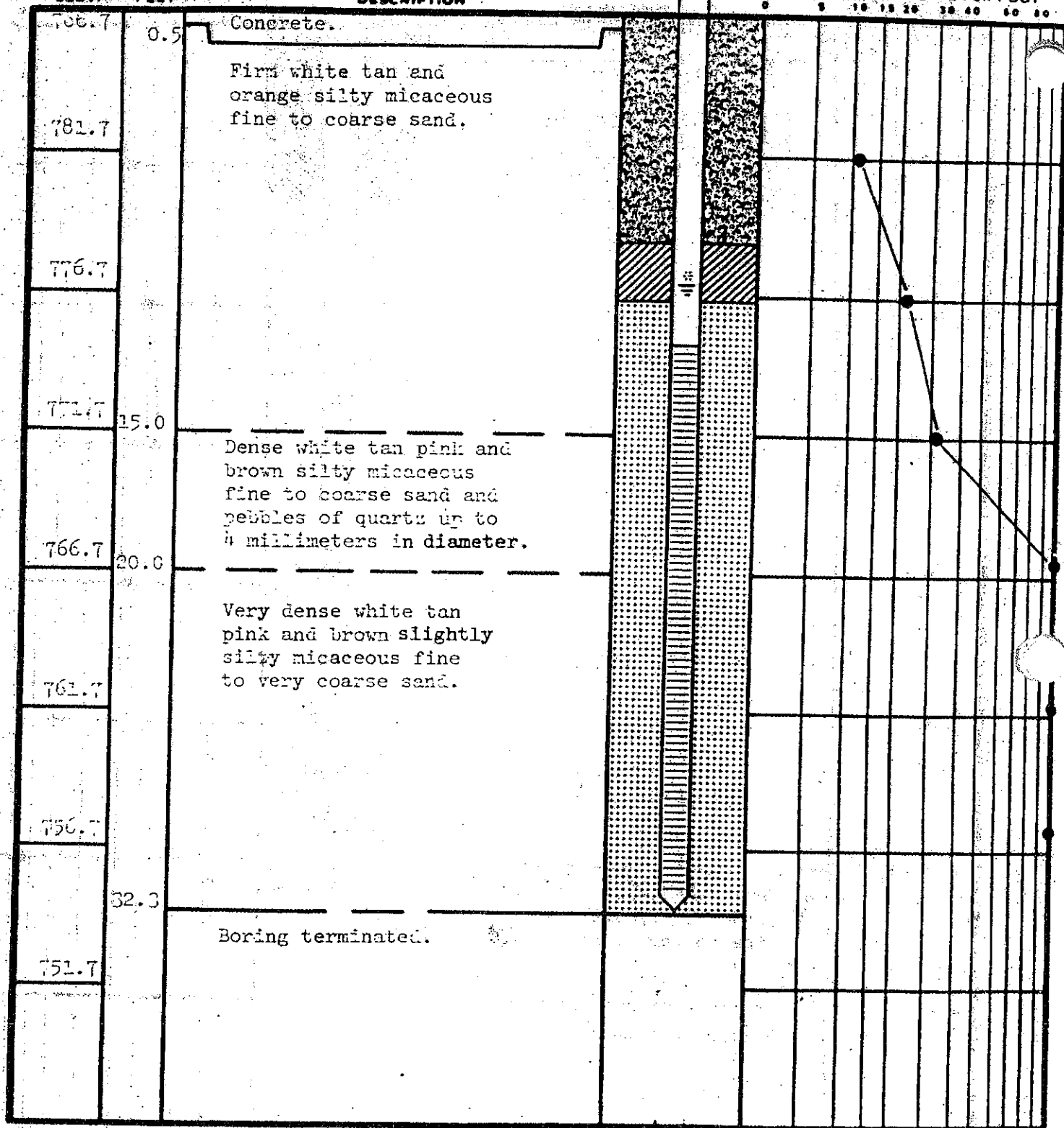
PENETRATION-BLOWS PER FOOT

0 5 10 15 20 30 40 50 60 100

Approx.  
ELEV.

DEPTH  
FEET

DESCRIPTION



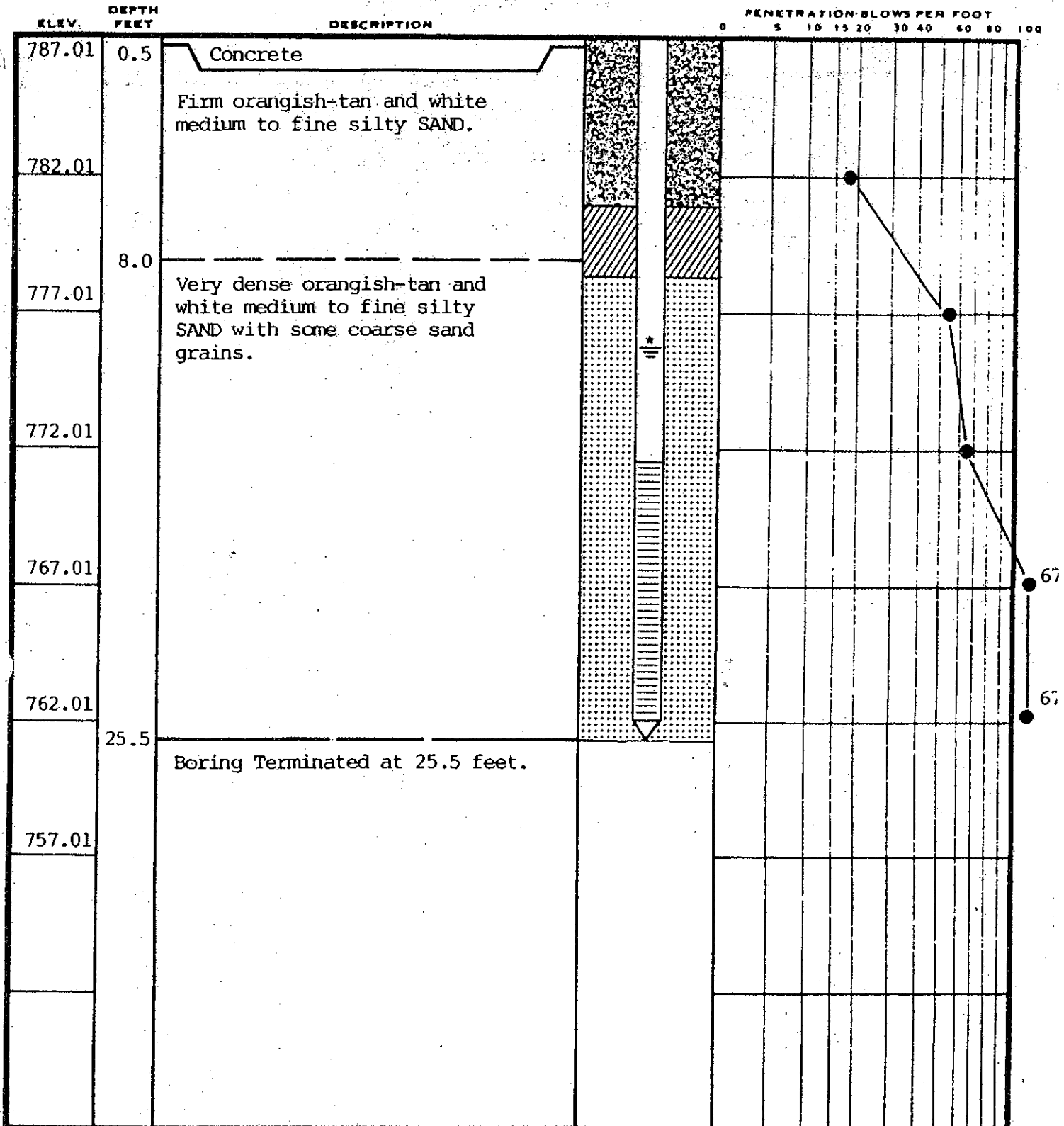
**REMARKS:**

- # Water level on 12/16/36.
- Wash drilled with # 7/8 inch roller bit to 32.3 feet.
- Developed by air-lift pumping 12/2/36.

**DRILLED BY**                       
**LOGGED BY** TCS  
**CHECKED BY**                     

**BORING NUMBER** B-22  
**DATE STARTED** 12/11/36  
**DATE COMPLETED** 12/22/36  
**JOB NUMBER**

# TEST BORING RECORD



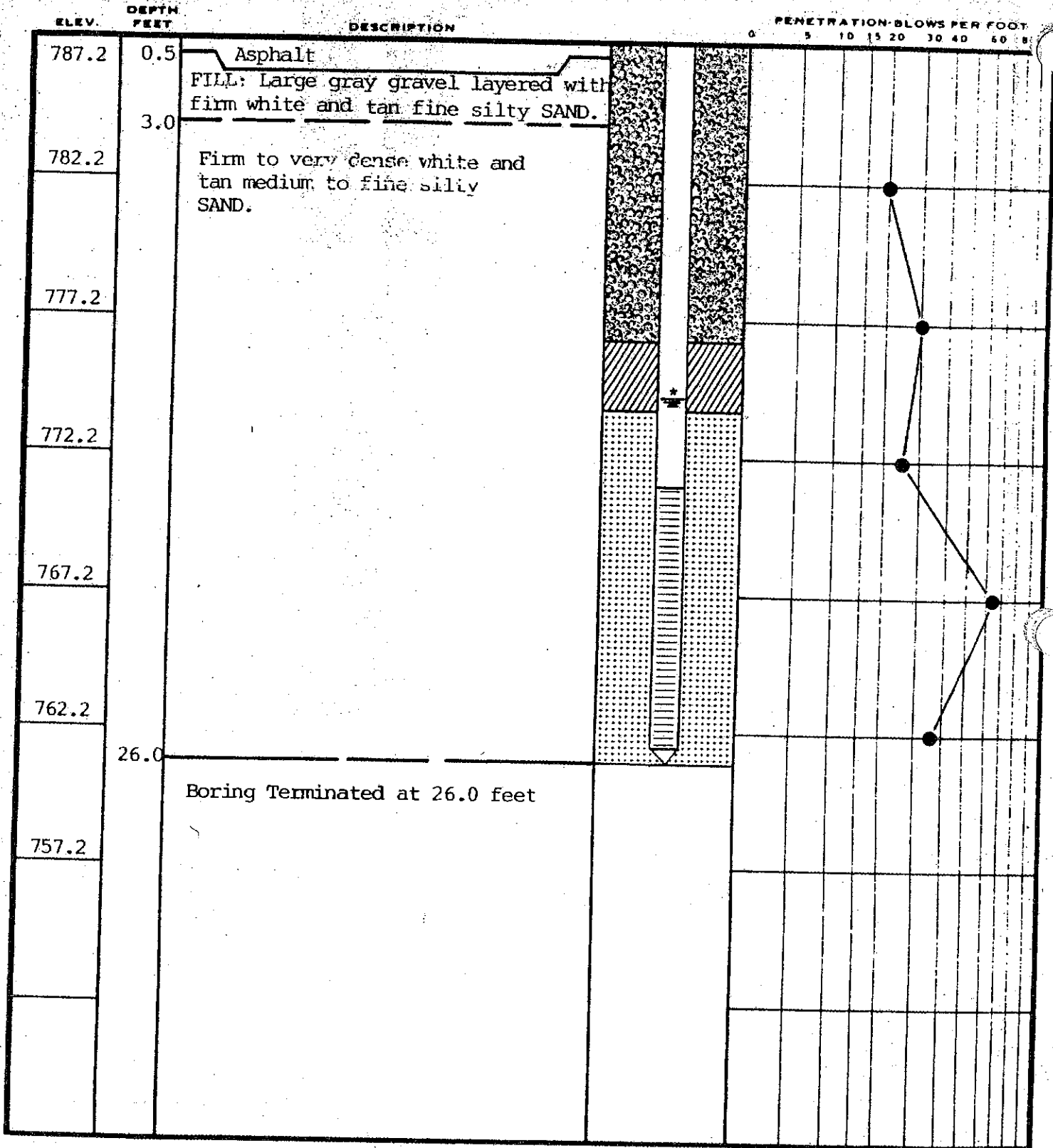
**REMARKS:**

- \* Water level measured on 12-2-87.
- Wash drilled with 5 7/8 inch roller to 25.5 feet.
- Developed by air-lift pumping on 12-3-87.
- Pilot hole drilled with 3 7/8 inch roller bit

**DRILLED BY** Law-Atlanta  
**LOGGED BY** R. Scott Ribes  
**CHECKED BY** Kirk J. Kessler

**BORING NUMBER** B-23  
**DATE STARTED** 12-1-87  
**DATE COMPLETED** 12-1-87  
**JOB NUMBER** 55-4333

# TEST BORING RECORD



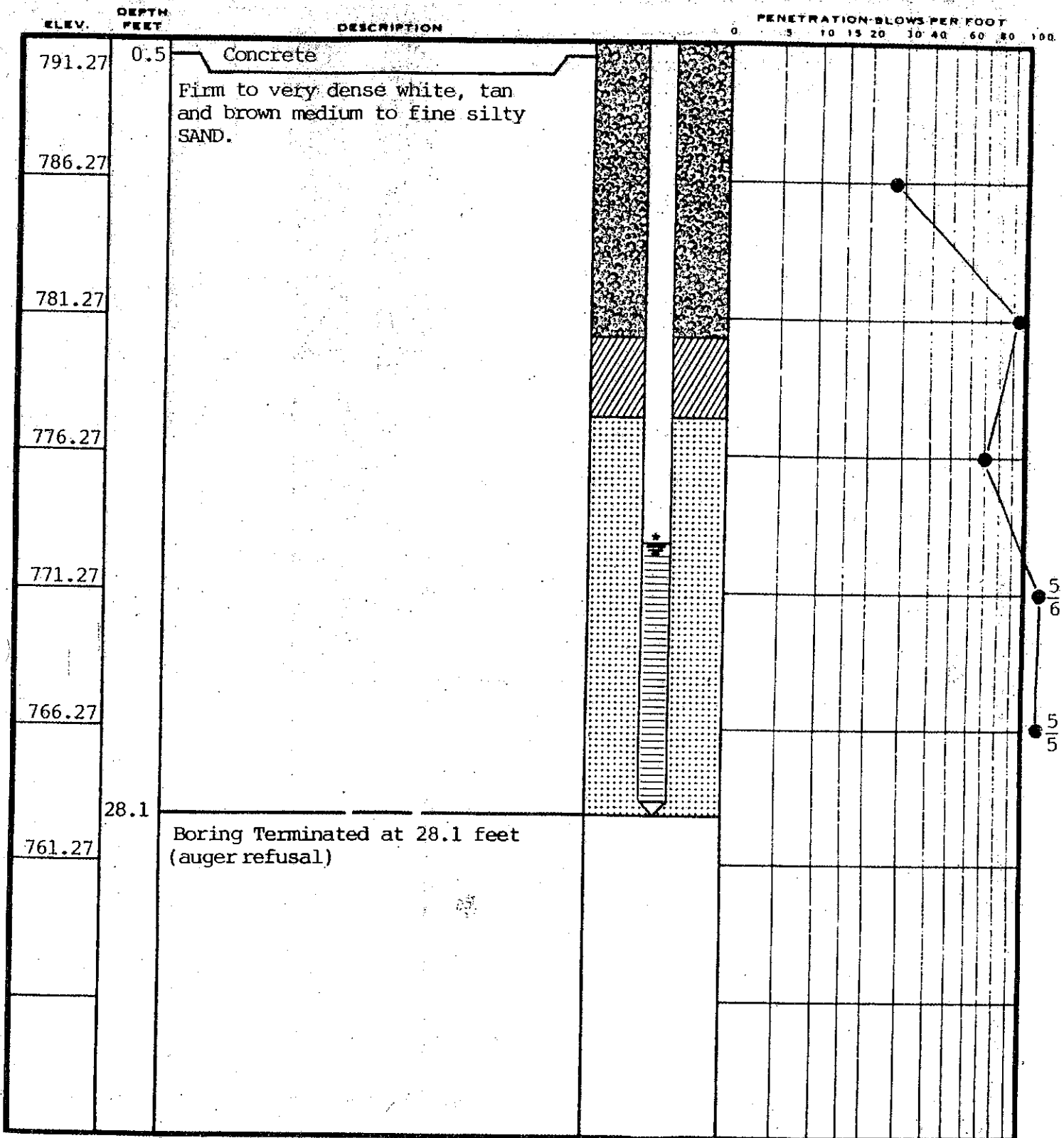
**REMARKS:**

- \* Water level measured on 12-1-87.
- Pilot hole drilled with 3 7/8 inch roller
- Wash drilled with 7 7/8 inch roller to 26.0 feet.
- Developed by air-lift pumping on 12-4-87.

**DRILLED BY** Law-Atlanta  
**LOGGED BY** R. Scott Ribes  
**CHECKED BY** Kirk J. Kessler

**BORING NUMBER** B-24  
**DATE STARTED** 11-30-87  
**DATE COMPLETED** 11-30-87  
**JOB NUMBER** 55-4333

# TEST BORING RECORD



**REMARKS:**

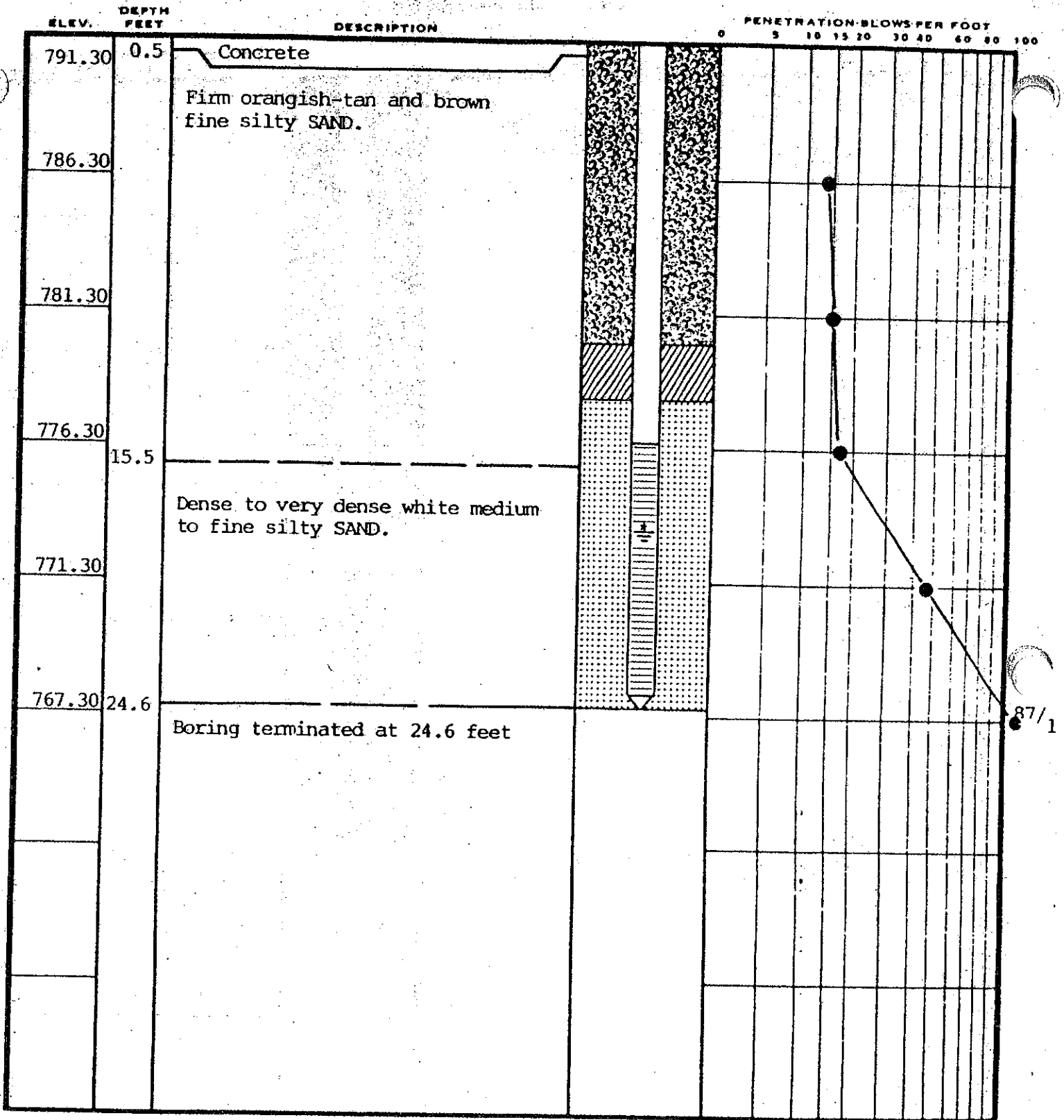
- \* Water level measured on 12-4-87
- 3 inch I.D. hollow stem auger to 28.1 feet
- Developed by air-lift pumping on 12-7-87.

**DRILLED BY** Law-Atlanta  
**LOGGED BY** R. Scott Ribes  
**CHECKED BY** Kirk J. Kessler

**BORING NUMBER** B-25  
**DATE STARTED** 12-2-87  
**DATE COMPLETED** 12-2-87  
**JOB NUMBER** 55-4333



# TEST BORING RECORD



**REMARKS:**

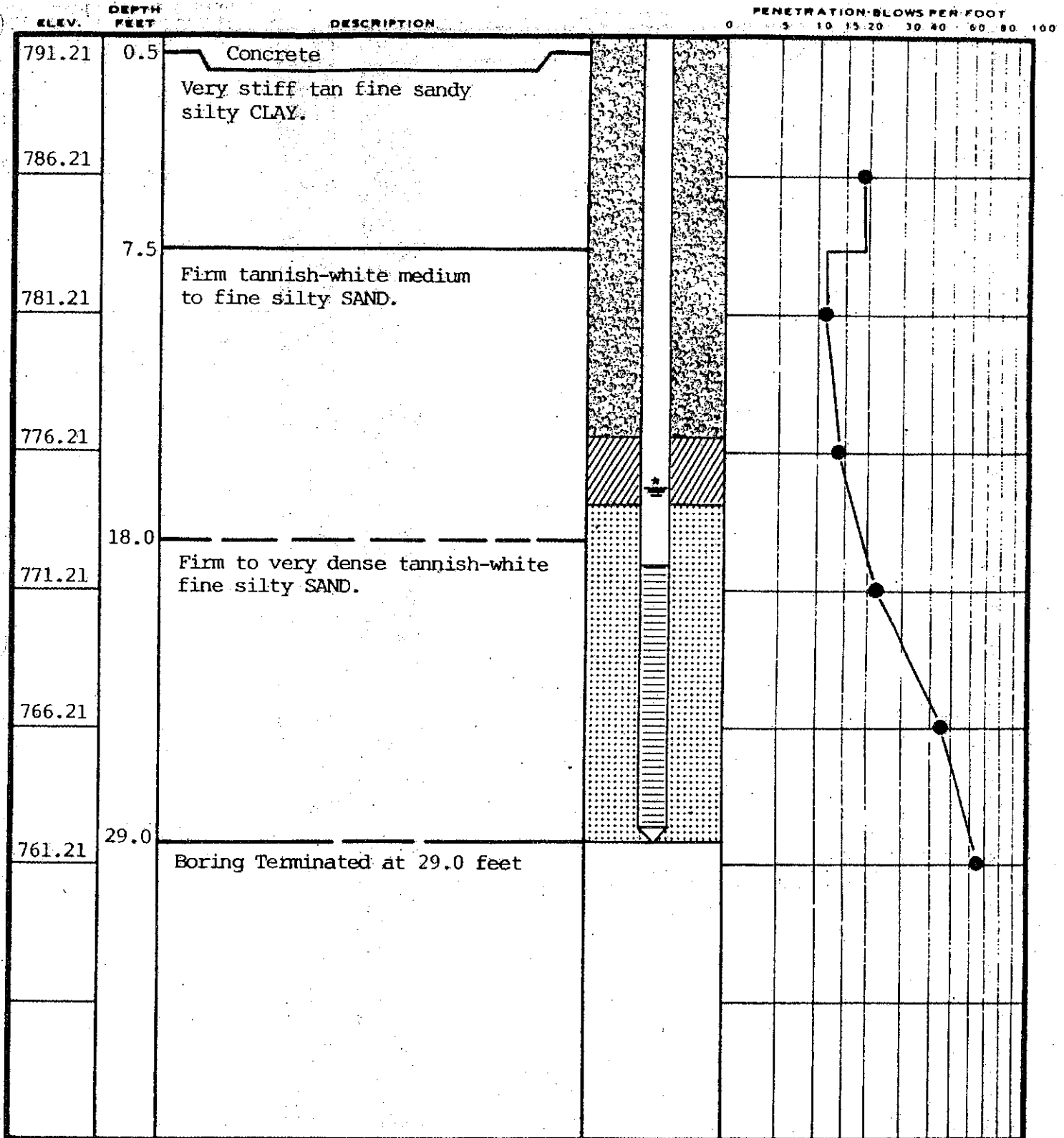
- \* Water level measured on 12-4-87.
- 3-inch I.D. hollow stem auger to 24.6 feet.
- Developed by air-lift pumping on 12-7-87.

DRILLED BY Law-Atlanta  
 LOGGED BY R. Scott Ribes  
 CHECKED BY Kirk J. Kessler

BORING NUMBER B-26  
 DATE STARTED 12-3-87  
 DATE COMPLETED 12-3-87  
 JOB NUMBER 55-4333

87/1

# TEST BORING RECORD



**REMARKS:**

- \* Water level measured on 12-7-87
- 3 inch I.D. hollow stem auger to 29.0 feet.
- Developed by air-lift pumping on 12-9-87.

DRILLED BY Law-Atlanta  
 LOGGED BY R. Scott Ribes  
 CHECKED BY Kirk J. Kessler

BORING NUMBER B-27  
 DATE STARTED 12-4-87  
 DATE COMPLETED 12-4-87  
 JOB NUMBER 55-4333

# TEST BORING RECORD

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT
			0 5 10 15 20 30 40 60 80
791.22	0.5	Concrete	
		From 0 - 30 feet see Boring Record B-27 for Lithology	
786.22			
781.22			
776.22			
771.22			
766.22			
761.22	30.0	Dense to very dense tannish-white medium to fine silty SAND.	
756.22			
751.22	40.0		

**REMARKS:**

- \* Water level measured on 12-8-87.
- Wash drilled with 5 7/8 inch roller to 54.4 feet.
- Developed by air-lift pumping on 12-9-87
- Pilot hole drilled with 3 7/8 inch roller

**DRILLED BY** Law-Atlanta  
**LOGGED BY** R. Scott Ribes  
**CHECKED BY** Kirk J. Kessler

**BORING NUMBER** B-27A  
**DATE STARTED** 12-7-87  
**DATE COMPLETED** 12-7-87  
**JOB NUMBER** 55-4333

TEST BORING RECORD

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT																	
			0	5	10	15	20	30	40	60	80	100								
751.22		Dense to very dense tannish-white medium to fine silty SAND.																		
746.22																				
741.22																				
736.22	54.4																			
		Boring Terminated at 54.4 feet (auger refusal)																		

83

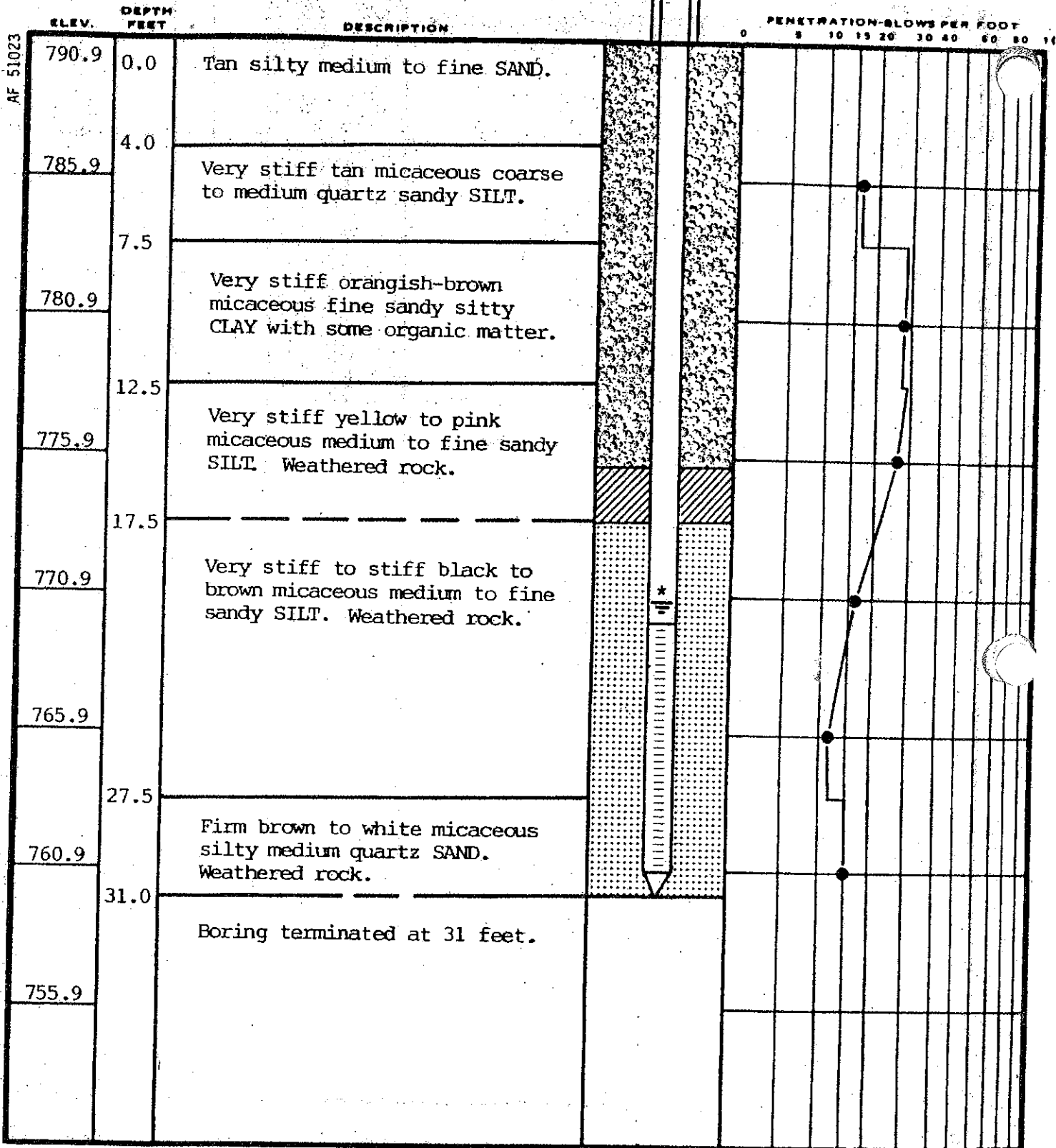
REMARKS:

DRILLED BY Law-Atlanta  
 LOGGED BY R. Scott Ribes  
 CHECKED BY Kirk J. Kessler

BORING NUMBER B-27A  
 DATE STARTED 12-7-87  
 DATE COMPLETED 12-7-87  
 JOB NUMBER 55-4333

# TEST BORING RECORD

Riser Stickup is 2.55 feet



**REMARKS:**

Method of Drilling: hollow stem auger

Method of Development: air lift pumping on 7-21-88.

\* Water level measured on 8-31-88.

Designated on field log as B-33.

**DRILLED BY** LAW-Atlanta

**LOGGED BY** R.S. Ribes

**CHECKED BY** K.J. Kessler

**BORING NUMBER** B-28

**DATE STARTED** 7/7/88

**DATE COMPLETED** 7/7/

**JOB NUMBER** 55-4333

TEST BORING RECORD

Riser Stickup is 2.75 feet

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT																		
			0	5	10	15	20	30	40	60	80	100									
790.7	0.0	See B-28 test boring record for lithology																			
785.7																					
780.7																					
775.7																					
770.7																					
765.7																					
760.7																					
755.7	34.0		Very stiff brown and white micaceous medium to fine quartz sandy SILT with some coarse quartz grains. Weathered Rock.																		
750.7																					

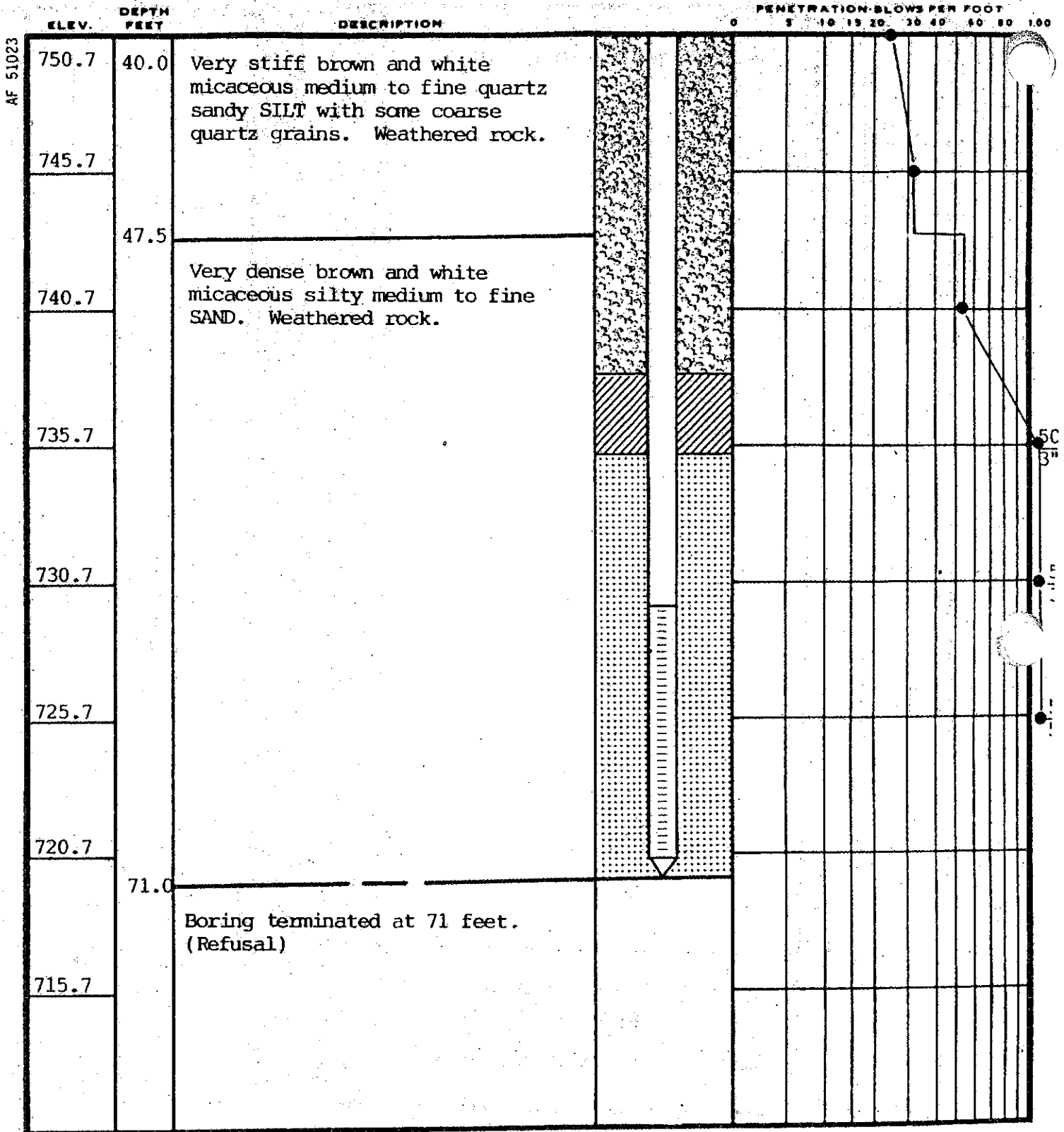
REMARKS:

Method of Drilling: hollow stem auger.  
 Method of Development: air lift pumping on 7-21-88.  
 \* Water level measured on 8-31-88.  
 Designated on field log as P-33A

DRILLED BY LAW-Atlanta  
 LOGGED BY R.S. Ribes  
 CHECKED BY K.J. Kessler

BORING NUMBER B-28A  
 DATE STARTED 7/8/88  
 DATE COMPLETED 7/8/88  
 JOB NUMBER 55-4333

# TEST BORING RECORD



**REMARKS:**

DRILLED BY LAW-Atlanta  
 LOGGED BY R.S. Ribes  
 CHECKED BY K.J. Kessler

BORING NUMBER B-28A  
 DATE STARTED 7-8-88  
 DATE COMPLETED 7-8-  
 JOB NUMBER 55-4

# TEST BORING RECORD

Riser Stickup is 2.25 feet.

	ELEV. FEET	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT									
				0	5	10	15	20	30	40	60	80	100
AF 51023	790.6	0.0	See E-28 and B-28A Test Boring records for lithology										
	785.6												
	780.6												
	775.6												
	770.6												
	765.6												
	760.6												
	755.6												
	750.6												

**REMARKS:**

Method of Drilling: wash boring from 0 to 73 feet; diamond coring from 73 to 103 feet.

Method of Development: dedicated teflon bailer on 7-29-88.

\* Water level measured on 8-31-88. Designated on field log as B-33B.

DRILLED BY JAW-Atlanta  
 LOGGED BY J.L. Lemine  
 CHECKED BY K.J. Kessler

BORING NUMBER B-28B  
 DATE STARTED 7-22-88  
 DATE COMPLETED 7-22-88  
 JOB NUMBER 55-4333



# TEST BORING RECORD

AF 51023	ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION BLOWS PER FOOT											
				0	5	10	15	20	30	40	50	60	70		
	750.6	40.0	See B-28A Test Boring Record for lithology.												
	745.6														
	740.6														
	735.6														
	730.6														
	725.6														
	720.6														
	715.6	73.0		Top of Rock											
	710.6		Tan to gray partially weathered quartz biotite gneiss with quartz vein.  Cored (NX)												
				35	6.6										

**REMARKS:**

DRILLED BY LAW-Atlanta  
 LOGGED BY J.L. Lemine  
 CHECKED BY K.J. Kessler

BORING NUMBER B-28B  
 DATE STARTED 7-22-87  
 DATE COMPLETED 7-22  
 JOB NUMBER 55-4333



# TEST BORING RECORD

Riser Stickup is 2.76 feet

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT										
			0	5	10	15	20	30	40	50	60	80	100
789.9	0.0	See B-29A test boring record for lithology.											
784.9													
779.9													
774.9													
769.9													
764.9													
759.9	30.6	Boring terminated at 30.6 feet.											
754.9													

**REMARKS:**

Method of Drilling: hollow stem auger.

Method of Development: dedicated teflon bailer on 7-28-88.

\* Water level measured on 8-31-88. Designated on field log as B-34.

DRILLED BY LAW-Atlanta  
 LOGGED BY R.S. Ribes  
 CHECKED BY K.J. Kessler

BORING NUMBER B-29  
 DATE STARTED 7-13-88  
 DATE COMPLETED 7-13-88  
 JOB NUMBER 55-4

TEST BORING RECORD

Riser Stickup is 2.69 feet

PENETRATION-BLOWS PER FOOT  
0 5 10 15 20 30 40 50 60 70 80 90 100

ELEV.	DEPTH FEET	DESCRIPTION																			
789.8	0.0	Hard tan fine sandy SILT.																			
784.8																					
779.8		Very stiff to hard orange-brown and tan coarse to fine sandy silty CLAY.																			
774.8																					
769.8		Dense to very dense orange-brown and white micaceous medium to fine silty SAND.																			
764.8																					
759.8																					
754.8		Very dense gray and black medium to fine silty SAND. Weathered rock.																			
749.8		Very dense orange-tan medium to fine silty SAND with some black staining. Weathered rock.																			

REMARKS:

Method of Drilling: hollow stem auger.

Method of Development: dedicated teflon bailer on 7-28-88.

\* Water level measured on 8-31-88. Designated on field log as B-34A.

DRILLED BY LAW-Atlanta  
 LOGGED BY R.S. Ribes  
 CHECKED BY K.J. Kessler

BORING NUMBER B-29A  
 DATE STARTED 7-12-88  
 DATE COMPLETED 7-12-88  
 JOB NUMBER 55-4333

# TEST BORING RECORD

AF 51023	ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT											
				0	5	10	15	20	30	40	50	60	70		
	749.8	40.0													
		42.5	Very dense gray and black micaceous medium to fine silty SAND. Weathered rock.												
	744.8														
	739.8														
	734.8														
	729.8	60.0	Boring terminated at 60 feet. (Refusal)												

**REMARKS:**

**DRILLED BY** LAW-Atlanta  
**LOGGED BY** R.S. Ribes  
**CHECKED BY** K.J. Kessler

**BORING NUMBER** E-29A  
**DATE STARTED** 7-12-88  
**DATE COMPLETED** 7-12  
**JOB NUMBER** 55-4333

TEST BORING RECORD

Riser Stickup is 1.14 feet.

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT																	
			0	5	10	15	20	30	40	50	60	80	100							
789.2	0.0	See B-30A test boring record for lithology.																		
784.2																				
779.2																				
774.2																				
769.2																				
764.2																				
759.2	30.0		Boring terminated at 30 feet.																	

REMARKS:

Method of Drilling: hollow stem auger.

Method of Development: dedicated teflon bailer on 7-27-88.

\* Water level measured on 8-31-88. Designated on field log as B-32.

DRILLED BY LAW-Atlanta

LOGGED BY R.S. Ribes

CHECKED BY K.J. Kessler

BORING NUMBER B-30

DATE STARTED 7/13/88

DATE COMPLETED 7/13/88

JOB NUMBER 55-4333

# TEST BORING RECORD

Riser Stickup is 1.37 feet  
PENETRATION BLOWS PER FOOT  
0 5 10 15 20 30 40 50 60 100

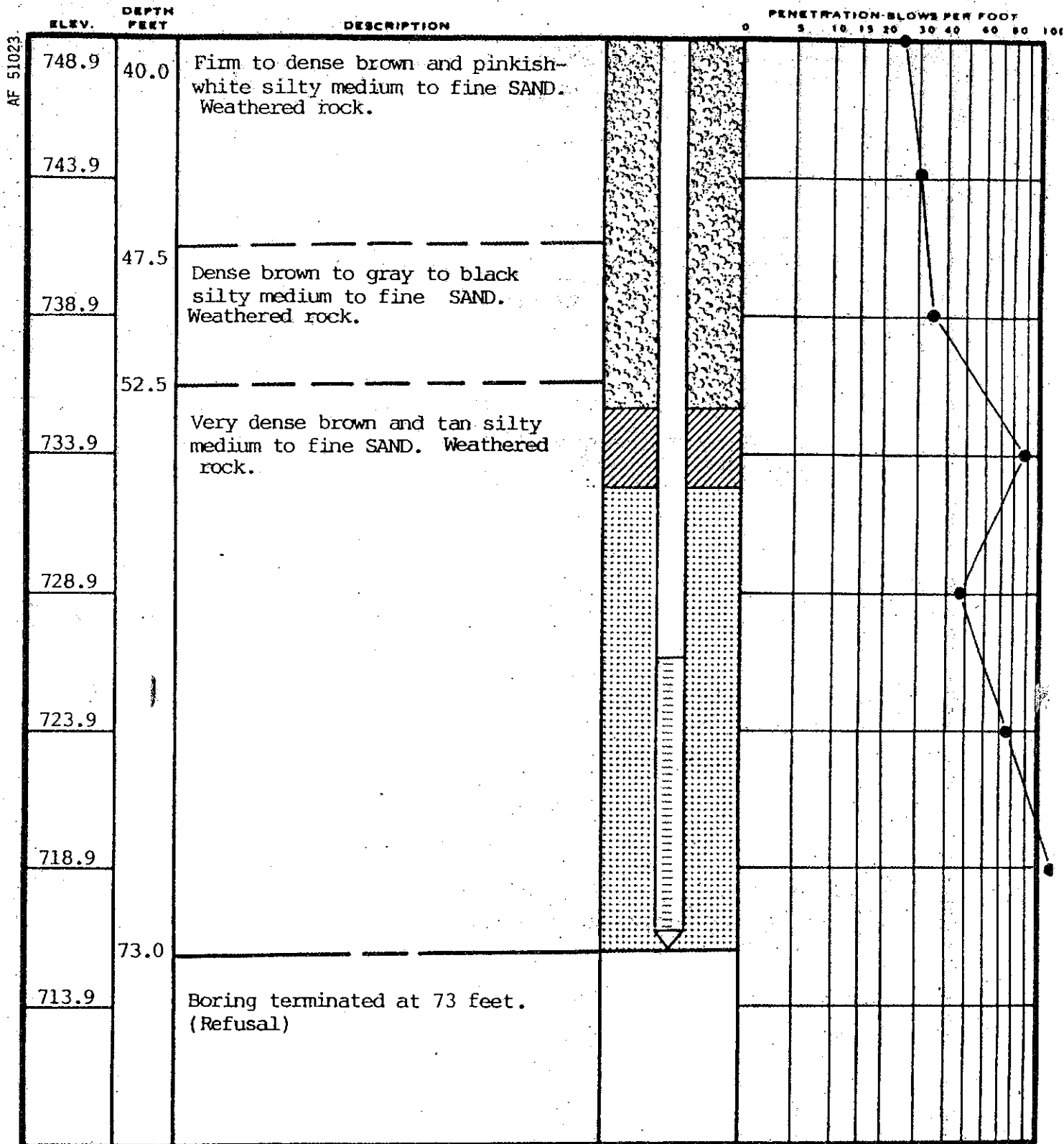
ELEV.	DEPTH FEET	DESCRIPTION	
788.9	0.0	Loose orange-brown and tan medium to fine silty SAND.	0
783.9			
778.9	7.5	Firm to very stiff tan/brown micaceous fine sandy SILT.	5
773.9			10
768.9			15
763.9			20
758.9	27.5	Firm to dense brown and pinkish-white silty medium to fine SAND. Weathered rock.	25
753.9			30
748.9			35

**REMARKS:**

Method of Drilling: wash boring. DRILLED BY LAW-Atlanta  
 Method of Development: air LOGGED BY R.S. Ribes  
 lift pumping on 7-27-88. CHECKED BY K.J. Kessler  
 \* Water level measured on 8-31-88.  
 Designated on field log as B-32A.

BORING NUMBER B-30A  
 DATE STARTED 7/11/88  
 DATE COMPLETED 7/1  
 JOB NUMBER 55-4333

# TEST BORING RECORD



**REMARKS:**

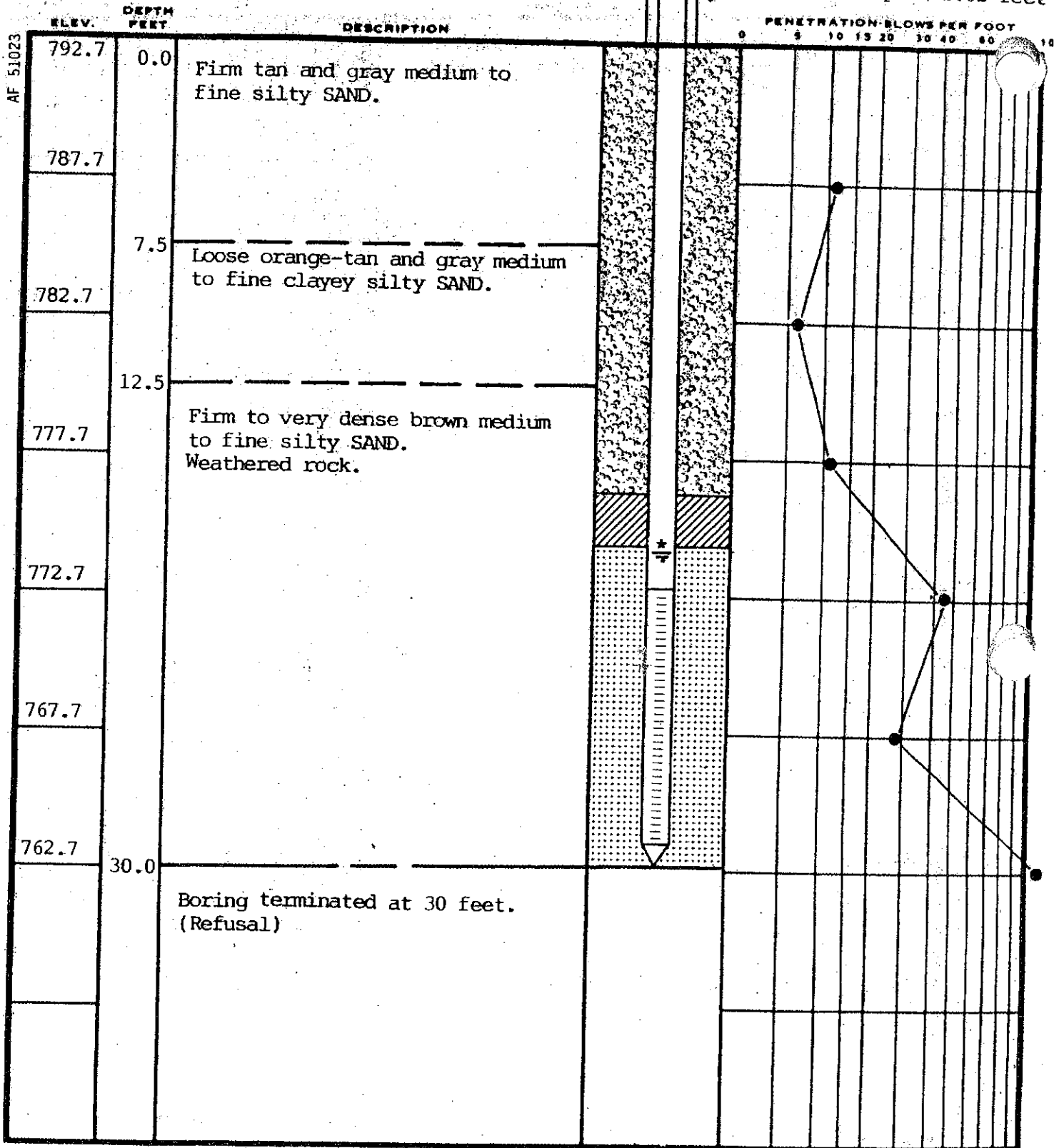
DRILLED BY LAW-Atlanta  
 LOGGED BY R.S. Ribes  
 CHECKED BY K.J. Kessler

BORING NUMBER B-30A  
 DATE STARTED 7/11/88  
 DATE COMPLETED 7/11/88  
 JOB NUMBER 55-4333



TEST BORING RECORD

Riser Stickup is 2.02 feet



REMARKS:

Method of Drilling: wash boring. DRILLED BY LAW-Atlanta  
 Method of Development: air LOGGED BY R.S. Ribes  
 lift pumping on 7-26-88. CHECKED BY K.J. Kessler  
 \* Water level measured on 8-31-88.

BORING NUMBER B-31  
 DATE STARTED 7/12/88  
 DATE COMPLETED 7/12  
 JOB NUMBER 55-4333

TEST BORING RECORD

Riser Stickup is 1.42 feet

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWERS PER FOOT																	
			0	5	10	15	20	30	40	50	60	80	100							
796.4	0.0	Very dense to dense tan white and gray medium to fine silty SAND.																		
791.4																				
786.4																				
781.4																				
776.4		Very dense tannish-gray and brown medium to fine silty SAND. Weathered rock.																		
771.4	22.5																			
766.4	30.0	Boring terminated at 30 feet. (Refusal).																		

REMARKS:

Method of Drilling: hollow stem auger.

Method of Development: air lift pumping on 7-27-88.

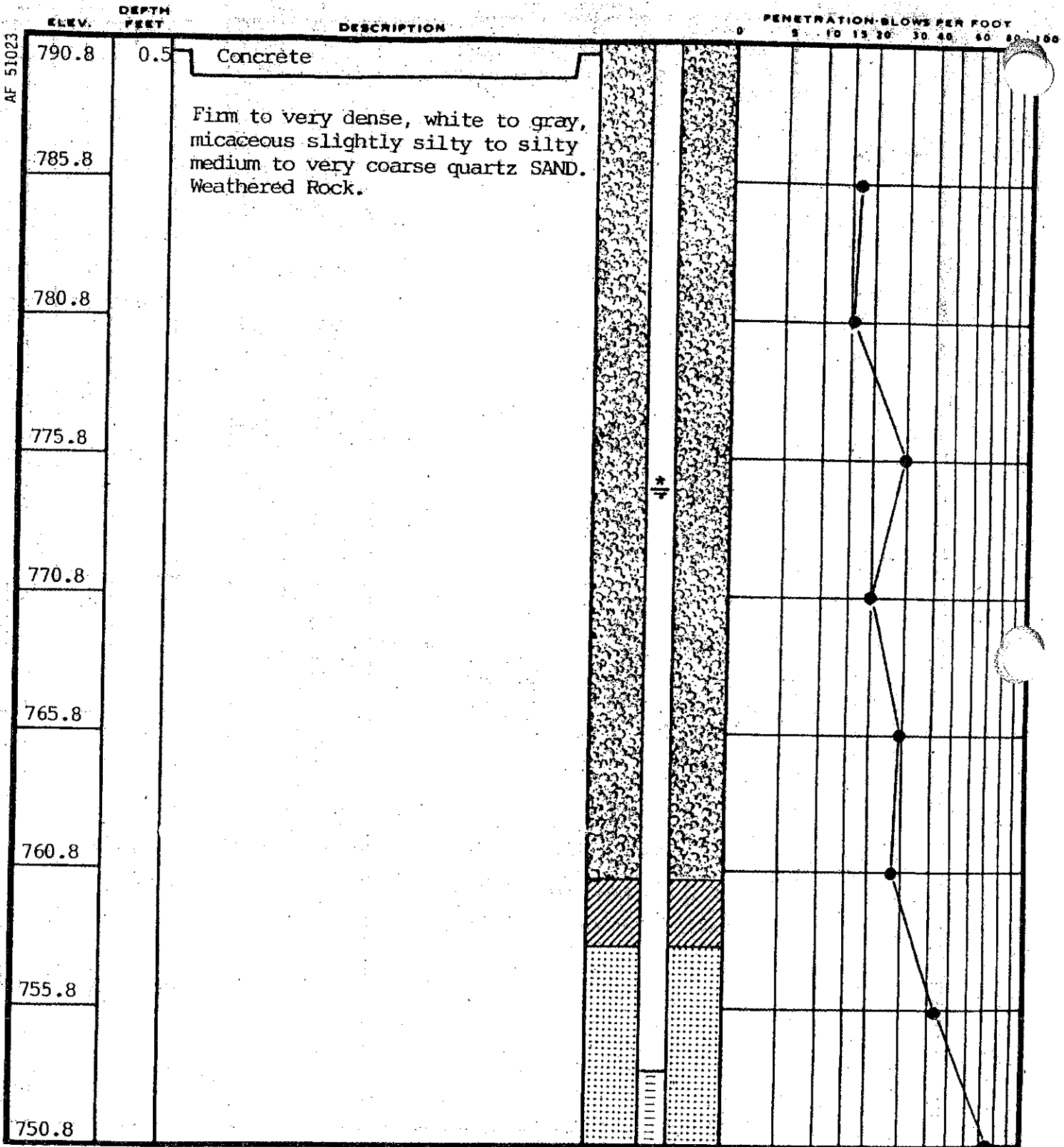
\* Water level measured on 8-31-88.

DRILLED BY LAW-Atlanta  
 LOGGED BY R.S. Ribes  
 CHECKED BY K.J. Kessler

BORING NUMBER B-32  
 DATE STARTED 7/13/88  
 DATE COMPLETED 7/13/88  
 JOB NUMBER 55-4333

Designated on field log as B-30.

# TEST BORING RECORD



**REMARKS:**  
 Method of Drilling: wash boring. **DRILLED BY** LAW-Atlanta  
 Method of Development: **LOGGED BY** R.S. Ribes  
 air lift pumping on 7-28-88. **CHECKED BY** K.J. Kessler  
 \* Water level measured on 8-31-88.  
 Designated on field logs as B-28.

**BORING NUMBER** B-33  
**DATE STARTED** 7/20/88  
**DATE COMPLETED** 7/20/88  
**JOB NUMBER** 55-4335

# TEST BORING RECORD

AF 51023	ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT													
				0	5	10	15	20	30	40	50	60	70	80	90	100	
	750.8	40.0															
	745.8																
		48.0															
	740.8		Boring terminated at 48 feet. (Refusal)														

REMARKS:

DRILLED BY LAW-Atlanta  
 LOGGED BY R.S. Ribes  
 CHECKED BY K.J. Kessler

BORING NUMBER B-33  
 DATE STARTED 7/20/88  
 DATE COMPLETED 7/20/88  
 JOB NUMBER 55-4333

# TEST BORING RECORD

HEIGHT OF RISER: 2.0 feet  
DATUM ELEVATION: 792.35

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT									
				0	5	10	15	20	40	60	80	100	
790.4		Light brown slightly micaceous very silty fine to medium SAND.											
785.4													
780.4	10.0	Light brown to white slightly micaceous very silty very fine to medium SAND with some fine rock fragments.											
775.4													
770.4	20.0	White and light brown with black slightly micaceous very silty fine to medium SAND with some fine quartz rock fragments and structure (saprolite). Saturated at 20.0 feet.											
765.4													
760.4													
755.4													
750.4													

UNPLOT LOG XEROX 33B PL 3 SDD-1

**REMARKS:**

Drilling Technique: 0.0 to 70.0 feet, air rotary using 9 7/8 inch tri-cone bit. 6-inch I.D. steel casing grouted to 70.0 feet. 70.0 to 100.0 feet using HQ rock core barrel. 2-inch I.D. PVC well screen and riser.

DRILLED BY Miller Drilling  
LOGGED BY RAS  
CHECKED BY SDD

BORING NUMBER B-33B  
DATE STARTED 10/24/02  
DATE COMPLETED 10/30/02  
JOB NUMBER 12000-8-0015



# TEST BORING RECORD

HEIGHT OF RISER: 2.0 feet  
DATUM ELEVATION: 792.35

ELEVATION (FT)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT										
				0	5	10	15	20	40	60	80	100		
745.4														
740.4	50.7	White, light brown and light gray micaceous very silty fine to coarse SAND with structure (saprolite).												
735.4														
730.4	60.2	No sample recovered. Saprolite with partially weathered rock. Refusal with tri-cone bit at 70.0 feet.												
725.4														
720.4	70.0	Gneissic granite with quartz, biotite, muscovite, pink to white feldspar. Weathered fracture from 71.2 to 71.9 feet.												
715.4		Vertical weathered fracture from 73.0 to 76.6 feet. Weathered horizontal to 30° fractures at 73.2, 73.7, 74.1, 74.4 and 74.7 feet.												
		Horizontal slightly weathered fractures at 79.5 and 80.0 feet.												
710.4														
					% REC.	% BOQ.								
					90	60								
					80	30								
					64	58								

REMARKS:

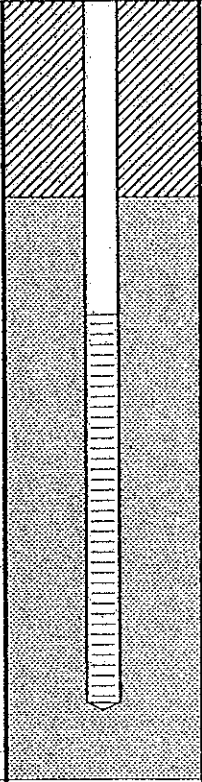
DRILLED BY Miller Drilling  
LOGGED BY RAS  
CHECKED BY SDD

BORING NUMBER B-33B  
DATE STARTED 10/24/02  
DATE COMPLETED 10/30/02  
JOB NUMBER 12000-8-0019



# TEST BORING RECORD

HEIGHT OF RISER: 2.0 feet.  
DATUM ELEVATION: 792.35

ELEVATION (FT)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	% REC.	% ROD
4					
705.4		Several low angle weathered fractures in core, depth undetermined due to poor core recovery.		64	58
700.4				39	28
695.4		Weathered horizontal to high angle fractures at 96.5, 97.9 to 98.1 and 99.2 to 99.5 feet.		100	68
690.4	100.0	Boring terminated at 100 feet.			
685.4					
680.4					
675.4					
670.4					

REMARKS:

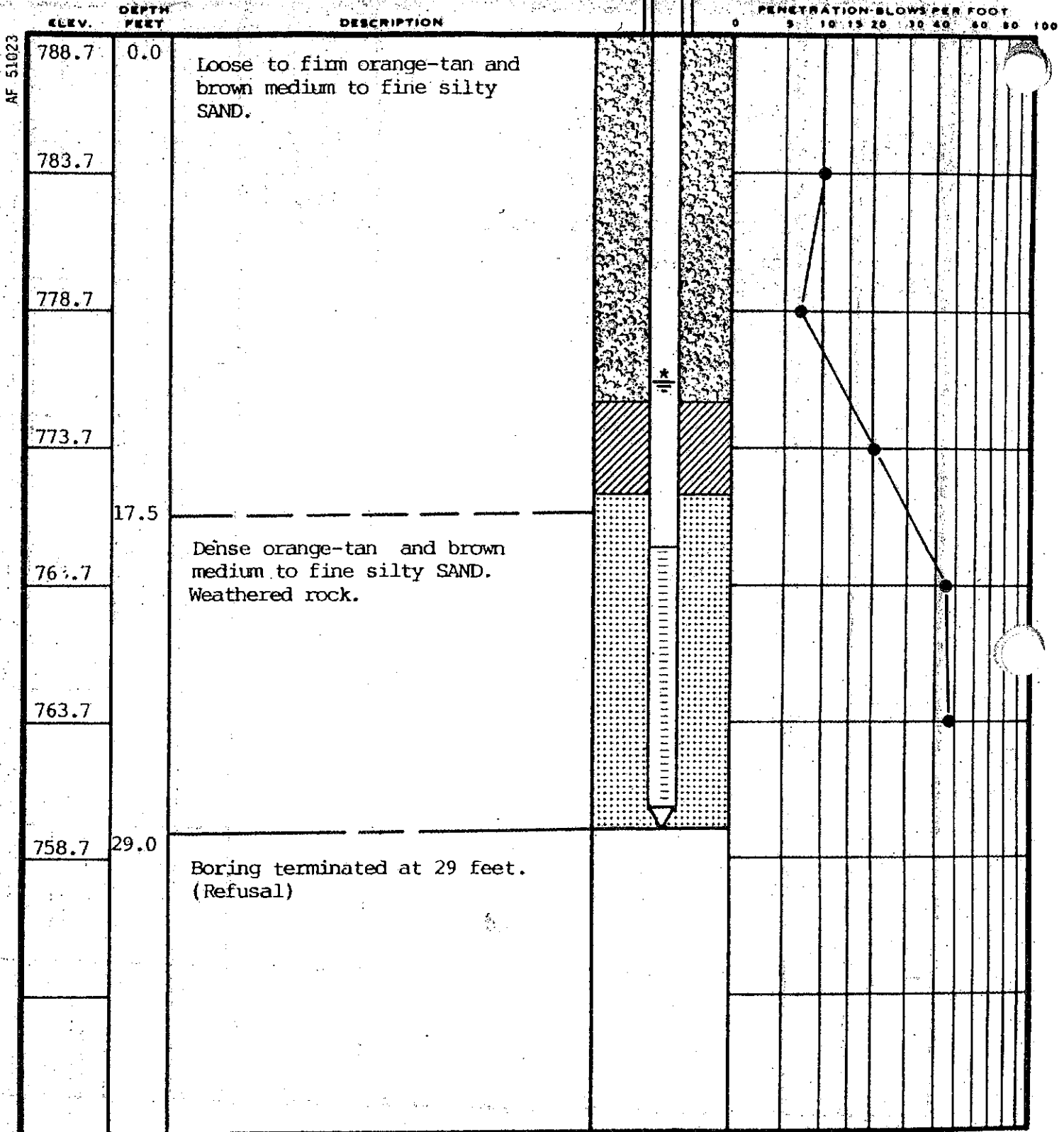
DRILLED BY Miller Drilling  
LOGGED BY RAS  
CHECKED BY SDD

BORING NUMBER B-33B  
DATE STARTED 10/24/02  
DATE COMPLETED 10/30/02  
JOB NUMBER 12000-8-0019



TEST BORING RECORD

Riser Stickup is 2.16 feet



REMARKS:

Method of Drilling: wash boring.  
 Method of Development:  
 dedicated teflon bailer on  
 7-28-88.

DRILLED BY LAW-Atlanta  
 LOGGED BY R.S. Ribes  
 CHECKED BY K.J. Kessler

BORING NUMBER B-34  
 DATE STARTED 7/13/88  
 DATE COMPLETED 7/13/88  
 JOB NUMBER 55-4

\* Water level measured on 8-31-88.  
 Designated on field log as B-29.



1. PROJECT  
**Xerox 2-Phase**

2. LOCATION (Coordinates or Station)  
**CRC Facility, Atlanta.**

3. DRILLING AGENCY  
**ATEC**

4. HOLE NO. (As shown on drawing file and file number)  
**-B-35**

5. NAME OF DRILLER  
**TEC**

6. DIRECTION OF HOLE  
 VERTICAL  INCLINED **0.0** DEG. FROM VERT.

7. THICKNESS OF OVERBURDEN  
**0.0'**

8. DEPTH DRILLED INTO ROCK  
**26' BGS**

9. TOTAL DEPTH OF HOLE  
**26.0**

10. SIZE AND TYPE OF BIT

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

12. MANUFACTURER'S DESIGNATION OF DRILL  
**CME 45 Skid-Mounted**

13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN  
DISTURBED **0** UNDISTURBED **7**

14. TOTAL NUMBER CORE BOXES  
**N/A**

15. ELEVATION GROUND WATER

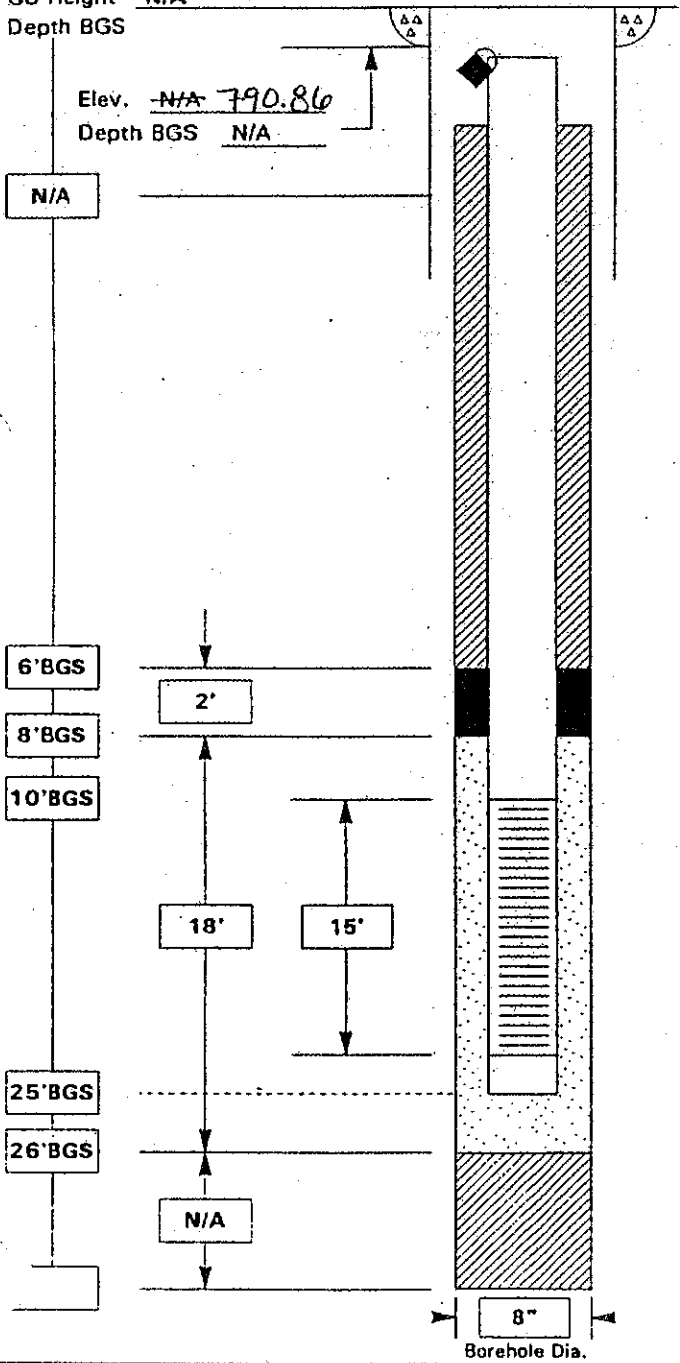
16. DATE HOLE  
STARTED **MAY 20 95** COMPLETED **MAY 20 95**

17. ELEVATION TOP OF HOLE  
**NA**

18. TOTAL CORE RECOVERY FOR BORING  
%

19. SIGNATURE OF INSPECTOR

Elev. N/A  
Height N/A  
GS Elev. N/A  
GS Height N/A  
Depth BGS



**PROTECTIVE CSG**  
Material/Type PVC  
Diameter 4"  
Depth BGS 26' BGS Weep Hole ( Y / (N) )

**GUARD POSTS ( Y / (N) )**  
No. N/A Type N/A

**SURFACE PAD**  
Composition & Size N/A

**RISER PIPE**  
Type PVC  
Diameter 4"  
Total Length (TOC to TOS) 10.0'  
Ventilated Cap ( Y / (N) )

**GROUT**  
Composition & Proportions Concrete

Tremied ( Y / (N) )  
Interval BGS 0-6'

**CENTRALIZERS ( Y / (N) )**  
Depth(s) N/A

**SEAL**  
Type Bentonite  
Source \_\_\_\_\_  
Setup/Hydration Time \_\_\_\_\_  
Vol. Fluid Added \_\_\_\_\_  
Tremied ( Y / (N) )

**FILTER PACK**  
Type Moist Sand  
Amt. Used 8-26' BGS  
Tremied ( Y / (N) )  
Source \_\_\_\_\_  
Gr. Size Dist. \_\_\_\_\_

**SCREEN**  
Type PVC  
Diameter 4"  
Slot Size & Type 0.010  
Interval BGS 10.0'-25.0'

**SUMP ( Y / (N) )**  
Interval BGS N/A Length N/A  
Bottom Cap ( Y / (N) )

**BACKFILL PLUG**  
Material N/A  
Setup/Hydration Time \_\_\_\_\_  
Tremied ( Y / (N) )

1. Company Name <b>Radian Corporation</b>		2. Drilling Contractor <b>ATEC</b>			Sheet 1 of 4 Sheets		
3. Project <b>Xerox 2-Phase</b>			4. Location <b>Xerox, CRC, Atlanta, GA</b>				
Name of Driller <b>ATEC</b>			6. Manufacturer's Designation of Drill <b>CME 45 Skid-Mounted</b>				
7. Sizes & Types of Drilling & Sampling Equipment <b>8" 2.25-inch pilot augers and 8-inch completion augers, 18-inch stainless steel split-spoon</b>		8. Hole Location <b>0.0 North 0.0 East</b>		9. Surface Elevation <b>NA'</b>			
		10. Date Started <b>5/20/95</b>	11. Date Completed <b>5/20/95</b>				
		12. Overburden Thickness <b>0.0'</b>		15. Depth Groundwater Encountered <b>22' BGS</b>			
		13. Depth Drilled into Rock <b>26' BGS</b>		16. Depth to Water and Elapsed Time after Drilling Completed			
14. Total Depth of Hole <b>26.0</b>		17. Other Water Level Measurements (Specify)					
18. Geotechnical Samples		Disturbed <b>0</b>	Undisturbed <b>7</b>	19. Total Number of Core Boxes <b>N/A</b>			
20. Samples for Chemical Analysis <b>N/A</b>		VOC <b>N/A</b>	Metals <b>N/A</b>	Other (Specify) <b>N/A</b>	Other (Specify) <b>N/A</b>	Other (Specify) <b>N/A</b>	
		21. Total Core Rec % <b>N/A</b>					
22. Disposition of Hole		Backfilled	Monitoring Well	Other (Specify)	23. Signature of Inspector		
		<b>N/A</b>	<b>N/A</b>	<b>Extraction Well</b>			

Elev. a	Depth b	Description of Materials c	Field Screening Results d	Geotech Smp. or Core Box # e	Analytical Sample No. f	Blow Counts g	Remarks h
NA	0	0-2' Partially Weathered Rock (PWR), dry, fine-grain, pink with some dark minerals and significant muscovite mica flakes.					
	1						
	2	2-4' PWR, moist, fine-grain, pink and gold, significant muscovite mica.					
	3						
	4						
	5						

Project Xerox 2-Phase  
Xerox, CRC, Atlanta, GA

Inspector Joe FitzGerald

Sheet 2  
of 4 Sheets

Elev. a	Depth b	Description of Materials c	Field Screening Results d	Geotech Smpl. or Core Box # e	Analytical Sample No. f	Blow Counts g	Remarks h
	6						
	7						
	8	8-10' PWR, dry, fine-grain, light pink to white, significant muscovite mica.					
	9						
	10						
	11						
	12						
	13						
	14						

# NEW DRILLING LOG

Project: Xerox 2-Phase  
Xerox, CRC, Atlanta, GA

Inspector: Joe FitzGerald

Sheet 3 of 4 Sheets

B-35

Elev. a	Depth b	Description of Materials c	Field Screening Results d	Geotech Smp. or Core Box # e	Analytical Sample No. f	Blow Counts g	Remarks h
	15	15-17' PWR, moist, fine to medium grain, light tan, significant mica.					
	16						
	17	17-19' PWR, moist, fine to medium grain, light tan to white, significant muscovite mica.					
	18						
	19	19-21' PWR, moist, fine to medium grain, tan to white, some large quartz grains, significant muscovite mica.					
	20						
	21						
	22						
	23						

# NEW DRILLING LOG

B-35

Project: Xerox 2-Phase  
Xerox, CRC, Atlanta, GA

Inspector: Joe FitzGerald

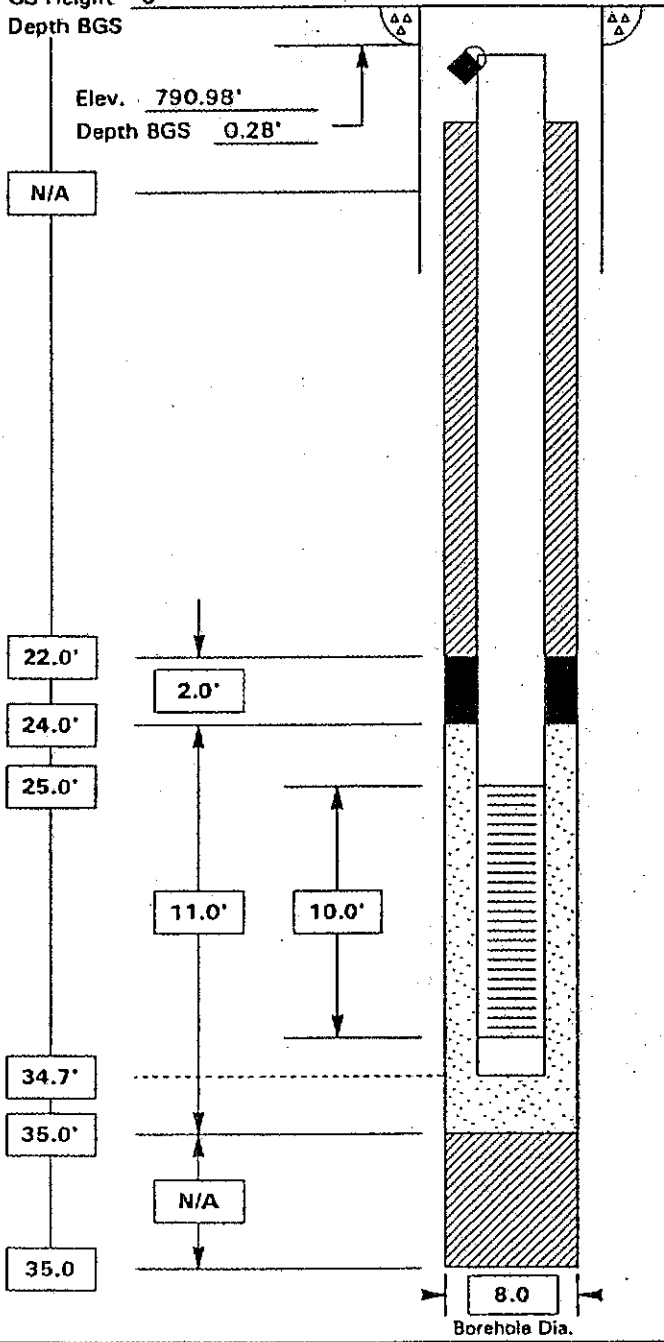
Sheet 4  
of 4 Sheets

Elev. a	Depth b	Description of Materials c	Field Screening Results d	Geotech Smp. or Core Box # e	Analytical Sample No. f	Blow Counts g	Remarks h
		23-25' PWR, wet, fine to medium grain, tan to white, some large quartz grains, significant muscovite mica.					
	24						
	25						
	26	Bottom of Hole.					
	27						
	28						
	29						
	30						
	31						
	32						

1. PROJECT <b>Xerox 2-Phase</b>	
2. LOCATION (Coordinates or Station) <b>CRC Facility, Atlanta</b>	
3. DRILLING AGENCY <b>ATEC</b>	
4. HOLE NO. (As shown on drawing title and file number)	<b>-B-36</b>
5. NAME OF DRILLER	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED <b>0.0</b> DEG. FROM VERT.	
7. THICKNESS OF OVERBURDEN	<b>0.0</b>
8. DEPTH DRILLED INTO ROCK	<b>0.0</b>
9. TOTAL DEPTH OF HOLE	<b>35.0</b>

10. SIZE AND TYPE OF BIT <b>8" Carbide Bit</b>		
11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <b>MSL</b>		
12. MANUFACTURER'S DESIGNATION OF DRILL <b>CME 45 Skid-Mounted</b>		
13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	<b>0</b>	UNDISTURBED <b>0</b>
14. TOTAL NUMBER CORE BOXES	<b>N/A</b>	
15. ELEVATION GROUND WATER		
16. DATE HOLE	STARTED <b>DEC 21 96</b>	COMPLETED <b>DEC 21 96</b>
17. ELEVATION TOP OF HOLE	<b>790.98'</b>	
18. TOTAL CORE RECOVERY FOR BORING	<b>N/A %</b>	
19. SIGNATURE OF INSPECTOR		

Elev. N/A  
 Height N/A  
 GS Elev. 791.26'  
 GS Height 0'  
 Depth BGS \_\_\_\_\_



**PROTECTIVE CSG**  
 Material/Type N/A  
 Diameter N/A  
 Depth BGS N/A Weep Hole ( Y / (N) ) \_\_\_\_\_

**GUARD POSTS ( Y / (N) )**  
 No. N/A Type N/A

**SURFACE PAD**  
 Composition & Size N/A

**RISER PIPE**  
 Type Stainless Steel  
 Diameter 2.0"  
 Total Length (TOC to TOS) 20'  
 Ventilated Cap ( Y / (N) ) \_\_\_\_\_

**GROUT**  
 Composition & Proportions Concrete  
 Tremied ( Y / (N) ) \_\_\_\_\_  
 Interval BGS 0-5'

**CENTRALIZERS ( Y / (N) )**  
 Depth(s) N/A

**SEAL**  
 Type Bentonite  
 Source \_\_\_\_\_  
 Setup/Hydration Time \_\_\_\_\_  
 Vol. Fluid Added \_\_\_\_\_  
 Tremied ( Y / (N) ) \_\_\_\_\_

**FILTER PACK**  
 Type Moile Sand  
 Amt. Used 24.0'-35.0' bgs  
 Tremied ( Y / (N) ) \_\_\_\_\_  
 Source \_\_\_\_\_  
 Gr. Size Dist. \_\_\_\_\_

**SCREEN**  
 Type Stainless Steel  
 Diameter 2.0"  
 Slot Size & Type 0.010"  
 Interval BGS 25.0'-35.0'

**SUMP ( Y / (N) )**  
 Interval BGS N/A Length N/A  
 Bottom Cap ( Y / (N) ) \_\_\_\_\_

**BACKFILL PLUG**  
 Material N/A  
 Setup/Hydration Time N/A  
 Tremied ( Y / (N) ) \_\_\_\_\_

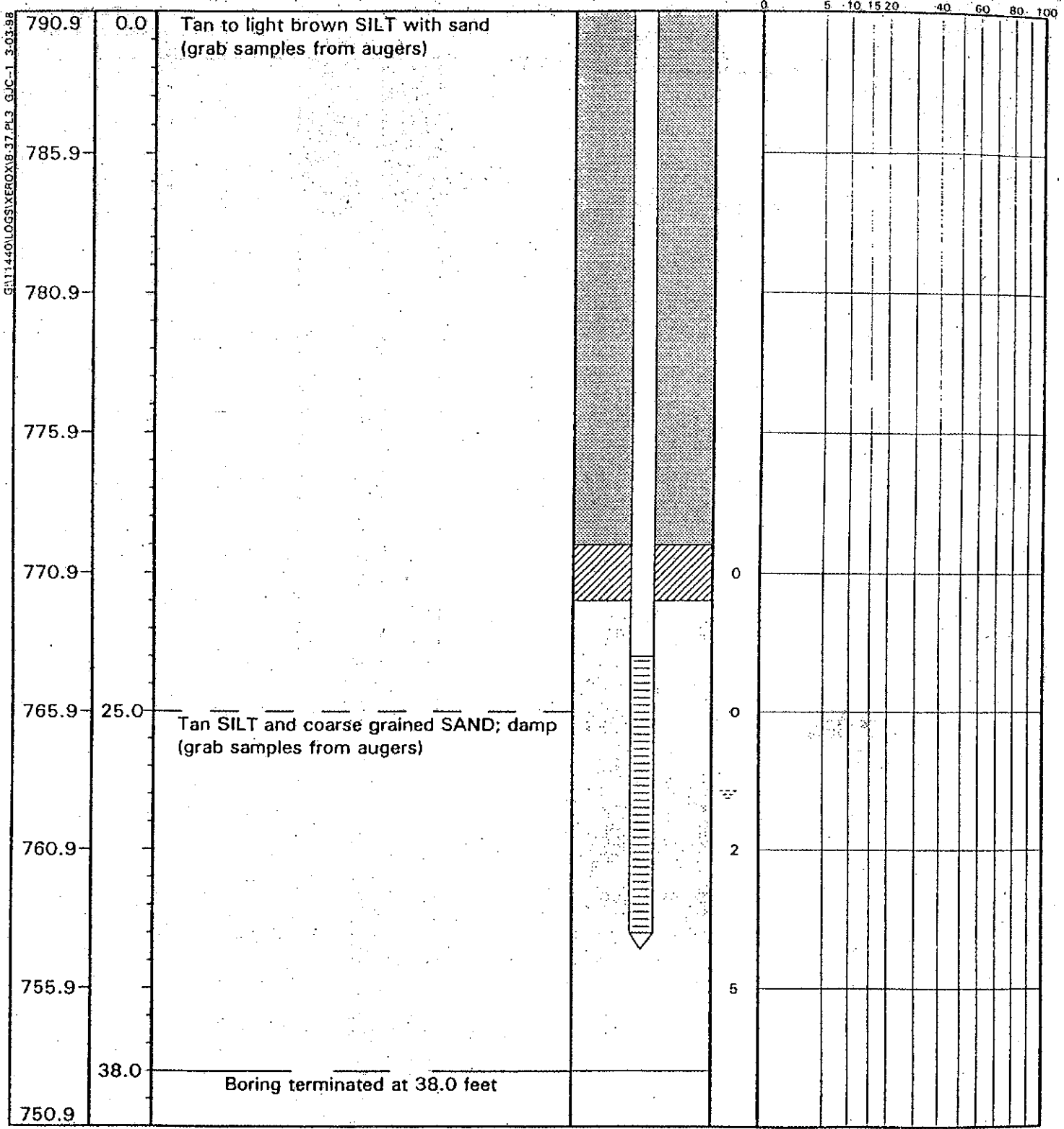
APPROXIMATE ELEVATION (FEET) DEPTH (FEET)

DESCRIPTION

WELL DIAGRAM

HNU (ppm)

HEIGHT OF RISER: 0.05 ft.  
 DATUM ELEVATION: 791.75 ft.  
 PENETRATION-BLOWS PER FOOT



REMARKS:

- Boring was drilled at an angle of 30° from the building and 20° from vertical using 4 1/4-inch augers.
- 2-inch PVC well with 0.010 inch prepack well screen installed on 11/18/97.
- Cuttings were screened with HNU.
- Water level measured made on 11/18/97.
- Approximate ground elevation estimated from nearby monitoring well B-3.

DRILLED BY LAW-Atl BORING NUMBER B-37  
 LOGGED BY HAL DATE STARTED 11/18/97  
 CHECKED BY PER DATE COMPLETED 11/18/97  
 JOB NUMBER 55-433326



**LAW**  
 ENGINEERING AND ENVIRONMENTAL SERVICES

# TEST BORING RECORD

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT
	0.0	Light brownish tan silty fine to coarse SAND		0 5 10 15 20 40 60 80 100
	5.0	Light brownish tan silty SAND with mica		
	10.0			
	15.0	Moist at 13 feet		
	20.0			
	25.0			
	30.0			
	35.0			

**REMARKS:**

1. Method of drilling - 10-inch O.D. hollow stem augers.
2. Well developed using 1/3-hp Grunfos pump.

DRILLED BY LAW  
 LOGGED BY ERS  
 CHECKED BY

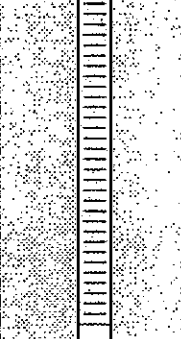
BORING NUMBER B-38  
 DATE STARTED 4/06/98  
 DATE COMPLETED 4/06/98  
 JOB NUMBER 12000-B-001





TEST BORING RECORD

HEIGHT OF RISER:  
DATUM ELEVATION:

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT																
				0	5	10	15	20	40	60	80	100								
40.0																				
	49.0	Boring terminated at 49.0 feet - auger refusal																		

S-25-98  
ANNEX-B-38 PL-3 C

REMARKS:

DRILLED BY	LAW	BORING NUMBER	B-38
LOGGED BY	ERS	DATE STARTED	4/06/98
CHECKED BY		DATE COMPLETED	4/06/98
		JOB NUMBER	12000-8-001



# TEST BORING RECORD

HEIGHT OF RISER:  
DATUM ELEVATION:

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT																	
				0	5	10	15	20	40	60	80	100									
	0.0	Light brownish tan silty fine to coarse SAND	[Pattern]																		
	5.0		[Pattern]																		
	10.0		[Pattern]																		
	15.0	Moist at 13 feet	[Pattern]																		
	20.0		[Pattern]																		
	25.0		[Pattern]																		
	30.0		[Pattern]																		
	35.0		[Pattern]																		

**REMARKS:**

1. Method of Drilling 10-inch O.D. hollow stem auger.
2. Well developed using 1/3-hp Grunfos pump.

DRILLED BY LAW  
 LOGGED BY ERS  
 CHECKED BY

BORING NUMBER B-39  
 DATE STARTED 4/07/98  
 DATE COMPLETED 4/07/98  
 JOB NUMBER 12000-8-001



**LAW**  
 ENGINEERING AND ENVIRONMENTAL SERVICES

TEST BORING RECORD

HEIGHT OF RISE:  
DATUM ELEVATION:

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT																
				0	5	10	15	20	40	60	80	100								
	40.5	Boring terminated at 40.5 feet - auger refusal																		

A110XB-39.P13.G

REMARKS:

DRILLED BY LAW  
LOGGED BY ERS  
CHECKED BY

BORING NUMBER B-39  
DATE STARTED 4/07/98  
DATE COMPLETED 4/07/98  
JOB NUMBER 12000-8-001



# TEST BORING RECORD

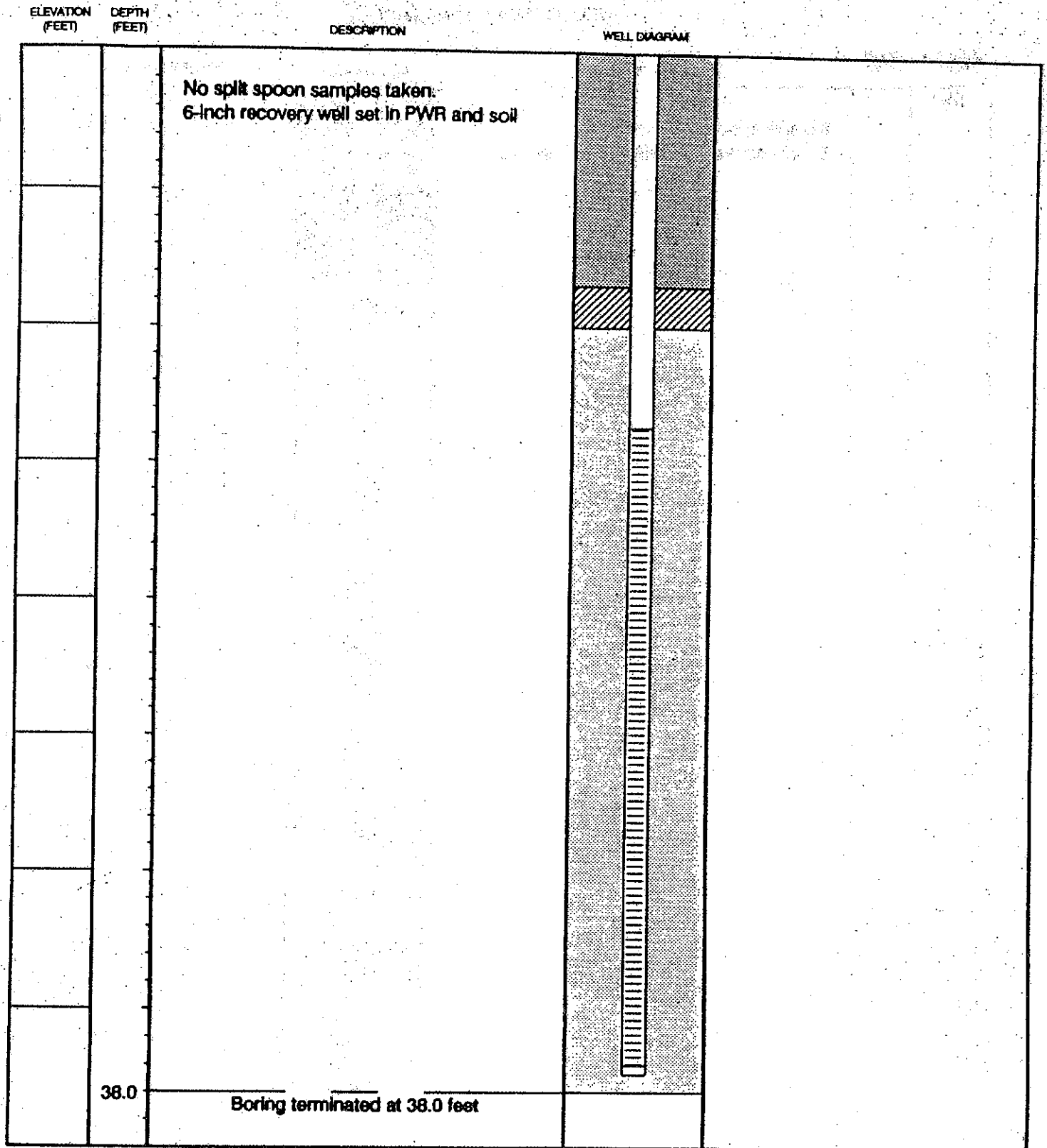
ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT									
			0	5	10	15	20	30	40	60	80	100
791.3	0.5	Concrete										
		Lithology Similar to B-4										
761.3												
756.3												
751.3												
746.3												
741.3												
736.3												
731.3												
726.3	40.0	Boring Terminated										

REMARKS:

DRILLED BY JO  
 LOGGED BY KN  
 CHECKED BY MM

BORING NUMBER TW  
 DATE STARTED 9-3-85  
 DATE COMPLETED 9-4-  
 JOB NUMBER MA-4355

**WELL COMPLETION DIAGRAM**



**REMARKS:**  
 See Report of Installation and Operations Manual  
 - Ground Water Recovery System, dated September  
 1986, for specific well information

DRILLED BY WM  
 LOGGED BY KK  
 CHECKED BY KS

BORING NUMBER RW-1  
 DATE STARTED 4-30-86  
 DATE COMPLETED 5-1-86  
 JOB NUMBER MA4333





# WELL COMPLETION DIAGRAM

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM
		<p>No split spoon samples taken. 6-inch recovery well set in PWR and soil</p>	

**REMARKS:**

See Report of Installation and Operations Manual  
- Ground Water Recovery System, dated September  
1986, for specific well information.

DRILLED BY WM  
LOGGED BY KK  
CHECKED BY KS

BORING NUMBER RW-3  
DATE STARTED 5-6-86  
DATE COMPLETED 5-7-86  
JOB NUMBER MA4333







ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM
		No split spoon samples taken. 6-Inch recovery well set in soil	
	31.0	Boring terminated at 31.0 feet	

**REMARKS:**

See Report of Installation and Operations Manual  
 - Ground Water Recovery System, dated September  
 1986, for specific well information.

DRILLED BY WM  
 LOGGED BY KK  
 CHECKED BY KS

BORING NUMBER RW-4  
 DATE STARTED 5-7-86  
 DATE COMPLETED 5-8-86  
 JOB NUMBER MA4333



**WELL COMPLETION DIAGRAM**

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM
		No split spoon samples taken. 6-inch recovery well set in soil	
	27.5	Boring terminated at 27.5 feet	

**REMARKS:**

See Report of Installation and Operations Manual  
- Ground Water Recovery System, dated September  
1986, for specific well information

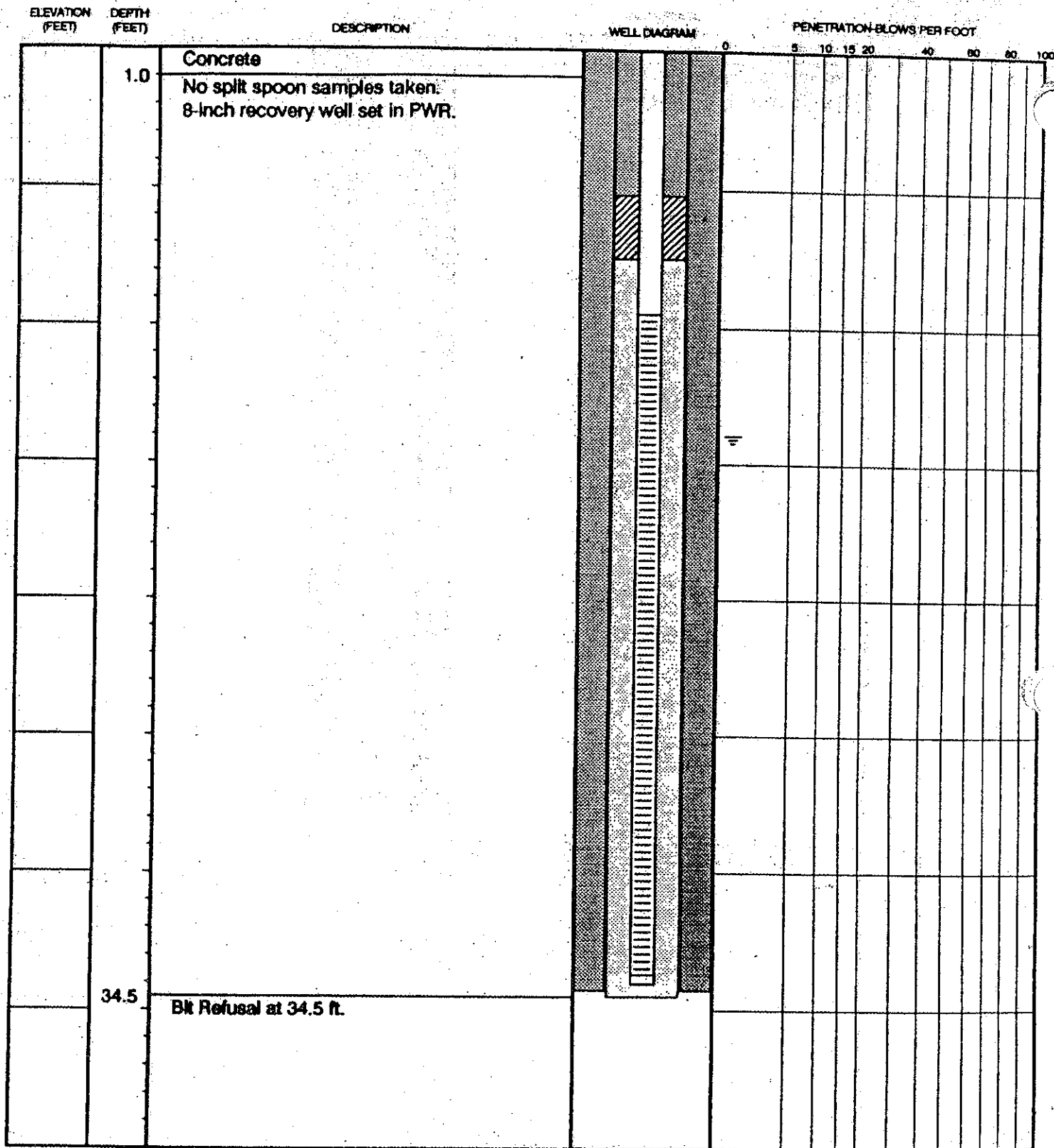
DRILLED BY WM  
LOGGED BY KK  
CHECKED BY KS

BORING NUMBER RW-5  
DATE STARTED 5-8-86  
DATE COMPLETED 5-9-86  
JOB NUMBER MW4333





# WELL COMPLETION DIAGRAM



**REMARKS:**

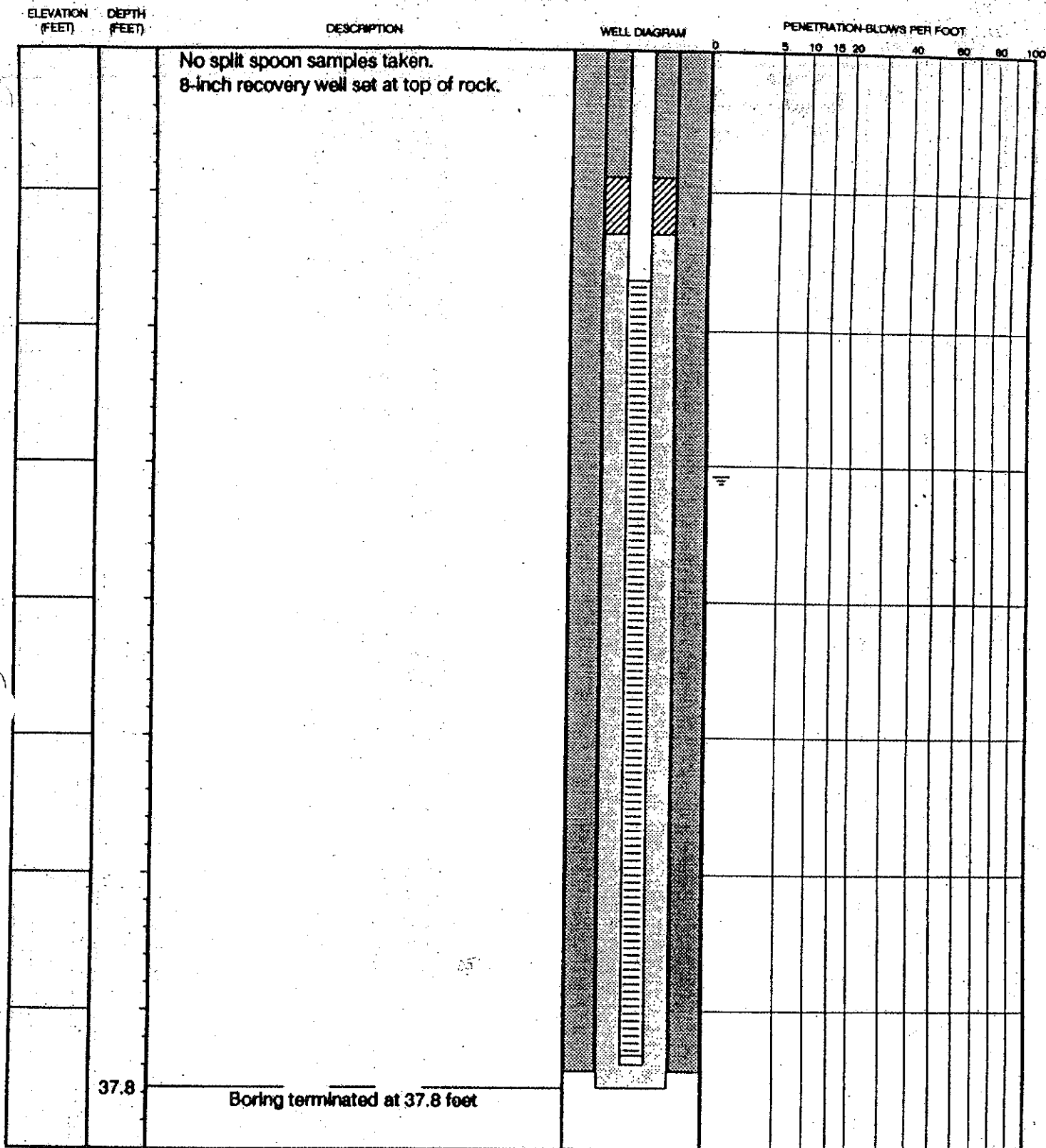
Drilling Technique: Wash bore with 12-inch tri-cone bit to refusal. Screen placed to straddle air/water interface. Centralizers placed at 24 and 14 feet.

DRILLED BY	LAW ENG	BORING NUMBER	RW-7
LOGGED BY	SRC	DATE STARTED	1-18-90
CHECKED BY	PER	DATE COMPLETED	1-19-90
		JOB NUMBER	55-976401

Developed by Grundfos submersible pump on 1/30/90.



# WELL COMPLETION DIAGRAM



**REMARKS:**

Drilling Technique: Wash bore with 12-inch tri-cone bit to refusal. Screen placed to straddle air/water interface. Centralizers placed at 27 and 13 feet.

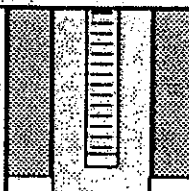
DRILLED BY	LAW ENG	BORING NUMBER	RW-8
LOGGED BY	SRC	DATE STARTED	2-1-90
CHECKED BY	PER	DATE COMPLETED	2-2-90
		JOB NUMBER	55-976401

Developed by Grundfos submersible pump on 2/08/90.





# WELL COMPLETION DIAGRAM

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT																					
				0	5	10	15	20	40	60	80	100													
	45.0	Bit Refusal at 45.0 ft.																							

REMARKS:

DRILLED BY	LAW ENG	BORING NUMBER	RW-9
LOGGED BY	SRC	DATE STARTED	1-16-90
CHECKED BY	PER	DATE COMPLETED	1-17-90
		JOB NUMBER	55-976401



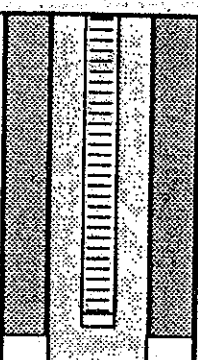








# WELL COMPLETION DIAGRAM

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT																		
				0	5	10	15	20	40	60	80	100										
	49.0	Bit Refusal at 49.0 feet.																				

REMARKS:

DRILLED BY	LAW ENG	BORING NUMBER	RW-11
LOGGED BY	SRC	DATE STARTED	1-9-90
CHECKED BY	PER	DATE COMPLETED	1-10-90
		JOB NUMBER	55-976401









# WELL COMPLETION DIAGRAM

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT
	1.0	<b>Concrete</b> No split-spoon samples taken. 8-inch recovery well set at top of rock.		0    5    10    15    20    40    60    80    100
	31.5	<b>Bk refusal at 31.5 ft.</b>		

**REMARKS:**

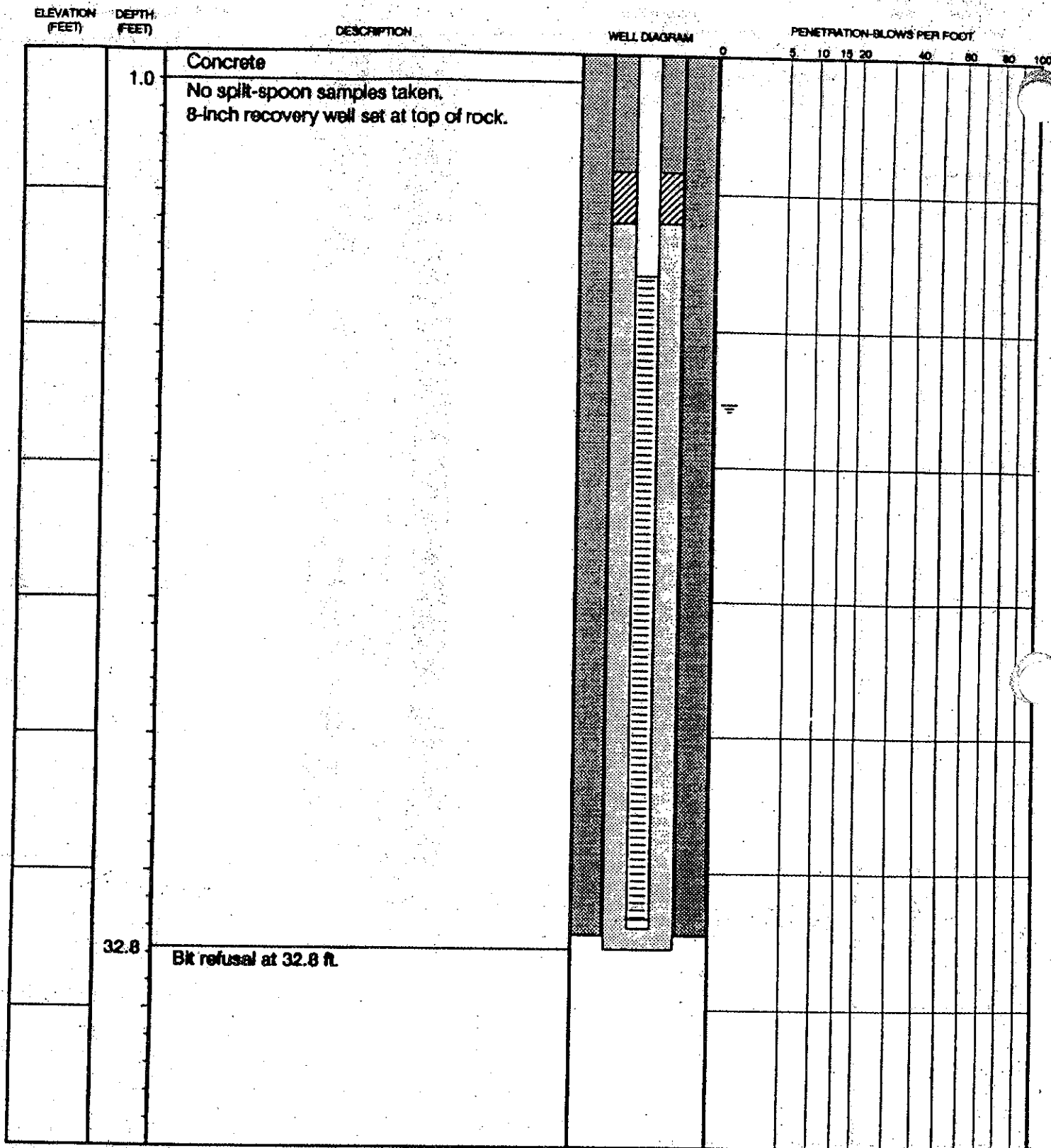
Drilling Technique: Wash bore with 12-inch tri-cone bit to refusal. Screen placed to straddle air/water interface. Centralizers placed at 21 and 7 feet.

DRILLED BY	LAW ENG	BORING NUMBER	RW-14
LOGGED BY	SRC	DATE STARTED	1-26-90
CHECKED BY	PER	DATE COMPLETED	1-29-90
		JOB NUMBER	55-976401

Developed by Grudfos submersible pump on 2/14/90.



# WELL COMPLETION DIAGRAM



**REMARKS:**

Drilling Technique: Wash bore with 12-inch tri-cone bit to refusal. Screen placed to straddle air/water interface. Centralizers placed at 22 and 12 feet.

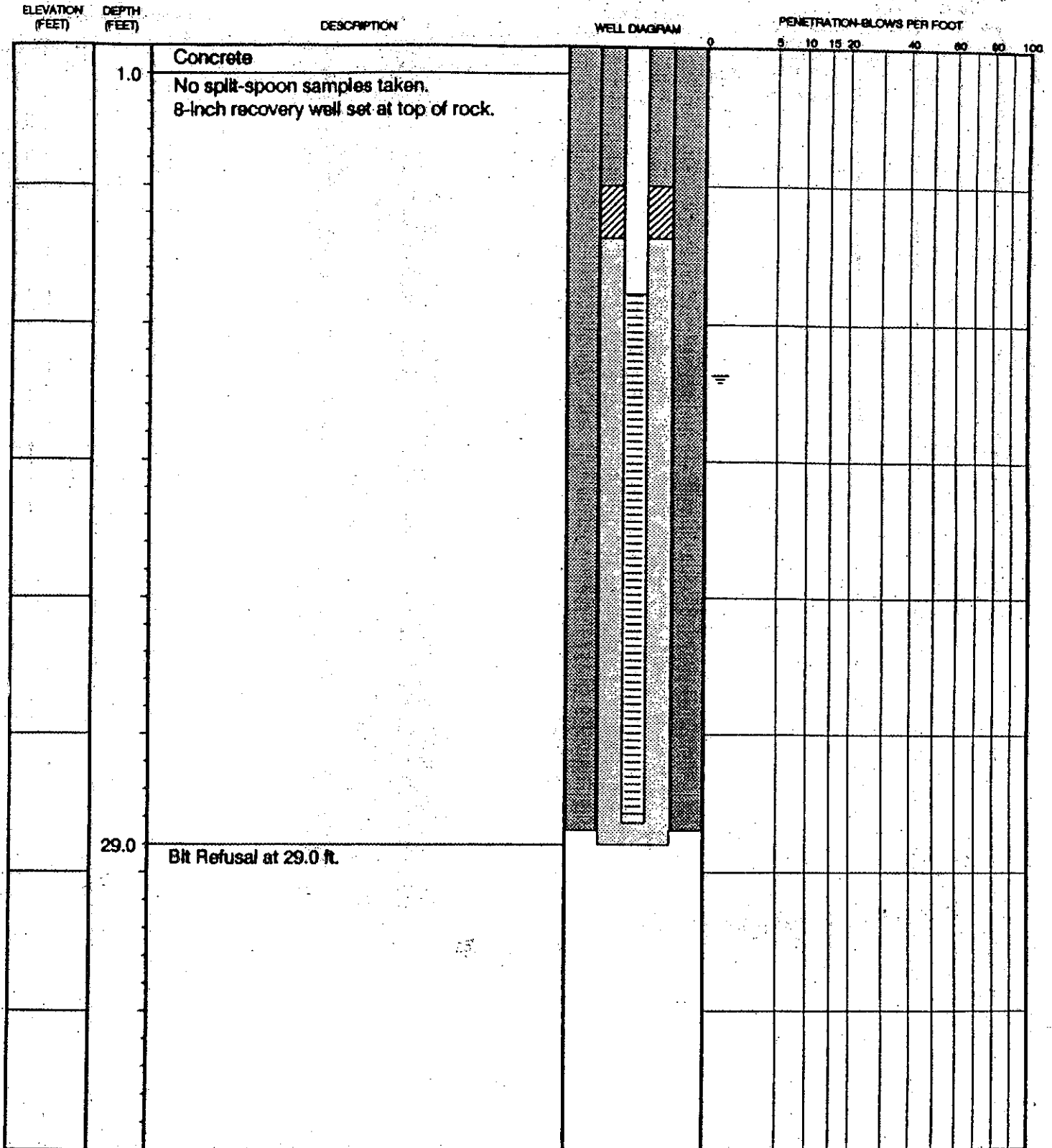
DRILLED BY	LAW ENG	BORING NUMBER	RW-15
LOGGED BY	SRC	DATE STARTED	1-23-90
CHECKED BY	PER	DATE COMPLETED	1-23-90
		JOB NUMBER	55-97640

Developed by Grundfos submersible pump on 1/30/90.





# WELL COMPLETION DIAGRAM



**REMARKS:**

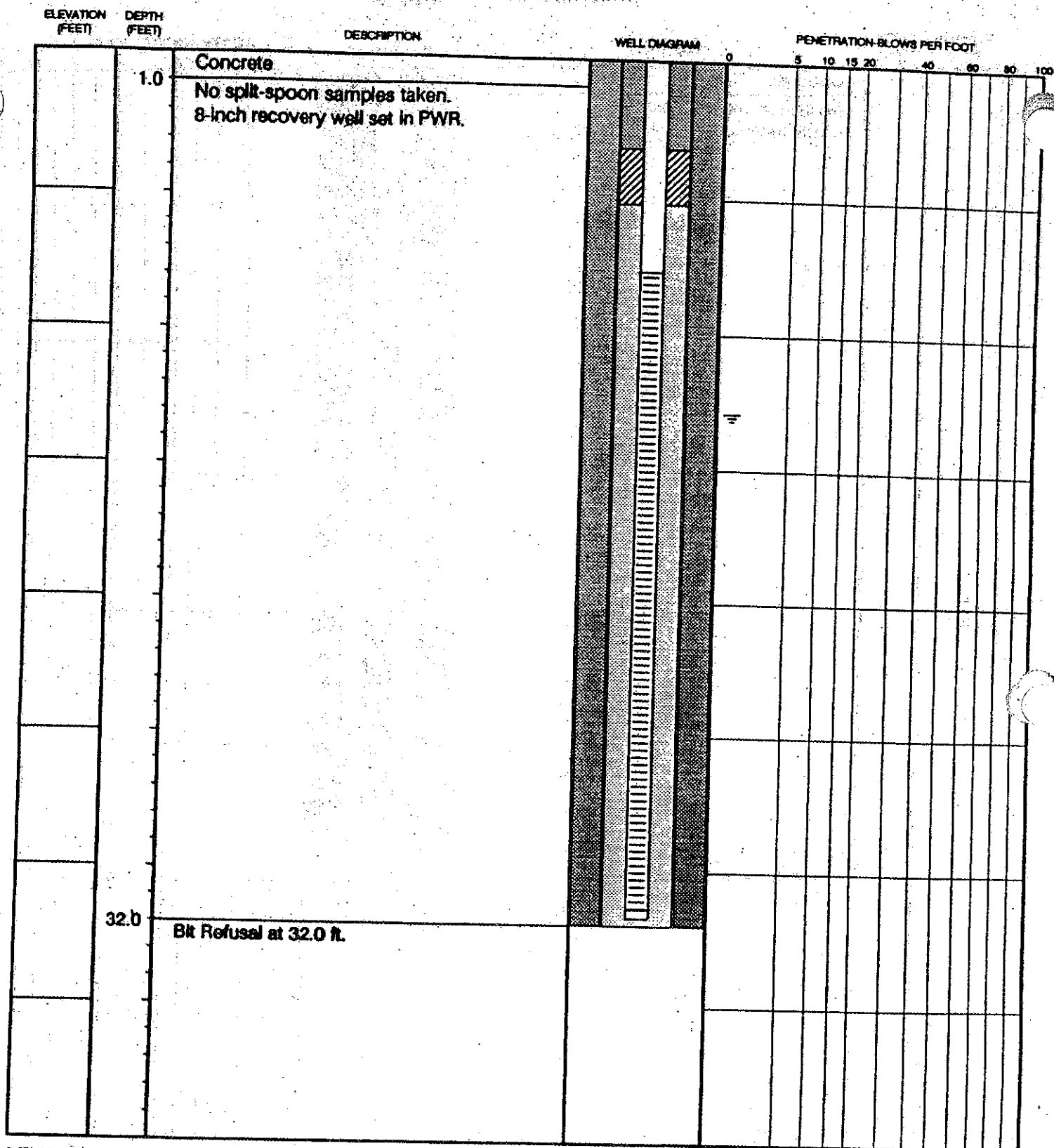
Drilling Technique: Wash bore with 12-inch tri-cone bit to refusal. Screen placed to straddle air/water interface. Centralizers placed at 15 feet.

DRILLED BY	LAW ENG	BORING NUMBER	RW-16
LOGGED BY	SRC	DATE STARTED	1-29-90
CHECKED BY	PER	DATE COMPLETED	1-30-90
		JOB NUMBER	55-976401

Developed by Grundfos submersible pump on 2/06/90.



# WELL COMPLETION DIAGRAM



**REMARKS:**

Drilling Technique: Wash bore with 12-inch tri-cone bit to refusal. Screen placed to straddle air/water interface. Centralizers placed at 20 and 10 feet.

DRILLED BY	LAW ENG	BORING NUMBER	RW-17
LOGGED BY	SRC	DATE STARTED	1-23-90
CHECKED BY	PER	DATE COMPLETED	1-24-90
		JOB NUMBER	55-976401

Developed by Grundfos submersible pump on 2/09/90.



**APPENDIX E-3**

**SUMMARY OF GROUNDWATER MONITORING DATA – JANUARY 1998-JANUARY 2000**

Results Analyses for  
 Volatile Organic Compounds - Xerox Facility  
 August 1998 to January 2000

Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
<b>1,1,1-Trichloroethane, ug/L</b>													
8/25/1998	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/23/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
10/28/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/16/1998	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1/25/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
2/23/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
3/30/1999	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
4/28/1999	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
5/26/1999	--	<50	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
6/29/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
7/26/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8/31/1999	--	<25	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	<1	--
9/30/1999	--	<25	<1	<1	<1	--	--	<1	<1	<1	<1	--	<1
10/28/1999	<1	<20	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1
11/30/1999	--	<20	<1	<1	--	--	<1	<1	<1	<1	<1	<1	<1
12/21/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
1/18/2000	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>1,1,2,2-Tetrachloroethane, ug/L</b>													
8/25/1998	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/23/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
10/28/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/16/1998	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1/25/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
2/23/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
3/30/1999	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
4/28/1999	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
5/26/1999	--	<100	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
6/29/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
7/26/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
8/31/1999	--	<50	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	<2	--
9/30/1999	--	<50	<2	<2	<2	--	--	<2	<2	<2	<2	--	<2
10/28/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
11/30/1999	--	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
12/21/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
1/18/2000	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
<b>1,1,2-Trichloroethane, ug/L</b>													
8/25/1998	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/23/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
10/28/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/16/1998	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1/25/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2

Results of Analyses for  
Volatile Organic Compounds - Xerox Facility  
August 1998 to January 2000

Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
2/23/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
3/30/1999	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
4/28/1999	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
5/26/1999	--	<100	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
6/29/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
7/26/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
8/31/1999	--	<50	<2	<2	--	--	--	--	--	--	--	<2	--
9/1/1999	--	--	--	--	--	--	--	<2	<2	<2	<2	--	<2
9/30/1999	--	<50	<2	<2	<2	--	--	<2	<2	<2	<2	<2	<2
10/28/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
11/30/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/21/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
1/18/2000	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
<b>1,1-Dichloroethane, ug/L</b>													
8/25/1998	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/23/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
10/28/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/16/1998	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1/25/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
2/23/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
3/30/1999	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
4/28/1999	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
5/26/1999	--	<50	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
6/29/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
7/26/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8/31/1999	--	<25	<1	<1	--	--	--	--	--	--	--	<1	--
9/1/1999	--	--	--	--	--	--	--	<1	<1	<1	<1	--	<1
9/30/1999	--	<25	<1	<1	<1	--	--	<1	<1	<1	<1	<1	<1
10/28/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
11/30/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/21/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
1/18/2000	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>1,1-Dichloroethene, ug/L</b>													
8/25/1998	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/23/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
10/28/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/16/1998	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1/25/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
2/23/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
3/30/1999	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
4/28/1999	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
5/26/1999	--	<50	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
6/29/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
7/26/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Results Analyses for  
Volatile Organic Compounds - Xerox Facility  
August 1998 to January 2000

Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
8/31/1999	--	<25	<1	<1	--	--	--	--	--	--	--	<1	--
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	--	--
9/30/1999	--	<25	<1	<1	<1	--	--	<1	<1	<1	<1	--	<1
10/28/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
11/30/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/21/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
1/18/2000	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>1,2-Dichlorobenzene, ug/L</b>													
8/25/1998	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/23/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
10/28/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/16/1998	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1/25/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
2/23/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
3/30/1999	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
4/28/1999	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
5/26/1999	--	<100	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
6/29/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
7/26/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
8/31/1999	--	<50	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	<2	--
9/30/1999	--	<50	<2	<2	<2	--	--	<2	<2	<2	<2	--	<2
10/28/1999	<2	<40	<2	<2	<2	--	--	<2	<2	<2	<2	<2	<2
11/30/1999	--	<40	<2	<2	--	<2	<2	<2	<2	<2	<2	<2	<2
12/21/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
1/18/2000	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
<b>1,2-Dichloroethane, ug/L</b>													
8/25/1998	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/23/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
10/28/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/16/1998	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1/25/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
2/23/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
3/30/1999	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
4/28/1999	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
5/26/1999	--	<50	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
6/29/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
7/26/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8/31/1999	--	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	<1	--
9/30/1999	--	<25	<1	<1	<1	--	--	<1	<1	<1	<1	--	<1
10/28/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
11/30/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/21/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1

Results of Analyses for  
Volatile Organic Compounds - Xerox Facility  
August 1998 to January 2000

Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
1/18/2000	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>1,2-Dichloropropane, ug/L</b>													
8/25/1998	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/23/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
10/28/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/16/1998	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1/25/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
2/23/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
3/30/1999	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
4/28/1999	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
5/26/1999	--	<50	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
6/29/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
7/26/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8/31/1999	--	<25	<1	<1	--	--	--	--	--	--	--	<1	--
9/1/1999	--	--	--	--	--	--	--	<1	<1	<1	<1	--	<1
9/30/1999	--	<25	<1	<1	<1	--	--	<1	<1	<1	<1	<1	<1
10/28/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
11/30/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/21/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
1/18/2000	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>1,3-Dichlorobenzene, ug/L</b>													
8/25/1998	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/23/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
10/28/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/16/1998	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1/25/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
2/23/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
3/30/1999	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
4/28/1999	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
5/26/1999	--	<100	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
6/29/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
7/26/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
8/31/1999	--	<50	<2	<2	--	--	--	--	--	--	--	<2	--
9/1/1999	--	--	--	--	--	--	--	<2	<2	<2	<2	--	<2
9/30/1999	--	<50	<2	<2	<2	--	--	<2	<2	<2	<2	<2	<2
10/28/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
11/30/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/21/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
1/18/2000	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
<b>1,4-Dichlorobenzene, ug/L</b>													
8/25/1998	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/23/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
10/28/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2

Results Analyses for  
 Volatile Organic Compounds - Xerox Facility  
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Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
12/16/1998	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1/25/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
2/23/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
3/30/1999	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
4/28/1999	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
5/26/1999	--	<100	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
6/29/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
7/26/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
8/31/1999	--	<50	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	<2	--
9/30/1999	--	<50	<2	<2	<2	--	--	<2	<2	<2	<2	--	<2
10/28/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
11/30/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/21/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
1/18/2000	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
<b>2-Chloroethyl vinyl ether, ug/L</b>													
8/25/1998	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/23/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
10/28/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/16/1998	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1/25/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
2/23/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
3/30/1999	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
4/28/1999	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
5/26/1999	--	<100	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
6/29/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
7/26/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
8/31/1999	--	<50	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	<2	--
9/30/1999	--	<50	<2	<2	<2	--	--	<2	<2	<2	<2	--	<2
10/28/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
11/30/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/21/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
1/18/2000	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
<b>Bromodichloromethane, ug/L</b>													
8/25/1998	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/23/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
10/28/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/16/1998	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1/25/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
2/23/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
3/30/1999	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
4/28/1999	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
5/26/1999	--	<50	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1



Results of Analyses for  
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Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
6/29/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
7/26/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8/31/1999	--	<25	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	<1	--
9/30/1999	--	<25	<1	<1	<1	--	--	<1	<1	<1	<1	--	<1
10/28/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
11/30/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/21/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
1/18/2000	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>Bromoform (Tribromomethane), ug/L</b>													
8/25/1998	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/23/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
10/28/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/16/1998	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1/25/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
2/23/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
3/30/1999	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
4/28/1999	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
5/26/1999	--	<100	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
6/29/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
7/26/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
8/31/1999	--	<50	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	<2	--
9/30/1999	--	<50	<2	<2	<2	--	--	<2	<2	<2	<2	--	<2
10/28/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
11/30/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/21/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
1/18/2000	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
<b>Bromomethane (Methyl bromide), ug/L</b>													
8/25/1998	--	<50	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
9/23/1998	--	<25	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
10/28/1998	--	<25	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
12/16/1998	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1/25/1999	--	<100	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
2/23/1999	--	<100	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
3/30/1999	--	<50	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
4/28/1999	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
5/26/1999	--	<250	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
6/29/1999	--	<100	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
7/26/1999	<5	<100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
8/31/1999	--	<130	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	<5	--
9/30/1999	--	<130	<5	<5	<5	--	--	<5	<5	<5	<5	<5	<5
10/28/1999	<5	<100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

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Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
11/30/1999	--	< 100	< 5	< 5	--	--	--	< 5	< 5	< 5	< 5	< 5	< 5
12/21/1999	--	< 100	< 5	< 5	--	--	--	< 5	< 5	< 5	< 5	< 5	< 5
1/18/2000	< 5	< 100	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
<b>Carbon tetrachloride, ug/L</b>													
8/25/1998	--	< 10	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
9/23/1998	--	< 5	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
10/28/1998	--	< 5	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
12/16/1998	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1/25/1999	--	< 20	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
2/23/1999	--	< 20	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
3/30/1999	--	< 10	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
4/28/1999	< 1	< 25	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
5/26/1999	--	< 50	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
6/29/1999	--	< 20	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
7/26/1999	< 1	< 20	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
8/31/1999	--	< 25	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	--	--
9/30/1999	--	< 25	< 1	< 1	< 1	--	--	< 1	< 1	< 1	< 1	--	< 1
10/28/1999	< 1	< 20	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
11/30/1999	--	< 20	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
12/21/1999	--	< 20	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
1/18/2000	< 1	< 20	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
<b>Chlorobenzene, ug/L</b>													
8/25/1998	--	< 20	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
9/23/1998	--	< 10	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
10/28/1998	--	< 10	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
12/16/1998	< 2	< 20	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1/25/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
2/23/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
3/30/1999	--	< 20	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
4/28/1999	< 2	< 50	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
5/26/1999	--	< 100	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
6/29/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
7/26/1999	< 2	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
8/31/1999	--	< 50	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	< 2	--
9/30/1999	--	< 50	< 2	< 2	< 2	--	--	< 2	< 2	< 2	< 2	--	< 2
10/28/1999	< 2	< 40	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
11/30/1999	--	< 40	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
12/21/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
1/18/2000	< 2	< 40	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
<b>Chlorodibromomethane (Dibromochloromethane), ug/L</b>													
8/25/1998	--	< 20	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2

Results of Analyses for  
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Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
9/23/1998	--	< 10	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
10/28/1998	--	< 10	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
12/16/1998	< 2	< 20	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1/25/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
2/23/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
3/30/1999	--	< 20	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
4/28/1999	< 2	< 50	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
5/26/1999	--	< 100	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
6/29/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
7/26/1999	< 2	< 40	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
8/31/1999	--	< 50	< 2	< 2	--	--	--	--	--	--	--	< 2	--
9/1/1999	--	--	--	--	--	--	--	< 2	< 2	< 2	< 2	--	< 2
9/30/1999	--	< 50	< 2	< 2	< 2	--	--	< 2	< 2	< 2	< 2	< 2	< 2
10/28/1999	< 2	< 40	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
11/30/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
12/21/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
1/18/2000	< 2	< 40	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
<b>Chloroethane, ug/L</b>													
8/25/1998	--	< 20	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
9/23/1998	--	< 10	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
10/28/1998	--	< 10	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
12/16/1998	< 2	< 20	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1/25/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
2/23/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
3/30/1999	--	< 20	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
4/28/1999	< 2	< 50	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
5/26/1999	--	< 100	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
6/29/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
7/26/1999	< 2	< 40	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
8/31/1999	--	< 50	< 2	< 2	--	--	--	--	--	--	--	< 2	--
9/1/1999	--	--	--	--	--	--	--	< 2	< 2	< 2	< 2	--	< 2
9/30/1999	--	< 50	< 2	< 2	< 2	--	--	< 2	< 2	< 2	< 2	< 2	< 2
10/28/1999	< 2	< 40	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
11/30/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
12/21/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
1/18/2000	< 2	< 40	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
<b>Chloroform, ug/L</b>													
8/25/1998	--	< 10	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
9/23/1998	--	< 5	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
10/28/1998	--	< 5	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
12/16/1998	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1/25/1999	--	31	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
2/23/1999	--	< 20	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
3/30/1999	--	10	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1

Results Analyses for  
 Volatile Organic Compounds - Xerox Facility  
 August 1998 to January 2000

Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
4/28/1999	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
5/26/1999	--	<50	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
6/29/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
7/26/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.5	<1
8/31/1999	--	<25	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	1.2	--
9/30/1999	--	<25	<1	<1	<1	--	--	<1	<1	<1	<1	--	<1
10/28/1999	<1	28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
11/30/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	1	<1
12/21/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	1.1	<1
1/18/2000	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>Chloromethane (Methyl chloride), ug/L</b>													
8/25/1998	--	<50	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
9/23/1998	--	<25	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
10/28/1998	--	<25	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
12/16/1998	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1/25/1999	--	<100	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
2/23/1999	--	<100	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
3/30/1999	--	<50	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
4/28/1999	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
5/26/1999	--	<250	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
6/29/1999	--	<100	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
7/26/1999	<5	<100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
8/31/1999	--	<130	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	<5	--
9/30/1999	--	<130	<5	<5	<5	--	--	<5	<5	<5	<5	--	<5
10/28/1999	<5	<100	<5	<5	<5	--	--	<5	<5	<5	<5	<5	<5
11/30/1999	--	<100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
12/21/1999	--	<100	<5	<5	--	--	--	<5	<5	<5	<5	<5	<5
1/18/2000	<5	<100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
<b>cis-1,2-Dichloroethene, ug/L</b>													
8/25/1998	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/23/1998	--	190	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
10/28/1998	--	220	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/16/1998	<1	1000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1/25/1999	--	1300	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
2/23/1999	--	2100	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
3/30/1999	--	1300	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
4/28/1999	<1	3800	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
5/26/1999	--	2400	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
6/29/1999	--	2200	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
7/26/1999	<1	2400	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8/31/1999	--	2900	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/1/1999	--	--	--	--	--	--	--	<1	<1	<1	<1	--	<1

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Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
9/30/1999	--	3100	<1	<1	<1	--	--	<1	<1	<1	<1	<1	<1
10/28/1999	<1	3800	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
11/30/1999	--	2800	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/21/1999	--	2400	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
1/18/2000	<1	2600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>cis-1,3-Dichloropropene, ug/L</b>													
8/25/1998	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/23/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
10/28/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/16/1998	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1/25/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
2/23/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
3/30/1999	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
4/28/1999	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
5/26/1999	--	<50	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
6/29/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
7/26/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8/31/1999	--	<25	<1	<1	--	--	--	--	--	--	--	<1	--
9/1/1999	--	--	--	--	--	--	--	<1	<1	<1	<1	--	<1
9/30/1999	--	<25	<1	<1	<1	--	--	<1	<1	<1	<1	<1	<1
10/28/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
11/30/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/21/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
1/18/2000	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>Methylene chloride (Dichloromethane), ug/L</b>													
8/25/1998	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/23/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
10/28/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/16/1998	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1/25/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
2/23/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
3/30/1999	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
4/28/1999	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
5/26/1999	--	<50	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
6/29/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
7/26/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8/31/1999	--	<25	<1	<1	--	--	--	--	--	--	--	<1	--
9/1/1999	--	--	--	--	--	--	--	<1	<1	<1	<1	--	<1
9/30/1999	--	<25	<1	<1	<1	--	--	<1	<1	<1	<1	<1	<1
10/28/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
11/30/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/21/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
1/18/2000	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

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Volatile Organic Compounds - Xerox Facility  
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Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
<b>Tetrachloroethene (PCE), ug/L</b>													
8/25/1998	--	1200	<1	<1	--	--	--	2.5	<1	2.5	<1	8.5	<1
9/23/1998	--	440	<1	<1	--	--	--	1.7	<1	1.9	<1	15	<1
10/28/1998	--	540	<1	<1	--	--	--	<1	<1	2.1	<1	21	<1
12/16/1998	14	1400	<1	<1	5.4	4.6	4.4	1.2	1.8	5.7	<1	7.3	27
1/25/1999	--	1800	<1	<1	--	--	--	1.4	<1	4.2	<1	14	1.7
2/23/1999	--	1200	<1	<1	--	--	--	<1	<1	4.8	<1	13	<1
3/30/1999	--	760	<1	<1	--	--	--	1.2	<1	3.9	<1	12	<1
4/28/1999	29	850	<1	<1	6.6	4.5	5.6	1.3	<1	6.6	<1	13	1.2
5/26/1999	--	350	<1	<1	--	--	--	2	<1	5.4	<1	14	1.1
6/29/1999	--	390	<1	<1	--	--	--	6	<1	6	<1	25	1.1
7/26/1999	29	230	<1	<1	8.6	5.3	7.2	3	<1	5.2	<1	16	<1
8/31/1999	--	990	<1	<1	--	--	--	--	--	--	--	21	--
9/1/1999	--	--	--	--	--	--	--	8	1	5.9	<1	--	<1
9/30/1999	--	830	<1	<1	13	--	--	6.5	1.2	7.2	<1	18	<1
10/28/1999	30	2300	1.2	<1	18	5.7	10	6	<1	5.5	<1	24	<1
11/30/1999	--	2100	<1	<1	--	--	--	4.4	<1	4.1	<1	25	<1
12/21/1999	--	660	<1	<1	--	--	--	6.9	<1	5.3	<1	27	<1
1/18/2000	20	630	<1	<1	6.6	6.6	8.3	5.5	1.5	5.1	<1	3.8	<1
<b>trans-1,2-Dichloroethene, ug/L</b>													
8/25/1998	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
9/23/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
10/28/1998	--	<5	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/16/1998	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1/25/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
2/23/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
3/30/1999	--	<10	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
4/28/1999	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
5/26/1999	--	<50	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
6/29/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
7/26/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8/31/1999	--	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
9/1/1999	--	--	--	--	--	--	--	--	--	--	--	<1	--
9/30/1999	--	<25	<1	<1	<1	--	--	<1	<1	<1	<1	--	<1
10/28/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
11/30/1999	--	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
12/21/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
1/18/2000	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>trans-1,3-Dichloropropene, ug/L</b>													
8/25/1998	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/23/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
10/28/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/16/1998	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1/25/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2

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Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
2/23/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
3/30/1999	--	< 20	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
4/28/1999	< 2	< 50	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
5/26/1999	--	< 100	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
6/29/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
7/26/1999	< 2	< 40	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
8/31/1999	--	< 50	< 2	< 2	--	--	--	--	--	--	--	< 2	--
9/1/1999	--	--	--	--	--	--	--	< 2	< 2	< 2	< 2	--	< 2
9/30/1999	--	< 50	< 2	< 2	< 2	--	--	< 2	< 2	< 2	< 2	< 2	< 2
10/28/1999	< 2	< 40	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
11/30/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
12/21/1999	--	< 40	< 2	< 2	--	--	--	< 2	< 2	< 2	< 2	< 2	< 2
1/18/2000	< 2	< 40	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
<b>Trichloroethene (TCE), ug/L</b>													
8/25/1998	--	12	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	1.2	< 1
9/23/1998	--	27	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	1.9	< 1
10/28/1998	--	19	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	3	< 1
12/16/1998	< 1	110	< 1	< 1	1.9	1	< 1	< 1	1	2.5	< 1	< 1	< 1
1/25/1999	--	210	< 1	< 1	--	--	--	< 1	< 1	2	< 1	2	< 1
2/23/1999	--	150	< 1	< 1	--	--	--	< 1	< 1	1.8	< 1	1.4	< 1
3/30/1999	--	160	< 1	< 1	--	--	--	< 1	< 1	1.4	< 1	1.5	< 1
4/28/1999	< 1	310	< 1	< 1	2.8	< 1	< 1	< 1	< 1	2.7	< 1	2.2	< 1
5/26/1999	--	160	< 1	< 1	--	--	--	< 1	< 1	2.3	< 1	2.4	< 1
6/29/1999	--	140	< 1	< 1	--	--	--	1.6	< 1	2.5	< 1	4.9	< 1
7/26/1999	< 1	78	< 1	< 1	4	< 1	< 1	< 1	< 1	1.9	< 1	2.6	< 1
8/31/1999	--	550	< 1	< 1	--	--	--	--	--	--	--	3.9	--
9/1/1999	--	--	--	--	--	--	--	2.7	< 1	2.5	< 1	--	< 1
9/30/1999	--	250	< 1	< 1	2.9	--	--	1.5	< 1	3	< 1	2.6	< 1
10/28/1999	< 1	890	< 1	< 1	4.4	< 1	< 1	1.4	< 1	2	< 1	3.6	< 1
11/30/1999	--	900	< 1	< 1	--	--	--	1	< 1	1.6	< 1	4.7	< 1
12/21/1999	--	130	< 1	< 1	--	--	--	1.6	< 1	1.8	< 1	3.8	< 1
1/18/2000	< 1	140	< 1	< 1	2.4	< 1	< 1	1.3	< 1	1.8	< 1	< 1	< 1
<b>Trichlorofluoromethane, ug/L</b>													
8/25/1998	--	< 10	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
9/23/1998	--	< 5	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
10/28/1998	--	< 5	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
12/16/1998	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1/25/1999	--	< 20	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
2/23/1999	--	< 20	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
3/30/1999	--	< 10	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
4/28/1999	< 1	< 25	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
5/26/1999	--	< 50	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
6/29/1999	--	< 20	< 1	< 1	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1
7/26/1999	< 1	< 20	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Results Analyses for  
 Volatile Organic Compounds - Xerox Facility  
 August 1998 to January 2000

Parameter, units Date Sampled	B-3	B-4	B-4A	B-4B	B-7	B-7A	B-7B	B-15	B-15B	B-15C	B-15D	B-16	B-19
8/31/1999	--	<25	<1	<1	--	--	--	--	--	--	--	<1	--
9/1/1999	--	--	--	--	--	--	--	<1	<1	<1	--	<1	--
9/30/1999	--	<25	<1	<1	<1	--	--	<1	<1	<1	<1	<1	<1
10/28/1999	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
11/30/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
12/21/1999	--	<20	<1	<1	--	--	--	<1	<1	<1	<1	<1	<1
1/18/2000	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>Vinyl Chloride, ug/L</b>													
8/25/1998	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
9/23/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
10/28/1998	--	<10	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/16/1998	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1/25/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
2/23/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
3/30/1999	--	<20	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
4/28/1999	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
5/26/1999	--	<100	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
6/29/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
7/26/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
8/31/1999	--	<50	<2	<2	--	--	--	--	--	--	--	<2	--
9/1/1999	--	--	--	--	--	--	--	<2	<2	<2	<2	--	<2
9/30/1999	--	<50	<2	<2	<2	--	--	<2	<2	<2	<2	<2	<2
10/28/1999	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
11/30/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
12/21/1999	--	<40	<2	<2	--	--	--	<2	<2	<2	<2	<2	<2
1/18/2000	<2	<40	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

Notes:  
 ug/L = micrograms per liter  
 E = Estimated value, exceeded calibration range



Results of Analyses for  
Volatile Organic Compounds - Xerox Facility  
August 1998 to January 2000

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
<b>1,1,1-Trichloroethane, ug/L</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	1	1.1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	1	<10	--	--	<2.5	<2	<5	--	1.9	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	1.8	<1	<1
4/28/1999	<1	<1	<10	<1	<5	<20	<2	<10	<1	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<2	<1	<1
6/29/1999	<1	1.1	<10	--	--	<20	<2	<10	--	2.1	<1	<1
7/26/1999	<1	<1	<10	<1	<5	<20	<2	<10	<2	1	<1	<1
8/31/1999	--	--	--	--	--	--	<2.5	--	<2	3.4	<1	<1
9/1/1999	<1	<2	<5	--	--	<20	--	<20	--	--	--	--
9/30/1999	<1	2.8	<10	--	--	<20	<5	<20	<5	1.4	<1	<1
10/28/1999	<1	2.6	<10	<1	<5	<20	<2	<10	<2	3	<1	<1
11/30/1999	<1	<1	<20	--	--	<10	<5	<10	<2	3	<1	<1
12/21/1999	<1	<1	<10	--	--	<20	<5	<10	<2	2.3	<1	<1
1/18/2000	<1	<1	<10	<1	<5	<20	<5	<10	<5	1.7	<1	<1
<b>1,1,2,2-Tetrachloroethane, ug</b>												
8/25/1998	<2	<2	<20	--	--	<40	<10	<5	--	<4	<2	<2
9/23/1998	<2	<2	<20	--	--	<100	<10	<10	--	<2	<2	<2
10/28/1998	<2	<2	<20	--	--	<50	<5	<10	--	<2	<2	<2
12/16/1998	<2	<2	<20	<2	<10	<10	<2	<10	<2	<2	<2	<2
1/25/1999	<2	<2	<20	--	--	<5	<4	<10	--	<2	<2	<2
2/23/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
3/30/1999	<2	<2	<40	--	--	<20	<4	<10	--	<2	<2	<2
4/28/1999	<2	<2	<20	<2	<10	<40	<4	<20	<2	<2	<2	<2
5/26/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<4	<2	<2
6/29/1999	<2	<2	<20	--	--	<40	<4	<20	--	<2	<2	<2
7/26/1999	<2	<2	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
8/31/1999	--	--	--	--	--	--	<5	--	<4	<2	<2	<2
9/1/1999	<2	<4	<10	--	--	<40	--	<40	--	--	--	--
9/30/1999	<2	<4	<20	--	--	<40	<10	<40	<10	<2	<2	<2
10/28/1999	<2	<4	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
11/30/1999	<2	<2	<40	--	--	<20	<10	<20	<4	<4	<2	<2
12/21/1999	<2	<2	<20	--	--	<40	<10	<20	<4	<2	<2	<2
1/18/2000	<2	<2	<20	<2	<10	<40	<10	<20	<10	<2	<2	<2
<b>1,1,2-Trichloroethane, ug/L</b>												
8/25/1998	<2	<2	<20	--	--	<40	<10	<5	--	<4	<2	<2
9/23/1998	<2	<2	<20	--	--	<100	<10	<10	--	<2	<2	<2
10/28/1998	<2	<2	<20	--	--	<50	<5	<10	--	<2	<2	<2
12/16/1998	<2	<2	<20	<2	<10	<10	<2	<10	<2	<2	<2	<2
1/25/1999	<2	<2	<20	--	--	<5	<4	<10	--	<2	<2	<2

Result analyses for  
 Volatile Organic Compounds - Xerox Facility  
 August 1998 to January 2000

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
2/23/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
3/30/1999	<2	<2	<40	--	--	<20	<4	<10	--	<2	<2	<2
4/28/1999	<2	<2	<20	<2	<10	<40	<4	<20	<2	<2	<2	<2
5/26/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<4	<2	<2
6/29/1999	<2	<2	<20	--	--	<40	<4	<20	--	<2	<2	<2
7/26/1999	<2	<2	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
8/31/1999	--	--	--	--	--	--	<5	--	<4	<2	<2	<2
9/1/1999	<2	<4	<10	--	--	<40	--	<40	--	--	--	--
9/30/1999	<2	<4	<20	--	--	<40	<10	<40	<10	<2	<2	<2
10/28/1999	<2	<4	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
11/30/1999	<2	<2	<40	--	--	<20	<10	<20	<4	<4	<2	<2
12/21/1999	<2	<2	<20	--	--	<40	<10	<20	<4	<2	<2	<2
1/18/2000	<2	<2	<20	<2	<10	<40	<10	<20	<10	<2	<2	<2
<b>1,1-Dichloroethane, ug/L</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	<1	<1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	<1	<10	--	--	<2.5	<2	<5	--	<1	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	<1	<1	<1
4/28/1999	<1	<1	<10	<1	<5	<20	<2	<10	<1	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<2	<1	<1
6/29/1999	<1	<1	<10	--	--	<20	<2	<10	--	<1	<1	<1
7/26/1999	<1	<1	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
8/31/1999	--	--	--	--	--	--	<2.5	--	<2	<1	<1	<1
9/1/1999	<1	<2	<5	--	--	<20	--	<20	--	--	--	--
9/30/1999	<1	<2	<10	--	--	<20	<5	<20	<5	<1	<1	<1
10/28/1999	<1	<2	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
11/30/1999	<1	<1	<20	--	--	<10	<5	<10	<2	<2	<1	<1
12/21/1999	<1	<1	<10	--	--	<20	<5	<10	<2	<1	<1	<1
1/18/2000	<1	<1	<10	<1	<5	<20	<5	<10	<5	<1	<1	<1
<b>1,1-Dichloroethene, ug/L</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	<1	<1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	<1	<10	--	--	<2.5	<2	<5	--	<1	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	<1	<1	<1
4/28/1999	<1	<1	<10	<1	<5	<20	<2	<10	<1	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<2	<1	<1
6/29/1999	<1	<1	<10	--	--	<20	<2	<10	--	<1	<1	<1
7/26/1999	<1	<1	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1

**Results of Analyses for  
Volatile Organic Compounds - Xerox Facility  
August 1998 to January 2000**

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
8/31/1999	--	--	--	--	--	--	<2.5	--	<2	<1	<1	<1
9/1/1999	<1	<2	<5	--	--	<20	--	<20	--	--	--	--
9/30/1999	<1	<2	<10	--	--	<20	<5	<20	<5	<1	<1	<1
10/28/1999	<1	<2	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
11/30/1999	<1	<1	<20	--	--	<10	<5	<10	<2	<2	<1	<1
12/21/1999	<1	<1	<10	--	--	<20	<5	<10	<2	<1	<1	<1
1/18/2000	<1	<1	<10	<1	<5	<20	<5	<10	<5	<1	<1	<1
<b>1,2-Dichlorobenzene, ug/L</b>												
8/25/1998	<2	<2	<20	--	--	<40	<10	<5	--	<4	<2	<2
9/23/1998	<2	<2	<20	--	--	<100	<10	<10	--	<2	<2	<2
10/28/1998	<2	<2	<20	--	--	<50	<5	<10	--	<2	<2	<2
12/16/1998	<2	<2	<20	<2	<10	<10	<2	<10	<2	<2	<2	<2
1/25/1999	<2	<2	<20	--	--	<5	<4	<10	--	<2	<2	<2
2/23/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
3/30/1999	<2	<2	<40	--	--	<20	<4	<10	--	<2	<2	<2
4/28/1999	<2	<2	<20	<2	<10	<40	<4	<20	<2	<2	<2	<2
5/26/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<4	<2	<2
6/29/1999	<2	<2	<20	--	--	<40	<4	<20	--	<2	<2	<2
7/26/1999	<2	<2	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
8/31/1999	--	--	--	--	--	--	<5	--	<4	<2	<2	<2
9/1/1999	<2	<4	<10	--	--	<40	--	<40	--	--	--	--
9/30/1999	<2	<4	<20	--	--	<40	<10	<40	<10	<2	<2	<2
10/28/1999	<2	<4	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
11/30/1999	<2	<2	<40	--	--	<20	<10	<20	<4	<4	<2	<2
12/21/1999	<2	<2	<20	--	--	<40	<10	<20	<4	<2	<2	<2
1/18/2000	<2	<2	<20	<2	<10	<40	<10	<20	<10	<2	<2	<2
<b>1,2-Dichloroethane, ug/L</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	<1	<1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	<1	<10	--	--	<2.5	<2	<5	--	<1	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	<1	<1	<1
4/28/1999	<1	<1	<10	<1	<5	<20	<2	<10	<1	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<2	<1	<1
6/29/1999	<1	<1	<10	--	--	<20	<2	<10	--	<1	<1	<1
7/26/1999	<1	<1	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
8/31/1999	--	--	--	--	--	--	<2.5	--	<2	<1	<1	<1
9/1/1999	<1	<2	<5	--	--	<20	--	<20	--	--	--	--
9/30/1999	<1	<2	<10	--	--	<20	<5	<20	<5	<1	<1	<1
10/28/1999	<1	<2	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
11/30/1999	<1	<1	<20	--	--	<10	<5	<10	<2	<2	<1	<1
12/21/1999	<1	<1	<10	--	--	<20	<5	<10	<2	<1	<1	<1

Results analyses for  
 Volatile Organic Compounds - Xerox Facility  
 August 1998 to January 2000

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
1/18/2000	<1	<1	<10	<1	<5	<20	<5	<10	<5	<1	<1	<1
<b>1,2-Dichloropropane, ug/L</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	<1	<1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	<1	<10	--	--	<2.5	<2	<5	--	<1	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<1	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
4/28/1999	<1	<1	<10	<1	<5	<10	<2	<5	--	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<1	<1	<1
6/29/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<2	<1	<1
7/26/1999	<1	<1	<10	--	--	<20	<2	<10	--	<1	<1	<1
8/31/1999	--	--	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
9/1/1999	<1	<2	<5	--	--	--	<2.5	--	<2	<1	<1	<1
9/30/1999	<1	<2	<10	--	--	<20	<5	<20	--	--	--	--
10/28/1999	<1	<2	<10	--	--	<20	<5	<20	<5	<1	<1	<1
11/30/1999	<1	<1	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
12/21/1999	<1	<1	<20	--	--	<10	<5	<10	<2	<2	<1	<1
1/18/2000	<1	<1	<10	--	--	<20	<5	<10	<2	<1	<1	<1
<b>1,3-Dichlorobenzene, ug/L</b>												
8/25/1998	<2	<2	<20	--	--	<40	<10	<5	--	<4	<2	<2
9/23/1998	<2	<2	<20	--	--	<100	<10	<10	--	<2	<2	<2
10/28/1998	<2	<2	<20	--	--	<50	<5	<10	--	<2	<2	<2
12/16/1998	<2	<2	<20	<2	<10	<10	<2	<10	<2	<2	<2	<2
1/25/1999	<2	<2	<20	--	--	<5	<4	<10	--	<2	<2	<2
2/23/1999	<2	<2	<40	--	--	<20	<4	<10	--	<2	<2	<2
3/30/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
4/28/1999	<2	<2	<20	<2	<10	<40	<4	<20	<2	<2	<2	<2
5/26/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<2	<2	<2
6/29/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<4	<2	<2
7/26/1999	<2	<2	<20	--	--	<40	<4	<20	--	<2	<2	<2
8/31/1999	<2	<2	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
9/1/1999	--	--	--	--	--	--	<5	--	<4	<2	<2	<2
9/30/1999	<2	<4	<10	--	--	<40	--	<40	--	--	--	--
10/28/1999	<2	<4	<20	--	--	<40	<10	<40	<10	<2	<2	<2
11/30/1999	<2	<4	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
12/21/1999	<2	<2	<40	--	--	<20	<10	<20	<4	<4	<2	<2
1/18/2000	<2	<2	<20	--	--	<40	<10	<20	<4	<2	<2	<2
<b>1,4-Dichlorobenzene, ug/L</b>												
8/25/1998	<2	<2	<20	--	--	<40	<10	<5	--	<4	<2	<2
9/23/1998	<2	<2	<20	--	--	<100	<10	<10	--	<2	<2	<2
10/28/1998	<2	<2	<20	--	--	<50	<5	<10	--	<2	<2	<2

**Results of Analyses for  
Volatile Organic Compounds - Xerox Facility  
August 1998 to January 2000**

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
12/16/1998	<2	<2	<20	<2	<10	<10	<2	<10	<2	<2	<2	<2
1/25/1999	<2	<2	<20	--	--	<5	<4	<10	--	<2	<2	<2
2/23/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
3/30/1999	<2	<2	<40	--	--	<20	<4	<10	--	<2	<2	<2
4/28/1999	<2	<2	<20	<2	<10	<40	<4	<20	<2	<2	<2	<2
5/26/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<4	<2	<2
6/29/1999	<2	<2	<20	--	--	<40	<4	<20	--	<2	<2	<2
7/26/1999	<2	<2	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
8/31/1999	--	--	--	--	--	--	<5	--	<4	<2	<2	<2
9/1/1999	<2	<4	<10	--	--	<40	--	<40	--	--	--	--
9/30/1999	<2	<4	<20	--	--	<40	<10	<40	<10	<2	<2	<2
10/28/1999	<2	<4	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
11/30/1999	<2	<2	<40	--	--	<20	<10	<20	<4	<4	<2	<2
12/21/1999	<2	<2	<20	--	--	<40	<10	<20	<4	<2	<2	<2
1/18/2000	<2	<2	<20	<2	<10	<40	<10	<20	<10	<2	<2	<2
<b>2-Chloroethyl vinyl ether, ug/</b>												
8/25/1998	<2	<2	<20	--	--	<40	<10	<5	--	<4	<2	<2
9/23/1998	<2	<2	<20	--	--	<100	<10	<10	--	<2	<2	<2
10/28/1998	<2	<2	<20	--	--	<50	<5	<10	--	<2	<2	<2
12/16/1998	<2	<2	<20	<2	<10	<10	<2	<10	<2	<2	<2	<2
1/25/1999	<2	<2	<20	--	--	<5	<4	<10	--	<2	<2	<2
2/23/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
3/30/1999	<2	<2	<40	--	--	<20	<4	<10	--	<2	<2	<2
4/28/1999	<2	<2	<20	<2	<10	<40	<4	<20	<2	<2	<2	<2
5/26/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<4	<2	<2
6/29/1999	<2	<2	<20	--	--	<40	<4	<20	--	<2	<2	<2
7/26/1999	<2	<2	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
8/31/1999	--	--	--	--	--	--	<5	--	<4	<2	<2	<2
9/1/1999	<2	<4	<10	--	--	<40	--	<40	--	--	--	--
9/30/1999	<2	<4	<20	--	--	<40	<10	<40	<10	<2	<2	<2
10/28/1999	<2	<4	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
11/30/1999	<2	<2	<40	--	--	<20	<10	<20	<4	<4	<2	<2
12/21/1999	<2	<2	<20	--	--	<40	<10	<20	<4	<2	<2	<2
1/18/2000	<2	<2	<20	<2	<10	<40	<10	<20	<10	<2	<2	<2
<b>Bromodichloromethane, ug/L</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	<1	<1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	<1	<10	--	--	<2.5	<2	<5	--	<1	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	<1	<1	<1
4/28/1999	<1	<1	<10	<1	<5	<20	<2	<10	<1	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<2	<1	<1

Results Analyses for  
 Volatile Organic Compounds - Xerox Facility  
 August 1998 to January 2000

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
6/29/1999	<1	<1	<10	--	--	<20	<2	<10	--	<1	<1	<1
7/26/1999	<1	<1	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
8/31/1999	--	--	--	--	--	--	<2.5	--	<2	<1	<1	<1
9/1/1999	<1	<2	<5	--	--	<20	--	<20	--	--	<1	<1
9/30/1999	<1	<2	<10	--	--	<20	<5	<20	<5	<1	<1	--
10/28/1999	<1	<2	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
11/30/1999	<1	<1	<20	--	--	<10	<5	<10	<2	<1	<1	<1
12/21/1999	<1	<1	<10	--	--	<20	<5	<10	<2	<1	<1	<1
1/18/2000	<1	<1	<10	<1	<5	<20	<5	<10	<5	<1	<1	<1
<b>Bromoform (Tribromomethan</b>												
8/25/1998	<2	<2	<20	--	--	<40	<10	<5	--	<4	<2	<2
9/23/1998	<2	<2	<20	--	--	<100	<10	<10	--	<2	<2	<2
10/28/1998	<2	<2	<20	--	--	<50	<5	<10	--	<2	<2	<2
12/16/1998	<2	<2	<20	<2	<10	<10	<2	<10	<2	<2	<2	<2
1/25/1999	<2	<2	<20	--	--	<5	<4	<10	<2	<2	<2	<2
2/23/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
3/30/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
4/28/1999	<2	<2	<20	<2	<10	<40	<4	<20	<2	<2	<2	<2
5/26/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<4	<2	<2
6/29/1999	<2	<2	<20	--	--	<40	<4	<20	--	<2	<2	<2
7/26/1999	<2	<2	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
8/31/1999	--	--	--	--	--	--	<5	--	<4	<2	<2	<2
9/1/1999	<2	<4	<10	--	--	<40	--	<40	<4	<2	<2	<2
9/30/1999	<2	<4	<20	--	--	<40	<10	<40	--	--	--	--
10/28/1999	<2	<4	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
11/30/1999	<2	<2	<40	--	--	<20	<10	<20	<4	<4	<2	<2
12/21/1999	<2	<2	<20	--	--	<40	<10	<20	<4	<4	<2	<2
1/18/2000	<2	<2	<20	<2	<10	<40	<10	<20	<4	<2	<2	<2
<b>Bromomethane (Methyl brom</b>												
8/25/1998	<5	<5	<50	--	--	<100	<25	<13	--	<10	<5	<5
9/23/1998	<5	<5	<50	--	--	<250	<25	<25	--	<5	<5	<5
10/28/1998	<5	<5	<50	--	--	<130	<13	<25	--	<5	<5	<5
12/16/1998	<5	<5	<50	<5	<25	<25	<5	<25	<5	<5	<5	<5
1/25/1999	<5	<5	<50	--	--	<13	<10	<25	--	<5	<5	<5
2/23/1999	<5	<5	<100	--	--	<50	<10	<25	--	<5	<5	<5
3/30/1999	<5	<5	<100	--	--	<50	<10	<25	--	<5	<5	<5
4/28/1999	<5	<5	<50	<5	<25	<100	<10	<50	<5	<5	<5	<5
5/26/1999	<5	<5	<50	--	--	<100	<10	<50	<5	<10	<5	<5
6/29/1999	<5	<5	<50	--	--	<100	<10	<50	<5	<10	<5	<5
7/26/1999	<5	<5	<50	<5	<25	<100	<10	<50	--	<5	<5	<5
8/31/1999	--	--	--	--	--	--	<13	--	<10	<5	<5	<5
9/1/1999	<5	<10	<25	--	--	<100	--	<100	--	<5	<5	<5
9/30/1999	<5	<10	<50	--	--	<100	<25	<100	--	--	--	--
10/28/1999	<5	<10	<50	<5	<25	<100	<10	<50	<10	<5	<5	<5

Results of Analyses for  
Volatile Organic Compounds - Xerox Facility  
August 1998 to January 2000

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
11/30/1999	<5	<5	<100	--	--	<50	<25	<50	<10	<10	<5	<5
12/21/1999	<5	<5	<50	--	--	<100	<25	<50	<10	<5	<5	<5
1/18/2000	<5	<5	<50	<5	<25	<100	<25	<50	<25	<5	<5	<5
<b>Carbon tetrachloride, ug/L</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	<1	<1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	<1	<10	--	--	<2.5	<2	<5	--	<1	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	<1	<1	<1
4/28/1999	<1	<1	<10	<1	<5	<20	<2	<10	<1	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<2	<1	<1
6/29/1999	<1	<1	<10	--	--	<20	<2	<10	--	<1	<1	<1
7/26/1999	<1	<1	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
8/31/1999	--	--	--	--	--	--	<2.5	--	<2	<1	<1	<1
9/1/1999	<1	<2	<5	--	--	<20	--	<20	--	--	--	--
9/30/1999	<1	<2	<10	--	--	<20	<5	<20	<5	<1	<1	<1
10/28/1999	<1	<2	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
11/30/1999	<1	<1	<20	--	--	<10	<5	<10	<2	<2	<1	<1
12/21/1999	<1	<1	<10	--	--	<20	<5	<10	<2	<1	<1	<1
1/18/2000	<1	<1	<10	<1	<5	<20	<5	<10	<5	<1	<1	<1
<b>Chlorobenzene, ug/L</b>												
8/25/1998	<2	<2	<20	--	--	<40	<10	<5	--	<4	<2	<2
9/23/1998	<2	<2	<20	--	--	<100	<10	<10	--	<2	<2	<2
10/28/1998	<2	<2	<20	--	--	<50	<5	<10	--	<2	<2	<2
12/16/1998	<2	<2	<20	<2	<10	<10	<2	<10	<2	<2	<2	<2
1/25/1999	<2	<2	<20	--	--	<5	<4	<10	--	<2	<2	<2
2/23/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
3/30/1999	<2	<2	<40	--	--	<20	<4	<10	--	<2	<2	<2
4/28/1999	<2	<2	<20	<2	<10	<40	<4	<20	<2	<2	<2	<2
5/26/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<4	<2	<2
6/29/1999	<2	<2	<20	--	--	<40	<4	<20	--	<2	<2	<2
7/26/1999	<2	<2	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
8/31/1999	--	--	--	--	--	--	<5	--	<4	<2	<2	<2
9/1/1999	<2	<4	<10	--	--	<40	--	<40	--	--	--	--
9/30/1999	<2	<4	<20	--	--	<40	<10	<40	<10	<2	<2	<2
10/28/1999	<2	<4	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
11/30/1999	<2	<2	<40	--	--	<20	<10	<20	<4	<4	<2	<2
12/21/1999	<2	<2	<20	--	--	<40	<10	<20	<4	<2	<2	<2
1/18/2000	<2	<2	<20	<2	<10	<40	<10	<20	<10	<2	<2	<2
<b>Chlorodibromomethane (Dibr</b>												
8/25/1998	<2	<2	<20	--	--	<40	<10	<5	--	<4	<2	<2

Results Analyses for  
 Volatile Organic Compounds - Xerox Facility  
 August 1998 to January 2000

June 9, 2009

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
9/23/1998	<2	<2	<20	--	--	<100	<10	<10	--	<2	<2	<2
10/28/1998	<2	<2	<20	--	--	<50	<5	<10	--	<2	<2	<2
12/16/1998	<2	<2	<20	<2	<10	<10	<2	<10	<2	<2	<2	<2
1/25/1999	<2	<2	<20	--	--	<5	<4	<10	--	<2	<2	<2
2/23/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
3/30/1999	<2	<2	<40	--	--	<20	<4	<10	--	<2	<2	<2
4/28/1999	<2	<2	<20	<2	<10	<40	<4	<20	<2	<2	<2	<2
5/26/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<4	<2	<2
6/29/1999	<2	<2	<20	--	--	<40	<4	<20	--	<2	<2	<2
7/26/1999	<2	<2	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
8/31/1999	--	--	--	--	--	--	<5	--	<4	<2	<2	<2
9/1/1999	<2	<4	<10	--	--	<40	--	<40	--	--	--	--
9/30/1999	<2	<4	<20	--	--	<40	<10	<40	<10	<2	<2	<2
10/28/1999	<2	<4	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
11/30/1999	<2	<2	<40	--	--	<20	<10	<20	<4	<4	<2	<2
12/21/1999	<2	<2	<20	--	--	<40	<10	<20	<4	<2	<2	<2
1/18/2000	<2	<2	<20	<2	<10	<40	<10	<20	<10	<2	<2	<2
<b>Chloroethane, ug/L</b>												
8/25/1998	<2	<2	<20	--	--	<40	<10	<5	--	<4	<2	<2
9/23/1998	<2	<2	<20	--	--	<100	<10	<10	--	<2	<2	<2
10/28/1998	<2	<2	<20	--	--	<50	<5	<10	--	<2	<2	<2
12/16/1998	<2	<2	<20	<2	<10	<10	<2	<10	<2	<2	<2	<2
1/25/1999	<2	<2	<20	--	--	<5	<4	<10	--	<2	<2	<2
2/23/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
3/30/1999	<2	<2	<40	--	--	<20	<4	<10	--	<2	<2	<2
4/28/1999	<2	<2	<20	<2	<10	<40	<4	<20	<2	<2	<2	<2
5/26/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<4	<2	<2
6/29/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<2	<2	<2
7/26/1999	<2	<2	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
8/31/1999	--	--	--	--	--	--	<5	--	<4	<2	<2	<2
9/1/1999	<2	<4	<10	--	--	<40	--	<40	--	--	--	--
9/30/1999	<2	<4	<20	--	--	<40	<10	<40	<10	<2	<2	<2
10/28/1999	<2	<4	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
11/30/1999	<2	<2	<40	--	--	<20	<10	<20	<4	<4	<2	<2
12/21/1999	<2	<2	<20	--	--	<40	<10	<20	<4	<2	<2	<2
1/18/2000	<2	<2	<20	<2	<10	<40	<10	<20	<10	<2	<2	<2
<b>Chloroform, ug/L</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	<1	<1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	<1	<10	--	--	<2.5	<2	<5	--	<1	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	<1	<1	<1



**Results of Analyses for  
Volatile Organic Compounds - Xerox Facility  
August 1998 to January 2000**

October 9, 2009

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
4/28/1999	<1	<1	<10	<1	<5	<20	<2	<10	<1	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<2	<1	<1
6/29/1999	<1	<1	<10	--	--	<20	<2	<10	--	<1	<1	<1
7/26/1999	<1	<1	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
8/31/1999	--	--	--	--	--	--	<2.5	--	<2	<1	<1	<1
9/1/1999	<1	<2	<5	--	--	<20	--	<20	--	--	--	--
9/30/1999	<1	<2	<10	--	--	<20	<5	<20	<5	<1	<1	<1
10/28/1999	<1	<2	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
11/30/1999	<1	<1	<20	--	--	<10	<5	<10	<2	<2	<1	<1
12/21/1999	<1	<1	<10	--	--	<20	<5	<10	<2	<1	<1	<1
1/18/2000	<1	<1	<10	<1	<5	<20	<5	<10	<2	<1	<1	<1
<b>Chloromethane (Methyl chlori</b>												
8/25/1998	<5	<5	<50	--	--	<100	<25	<13	--	<10	<5	<5
9/23/1998	<5	<5	<50	--	--	<250	<25	<25	--	<5	<5	<5
10/28/1998	<5	<5	<50	--	--	<130	<13	<25	--	<5	<5	<5
12/16/1998	<5	<5	<50	<5	<25	<25	<5	<25	<5	<5	<5	<5
1/25/1999	<5	<5	<50	--	--	<13	<10	<25	--	<5	<5	<5
2/23/1999	<5	<5	<100	--	--	<50	<10	<25	--	<10	<5	<5
3/30/1999	<5	<5	<100	--	--	<50	<10	<25	--	<5	<5	<5
4/28/1999	<5	<5	<50	<5	<25	<100	<10	<50	<5	<5	<5	<5
5/26/1999	<5	<5	<50	--	--	<100	<10	<50	<5	<10	<5	<5
6/29/1999	<5	<5	<50	--	--	<100	<10	<50	--	<5	<5	<5
7/26/1999	<5	<5	<50	<5	<25	<100	<10	<50	<10	<5	<5	<5
8/31/1999	--	--	--	--	--	--	<13	--	<10	<5	<5	<5
9/1/1999	<5	<10	<25	--	--	<100	--	<100	--	--	--	--
9/30/1999	<5	<10	<50	--	--	<100	<25	<100	<25	<5	<5	<5
10/28/1999	<5	<10	<50	<5	<25	<100	<10	<50	<10	<5	<5	<5
11/30/1999	<5	<5	<100	--	--	<50	<25	<50	<10	<10	<5	<5
12/21/1999	<5	<5	<50	--	--	<100	<25	<50	<10	<5	<5	<5
1/18/2000	<5	<5	<50	<5	<25	<100	<25	<50	<25	<5	<5	<5
<b>cis-1,2-Dichloroethene, ug/L</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	<1	<1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	<1	<10	--	--	<2.5	<2	<5	--	<1	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	<1	<1	<1
4/28/1999	1.2	<1	<10	<1	<5	<20	<2	<10	80	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	23	<2	<1	5
6/29/1999	<1	<1	<10	--	--	<20	<2	<10	--	<1	<1	2
7/26/1999	1.8	<1	<10	<1	<5	<20	<2	<10	50	<1	<1	1.8
8/31/1999	--	--	--	--	--	--	<2.5	--	94	<1	<1	3.5
9/1/1999	1.2	<2	<5	--	--	<20	--	<20	--	--	--	--

Results Analyses for  
 Volatile Organic Compounds - Xerox Facility  
 August 1998 to January 2000

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
9/30/1999	<1	<2	<10	--	--	<20	<5	<20	69	<1	<1	1.6
10/28/1999	<1	<2	<10	<1	<5	<20	<2	<10	81	<1	<1	1
11/30/1999	1.3	<1	<20	--	--	<10	<5	<10	63	11	<1	<1
12/21/1999	<1	<1	<10	--	--	<20	<5	<10	42	16	<1	<1
1/18/2000	<1	<1	<10	<1	<5	<20	<5	<10	42	15	<1	<1
<b>cis-1,3-Dichloropropene, ug/L</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	<1	<1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	<1	<10	--	--	<2.5	<2	<5	--	<1	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	<1	<1	<1
4/28/1999	<1	<1	<10	<1	<5	<20	<2	<10	<1	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<2	<1	<1
6/29/1999	<1	<1	<10	--	--	<20	<2	<10	--	<1	<1	<1
7/26/1999	<1	<1	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
8/31/1999	--	--	--	--	--	--	<2.5	--	<2	<1	<1	<1
9/1/1999	<1	<2	<5	--	--	<20	--	<20	--	--	--	--
9/30/1999	<1	<2	<10	--	--	<20	<5	<20	<5	<1	<1	<1
10/28/1999	<1	<2	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
11/30/1999	<1	<1	<20	--	--	<10	<5	<10	<2	<2	<1	<1
12/21/1999	<1	<1	<10	--	--	<20	<5	<10	<2	<1	<1	<1
1/18/2000	<1	<1	<10	<1	<5	<20	<5	<10	<5	<1	<1	<1
<b>Methylene chloride (Dichloror)</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	<1	<1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	<1	<10	--	--	<2.5	<2	<5	--	<1	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	<1	<1	<1
4/28/1999	<1	<1	<10	<1	<5	<20	<2	<10	<1	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<2	<1	<1
6/29/1999	<1	<1	<10	--	--	<20	<2	<10	--	<1	<1	<1
7/26/1999	<1	<1	60	<1	<5	<20	<2	34	<2	<1	<1	<1
8/31/1999	--	--	--	--	--	--	<2.5	--	<2	<1	<1	<1
9/1/1999	<1	<2	<5	--	--	<20	--	<20	--	--	--	--
9/30/1999	<1	<2	<10	--	--	<20	<5	<20	<5	<1	<1	<1
10/28/1999	<1	<2	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
11/30/1999	<1	<1	<20	--	--	<10	<5	<10	<2	<2	<1	<1
12/21/1999	<1	<1	<10	--	--	<20	<5	<10	<2	<1	<1	<1
1/18/2000	<1	<1	<10	<1	<5	<20	<5	<10	<5	<1	<1	<1

Results of Analyses for  
Volatile Organic Compounds - Xerox Facility  
August 1998 to January 2000

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
<b>Tetrachloroethene (PCE), ug/</b>												
8/25/1998	84	82	1200	--	--	2800	340	300	--	180	4.2	32
9/23/1998	98	99	1400	--	--	3900	370	500	--	30	5.3	16
10/28/1998	120	85	1300	--	--	2700	160	380	--	75	6.4	19
12/16/1998	100	110	1400	88	460	370	57	410	93	83	5.1	62
1/25/1999	82	120	1500	--	--	250	200	430	--	140	4.2	45
2/23/1999	110	130	1600	--	--	1400	170	700	--	210	3.1	52
3/30/1999	79	110	1600	--	--	960	180	630	--	120	4.8	4.9
4/28/1999	100	130	1400	77	660	1800	230	1100	130	64	4.4	48
5/26/1999	83	150	1100	--	--	2100	220	950	240 E	160	4.8	28
6/29/1999	99	160	1100	--	--	1800	250	1200	--	120	3.9	43
7/26/1999	100	120	1100	38	510	1900	240	1400	160	100	3.8	40
8/31/1999	--	--	--	--	--	--	390	--	250	140	4.6	57
9/1/1999	88	200	480	--	--	1800	--	1600	--	--	--	--
9/30/1999	90	280	810	--	--	2100	380	1600	530	110	4.2	62
10/28/1999	93	200	1600	94	950	2100	380	1400	290	190	4	60
11/30/1999	110	180	1500	--	--	2500	570	1200	260	180	4.1	58
12/21/1999	130	180	1500	--	--	2500	610	1800	380	190	3.4	54
1/18/2000	120	190	1500	43	920	2800	570	1800	590	180	3.1	58
<b>trans-1,2-Dichloroethene, ug/l</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	<1	<1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	<1	<10	--	--	<2.5	<2	<5	--	<1	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	<1	<1	<1
4/28/1999	<1	<1	<10	<1	<5	<20	<2	<10	<1	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<2	<1	<1
6/29/1999	<1	<1	<10	--	--	<20	<2	<10	--	<1	<1	<1
7/26/1999	<1	<1	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
8/31/1999	--	--	--	--	--	--	<2.5	--	<2	<1	<1	<1
9/1/1999	<1	<2	<5	--	--	<20	--	<20	--	--	--	--
9/30/1999	<1	<2	<10	--	--	<20	<5	<20	<5	<1	<1	<1
10/28/1999	<1	<2	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
11/30/1999	<1	<1	<20	--	--	<10	<5	<10	<2	<2	<1	<1
12/21/1999	<1	<1	<10	--	--	<20	<5	<10	<2	<1	<1	<1
1/18/2000	<1	<1	<10	<1	<5	<20	<5	<10	<5	<1	<1	<1
<b>trans-1,3-Dichloropropene, ug</b>												
8/25/1998	<2	<2	<20	--	--	<40	<10	<5	--	<4	<2	<2
9/23/1998	<2	<2	<20	--	--	<100	<10	<10	--	<2	<2	<2
10/28/1998	<2	<2	<20	--	--	<50	<5	<10	--	<2	<2	<2
12/16/1998	<2	<2	<20	<2	<10	<10	<2	<10	<2	<2	<2	<2
1/25/1999	<2	<2	<20	--	--	<5	<4	<10	--	<2	<2	<2

Results Analyses for  
 Volatile Organic Compounds - Xerox Facility  
 August 1998 to January 2000

9, 2009

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
2/23/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
3/30/1999	<2	<2	<40	--	--	<20	<4	<10	--	<2	<2	<2
4/28/1999	<2	<2	<20	<2	<10	<40	<4	<20	<2	<2	<2	<2
5/26/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<4	<2	<2
6/29/1999	<2	<2	<20	--	--	<40	<4	<20	--	<2	<2	<2
7/26/1999	<2	<2	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
8/31/1999	--	--	--	--	--	--	<5	--	<4	<2	<2	<2
9/1/1999	<2	<4	<10	--	--	<40	--	<40	--	--	--	--
9/30/1999	<2	<4	<20	--	--	<40	<10	<40	<10	<2	<2	<2
10/28/1999	<2	<4	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
11/30/1999	<2	<2	<40	--	--	<20	<10	<20	<4	<4	<2	<2
12/21/1999	<2	<2	<20	--	--	<40	<10	<20	<4	<2	<2	<2
1/18/2000	<2	<2	<20	<2	<10	<40	<10	<20	<4	<2	<2	<2
<b>Trichloroethene (TCE), ug/L</b>												
8/25/1998	5.8	3.6	<10	--	--	<20	<5	<2.5	--	8.4	1.4	<1
9/23/1998	5.6	3.8	<10	--	--	<50	<5	<5	--	<1	1.5	<1
10/28/1998	9.4	4	<10	--	--	<25	<2.5	<5	--	3.4	2	<1
12/16/1998	8	5.8	<10	<1	<5	<5	<1	<5	3.2	12	2.2	2.3
1/25/1999	8.8	9.4	<10	--	--	<2.5	<2	<5	--	30	1.5	<1
2/23/1999	8.1	6.2	<20	--	--	<10	<2	<5	--	43	<1	<1
3/30/1999	8.8	8.1	<20	--	--	<10	<2	<5	--	32	1.8	1.3
4/28/1999	10	9	<10	<1	<5	<20	<2	<10	7.6	13	1.2	1.4
5/26/1999	7.7	9.4	<10	--	--	<20	<2	<10	12	35	1.2	<1
6/29/1999	11	12	<10	--	--	<20	<2	<10	--	25	1.2	1
7/26/1999	12	9.9	<10	<1	<5	<20	<2	<10	9.7	16	1	1.4
8/31/1999	--	--	--	--	--	--	2.7	--	35	39	1.2	2.1
9/1/1999	11	19	<5	--	--	<20	--	<20	--	--	--	--
9/30/1999	9	27	<10	--	--	<20	<5	<20	41	25	1.2	1.4
10/28/1999	8.6	13	<10	<1	<5	<20	<2	<10	37	41	<1	1
11/30/1999	12	12	<20	--	--	<10	<5	<10	30	50	<1	<1
12/21/1999	9.7	10	<10	--	--	23	<5	<10	37	43	<1	<1
1/18/2000	9	9.3	<10	<1	<5	76	<5	<10	55	34	<1	<1
<b>Trichlorofluoromethane, ug/l</b>												
8/25/1998	<1	<1	<10	--	--	<20	<5	<2.5	--	<2	<1	<1
9/23/1998	<1	<1	<10	--	--	<50	<5	<5	--	<1	<1	<1
10/28/1998	<1	<1	<10	--	--	<25	<2.5	<5	--	<1	<1	<1
12/16/1998	<1	<1	<10	<1	<5	<5	<1	<5	<1	<1	<1	<1
1/25/1999	<1	<1	<10	--	--	<2.5	<2	<5	--	<1	<1	<1
2/23/1999	<1	<1	<20	--	--	<10	<2	<5	--	<2	<1	<1
3/30/1999	<1	<1	<20	--	--	<10	<2	<5	--	<1	<1	<1
4/28/1999	<1	<1	<10	<1	<5	<20	<2	<10	<1	<1	<1	<1
5/26/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<1	<1	<1
6/29/1999	<1	<1	<10	--	--	<20	<2	<10	<1	<2	<1	<1
7/26/1999	<1	<1	<10	<1	<5	<20	<2	<10	--	<1	<1	<1

**Results of Analyses for  
Volatile Organic Compounds - Xerox Facility  
August 1998 to January 2000**

Parameter, units Date Sampled	B-20	B-23	B-26	B-35	B-36	B-37	B-38	B-39	RW-1	RW-9	RW-12	RW-13
8/31/1999	--	--	--	--	--	--	<2.5	--	<2	<1	<1	<1
9/1/1999	<1	<2	<5	--	--	<20	--	<20	--	--	--	--
9/30/1999	<1	<2	<10	--	--	<20	<5	<20	<5	<1	<1	<1
10/28/1999	<1	<2	<10	<1	<5	<20	<2	<10	<2	<1	<1	<1
11/30/1999	<1	<1	<20	--	--	<10	<5	<10	<2	<2	<1	<1
12/21/1999	<1	<1	<10	--	--	<20	<5	<10	<2	<1	<1	<1
1/18/2000	<1	<1	<10	<1	<5	<20	<5	<10	<5	<1	<1	<1
<b>Vinyl Chloride, ug/L</b>												
8/25/1998	<2	<2	<20	--	--	<40	<10	<5	--	<4	<2	<2
9/23/1998	<2	<2	<20	--	--	<100	<10	<10	--	<2	<2	<2
10/28/1998	<2	<2	<20	--	--	<50	<5	<10	--	<2	<2	<2
12/16/1998	<2	<2	<20	<2	<10	<10	<2	<10	<2	<2	<2	<2
1/25/1999	<2	<2	<20	--	--	<5	<4	<10	--	<2	<2	<2
2/23/1999	<2	<2	<40	--	--	<20	<4	<10	--	<4	<2	<2
3/30/1999	<2	<2	<40	--	--	<20	<4	<10	--	<2	<2	<2
4/28/1999	<2	<2	<20	<2	<10	<40	<4	<20	<2	<2	<2	<2
5/26/1999	<2	<2	<20	--	--	<40	<4	<20	<2	<4	<2	<2
6/29/1999	<2	<2	<20	--	--	<40	<4	<20	--	<2	<2	<2
7/26/1999	<2	<2	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
8/31/1999	--	--	--	--	--	--	<5	--	<4	<2	<2	<2
9/1/1999	<2	<4	<10	--	--	<40	--	<40	--	--	--	--
9/30/1999	<2	<4	<20	--	--	<40	<10	<40	<10	<2	<2	<2
10/28/1999	<2	<4	<20	<2	<10	<40	<4	<20	<4	<2	<2	<2
11/30/1999	<2	<2	<40	--	--	<20	<10	<20	<4	<4	<2	<2
12/21/1999	<2	<2	<20	--	--	<40	<10	<20	<4	<2	<2	<2
1/18/2000	<2	<2	<20	<2	<10	<40	<10	<20	<10	<2	<2	<2

Notes:  
ug/L = micrograms per liter  
E = Estimated value, exceeded c

PREPARED/DATE: DWK 10/2/09  
CHECKED/DATE: ADA 10/2/09

**APPENDIX E-4**

**DISCUSSION OF 1985 AQUIFER (PUMPING) TEST CONDUCTED IN A TEST WELL SCREENED  
IN BOTH THE RESIDUAL SOIL AND PWR**

## **DISCUSSION OF 1985 AQUIFER (PUMPING) TEST CONDUCTED IN A TEST WELL SCREENED IN BOTH THE RESIDUAL SOIL AND PWR**

An aquifer (pumping) test was conducted in September 1985 at the former Xerox Atlanta CRC facility in a test well located inside the building, a few feet to the west of the B-4 well cluster. The test well was constructed of 6-inch diameter PVC pipe, slotted from a depth of five feet to the bottom of the well at 40 feet (all depths are measured from the top of the concrete floor slab). Based on the description of soils encountered during the drilling of the B-4 cluster wells, the test well penetrated through the residual soils, and approximately 10 feet into the PWR. The residual soils are typically described as fine sandy micaceous silts to silty micaceous fine sands. These soils transition at a depth of about 30 feet into PWR, described as very dense fine sandy silt to silty fine to coarse sands. Groundwater was at a depth of approximately 10 to 12 feet. The aquifer test and test results are described in the "Report of Phase II Hydrologic Assessment, December 1985".

The aquifer test data indicated a transmissivity of about 1,800 gpd/ft and a storage coefficient of 0.04. Considering an aquifer thickness of 30 feet, a hydraulic conductivity of 8.0 feet/day is calculated. Based on data from slug tests conducted at the site, hydraulic conductivity values ranging from 0.05 to 5.0 ft/day have been used in groundwater velocity calculations. The calculated aquifer test conductivity value of 8.0 ft/day approximates the upper end of the conductivity range derived from the slug test data, a result consistent with the scale of aquifer pump testing versus slug testing. A hydraulic conductivity of 8.0 ft/day may be considered as an upper end estimate of hydraulic conductivity in evaluating the range of potential groundwater velocity at the site.

**APPENDIX E-5**

**DISCUSSION OF RATIONALE FOR SELECTED VALUES OF EFFECTIVE POROSITY**



## DISCUSSION OF RATIONALE FOR SELECTED VALUES OF EFFECTIVE POROSITY

### Specific Yield vs. Effective Porosity

Specific yield is a parameter (usually derived from the results of aquifer tests) most often used in developing groundwater supply and/or recovery systems while effective porosity is most often used when assessing groundwater flow characteristics and was used at the site in calculating groundwater flow velocity. Boutwell et. al. (1986) states "Most transport equations use effective porosity which does not include dead end and unconnected pores. Effective porosity approximately equals specific yield." Similar statements are provided in other references. Accepting this premise, Xerox has used referenced specific yield values (as effective porosity) in site calculations of groundwater flow.

As described in Subsection E-2c (Groundwater Flow Velocity), research to locate site-area values of effective porosity for residual soils has been unsuccessful. In the absence of site-specific data, applicable texts and professional papers have been reviewed for recommended values of effective porosity for soils similar to those at the site. Descriptions of samples of residual soils obtained from borings drilled at the site typically range from micaceous very fine sandy silt to silty fine sand. Referenced values of specific yield from several sources for soils similar to those described at the site are provided in the following tables and graphs. Other than the table from Fetter, 2001, the attached tables and graphs were presented in "Compilation of Specific Yield for Various Materials, A.I. Johnson, United States Geological Survey Water Supply Paper 1662-D, 1967".

<b>Material</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>
Clay	0	5	2
Sandy clay	3	12	7
Silt	3	19	18
Fine sand	10	28	21
Medium sand	15	32	26
Coarse sand	20	35	27
Gravelly sand	20	35	25
Fine gravel	21	35	25
Medium gravel	13	26	23
Coarse gravel	12	26	22

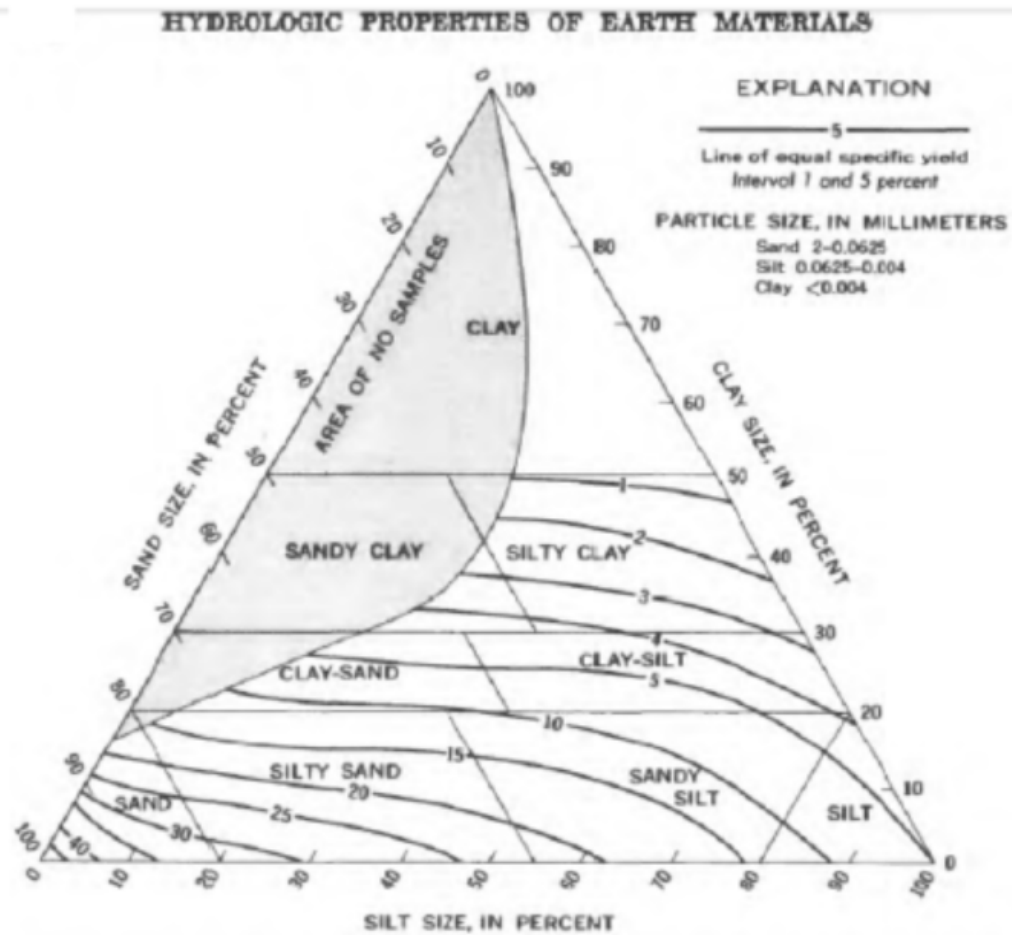
Applied Hydrogeology, Fetter, 2001

*Specific yields, in percent, of various materials*

[Rounded to nearest whole percent]

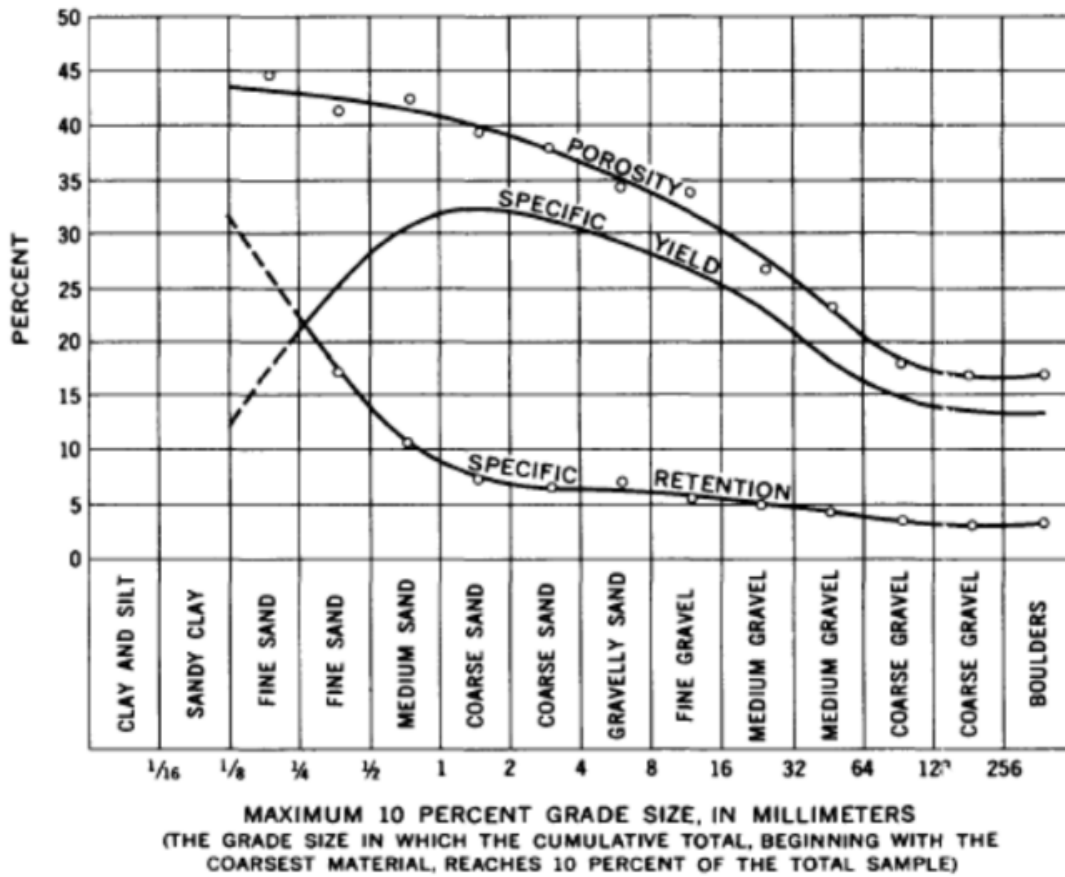
Material	Number of determinations	Specific yield		
		Maximum	Minimum	Average
Clay	15	5	0	2
Silt	16	19	3	8
Sandy clay	12	12	3	7
Fine sand	17	28	10	21
Medium sand	17	32	15	26
Coarse sand	17	35	20	27
Gravelly sand	15	35	20	25
Fine gravel	17	35	21	25
Medium gravel	14	26	13	23
Coarse gravel	14	26	12	22

Johnson, 1967 This table was prepared as a general summary of the relationship between specific yield and soil texture from the various studies outlined in the "Compilation of Specific Yield for Various Materials" (United States Geological Survey Water Supply Paper 1662-D, 1967).

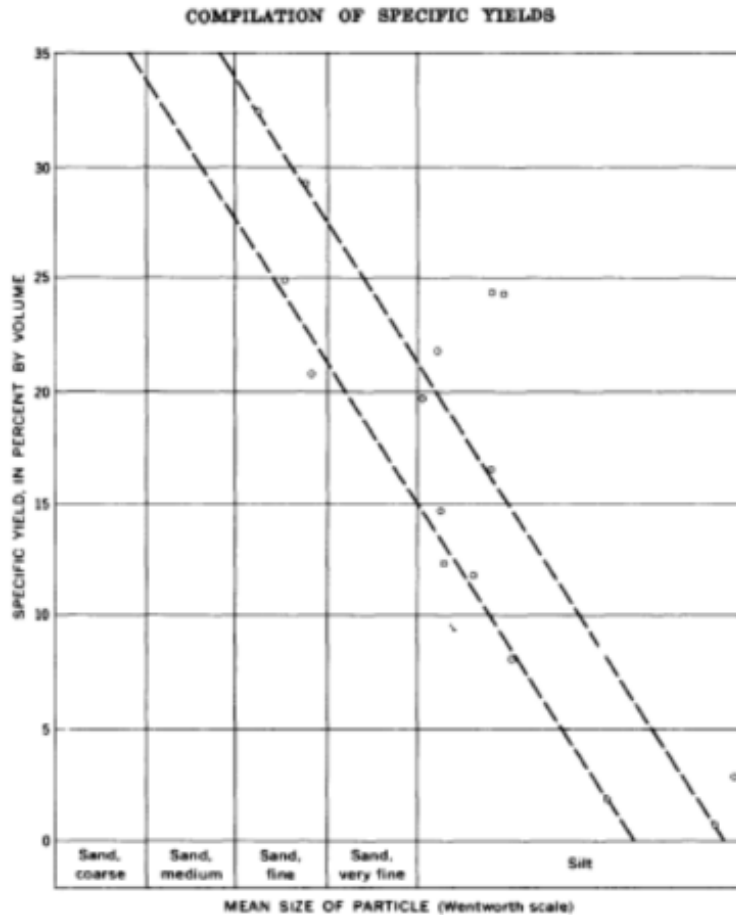


Prill and Johnson (unpublished data on relation between specific yield and soil texture for samples from the San Joaquin and Antelope Valleys, California, 1986).

## HYDROLOGIC PROPERTIES OF EARTH MATERIALS



Eckis R. (1934) "South Coastal Basin Investigation, Geology, and Groundwater Storage Capacity of Valley Fill, Bulletin 45, California Division of Water Resources, 1934".



Relation between texture and specific yield for materials that were drained for approximately 100 days. (After Piper and others, 1939).

Reviewing the specific yield findings for fine sandy silt to silty fine sand presented below in the tables and figures from the referenced studies, average specific yield for these soil types ranged from approximately 0.18 to 0.21 (Fetter), 0.08 to 0.21 (Johnson), 0.10 to 0.20 (Prill and Johnson), and 0.12 to 0.21 (Eckis). The value(s) for use at the site should tend toward the lower end of the range due to the preponderance of silt in the soils in the residuum. These references support the effective value of 0.17 that is used in site groundwater velocity calculations. Additionally, the heterogeneity of the residuum, as indicated by the wide range of hydraulic conductivity values calculated from the slug test results, has a greater impact on groundwater velocity values than would a change in effective porosity values that is within the approximate range of values described in the referenced studies.

**APPENDIX E-6**

**NOVEMBER 21, 2008 IM WORK PLAN AND EPD'S FEBRUARY 5, 2009 LETTER**

Haley & Aldrich of New York  
200 Town Centre Drive  
Suite 2  
Rochester, NY 14623-4264

Tel: 585.359.9000  
Fax: 585.359.4650  
HaleyAldrich.com



21 November 2008  
File No. 32077-086

Xerox Corporation  
800 Phillips Road  
Webster, New York

Attention: Elliott Duffney  
Program Manager

Subject: Pilot Test Activities  
Former CRC Facility  
Atlanta, Georgia

Dear Mr. Duffney:

Haley & Aldrich of New York (Haley & Aldrich) understands that Xerox would like to implement a remedial enhancement to reduce residual contaminant concentrations below drinking water standards at the point of compliance (POC) wells established for the former Xerox Corporation CRC facility located at 6077 Fulton County Industrial Boulevard in Atlanta, Georgia. Xerox understands that reducing the contaminant concentrations at the site POC wells to below drinking water standards and demonstrating compliance with those standards over a subsequent two to three year compliance monitoring period will allow Xerox to pursue formal closure of the post closure care permit for the site. Haley & Aldrich also understands that Xerox has engaged in initial discussions with Georgia Department of Natural Resources Environmental Protection Division (GA EPD) to implement a remedial enhancement program to pursue formal site closure. While GA EPD supports Xerox efforts to utilize a remedial enhancement to pursue a formal site closure, they were reluctant to recommend a specific remedial enhancement to achieve the site's remedial goals.

Xerox requested that H&A review site conditions and to recommend a remedial enhancement to achieve the stated objectives that would allow Xerox to pursue site closure. This letter presents a proposed approach and outlines activities for the implementation of a limited In-Situ Chemical Oxidation (ISCO) program to reduce low level contaminant concentrations found in groundwater at the POC wells at the facility.

## INTRODUCTION

The former CRC facility has undergone extensive investigative and remedial programs. Site soil and groundwater have been aggressively remediated through conventional groundwater pumping and through the application of Xerox's innovative patented 2-PHASE Extraction technology. Based on reports submitted in conjunction with the 2-

PHASE work, we understand that the source has been removed to the limits of the technology's effectiveness.

Following the completion of active remediation at the facility, Xerox has conducted a compliance monitoring program at designated well locations across the site. The compliance monitoring program has demonstrated that the groundwater impacts are stable and confined to the immediate area of the facility. However, low level concentrations of trichloroethene (TCE) and tetrachloroethene (PCE) have persisted. Over time, the TCE concentrations at the POC well cluster B11A, B11B and B11D have dropped below the TCE maximum contaminant level (MCL) for drinking water of 5 ppb. However, PCE is still consistently being detected at concentrations ranging from 5 to 10 ppb, which is slightly above the 5 ppb MCL for PCE. The purpose of this proposed remedial enhancement is to further reduce contaminant concentrations at the POC well locations. This remedial enhancement is designed to reduce the PCE levels to below MCLs but can not be expected to reduce site concentrations to non-detect levels.

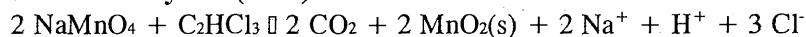
## BACKGROUND

### In-Situ Chemical Oxidation (ISCO)

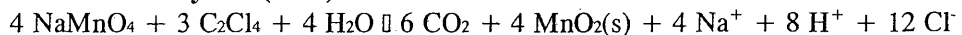
Implementation of ISCO to remediate source area groundwater involves the introduction of a chemical oxidant (such as sodium permanganate) to the subsurface in an effort to contact/mix with and thus oxidize organic matter (including volatile organic compounds (VOC)) in-situ. The oxidant facilitates the rapid and complete destruction of many chlorinated and recalcitrant compounds, including TCE and PCE.

Two (2) common oxidants used for groundwater remediation are potassium permanganate ( $\text{KMnO}_4$ ) and sodium permanganate ( $\text{NaMnO}_4$ ). The result of sufficient contact of permanganate with VOC is the production of manganese oxide ( $\text{MnO}_2$ ) solids, carbon dioxide, and free ions as described by the stoichiometric reactions below:

#### Trichloroethylene (TCE)



#### Tetrachloroethylene (PCE)



Successful application of permanganate depends on adequate site characterization and requires an understanding of the site geology, hydrology and geochemistry. The site geology and hydrology will control how quickly, and in what directions, the reactant migrates. The natural oxidant demand of the subsurface must be understood such that the appropriate amount of oxidant is applied to overcome the natural demand and allow for effective treatment of the target compounds. Monitoring post-injection is necessary to assess migration of the reactants, to identify any oxidation byproducts, and to monitor target compound destruction.

## **Additional Pre-Injection Investigation**

### Hydrologic Assessment

The subsurface of the treatment area is described as a residual soil underlain by a zone of weathered rock and then bedrock. Bedrock in this area is fractured, containing numerous vertical joints and at least one zone of concentrated fractures within the lower bedrock zone. Recent detections of PCE have been identified in wells screened within the partially weathered rock and bedrock zones. The fractures and joints identified in these zones comprise a secondary porosity in the rock which likely provides pathways for groundwater flow. This secondary porosity would provide distribution pathways for the oxidant (permanganate). These features are known to be highly variable in nature and therefore, an additional focused investigation of the wells located in the treatment zone is proposed to better understand how fluids containing the oxidant might behave when injected into these specific wells.

Falling head slug tests in each of the four (4) wells located in the target treatment area are proposed. While this analysis will not provide a quantitative measure of the expected lateral zone of influence of injected materials, it will provide a comparative analysis of which well screens are likely in contact with a higher portion of fractures and therefore more likely to allow injection fluid to travel easily into the formation. An evaluation of connectivity will also be conducted to assess potential vertical hydraulic connectivity between the wells. This test would involve the removal of a limited volume of water from the well with the highest apparent permeability (based on slug test results). Through pumping, the hydraulic head will be altered. Water levels in the other wells will be monitored throughout pumping. Changes in water level will indicate connectivity between the wells. The well will be pumped at the minimum rate necessary to cause drawdown, minimizing the amount of water to be extracted. The groundwater generated during the pump test will be placed in temporary storage, tested for VOC concentrations and with permission from the Georgia EPD, discharged to the nearest sewer discharge point.

### Treatability Study

Treatability testing of site groundwater will provide site-specific data necessary to design the injection scenario. A treatability test provides information on 1) the natural oxidant demand, 2) the capacity to remove contaminants in site groundwater, and 3) the effects of the oxidant on secondary water quality parameters. One gallon of groundwater will be collected from each of the wells located in the target treatment zone and a composite made in the field. The composite sample will be submitted for laboratory analysis. Collection of the required sample would be completed in conjunction with the proposed hydrologic tests. Data from this analysis will be used to determine the concentration and volume of oxidant required. The samples will be shipped to *PRIMA Environmental, Inc. of Sacramento, California*. PRIMA is a laboratory that specializes in the evaluation of intrinsic oxidant demand.



### Design Calculations

Based on the oxidant demand values obtained from bench-scale testing and the known stoichiometric oxidation reaction of the target compounds, the concentration of oxidant necessary to achieve effective target compound destruction will be determined. These calculations will provide the volume of oxidant necessary and would be the basis for the injection design.

### **ISCO Injection**

#### Injection Points

The cluster of wells located in the target treatment area, the "B-11" cluster, will be utilized for the remedial enhancement program. Two of these wells, B-11B and B-11D had detections of PCE and TCE at low levels. The boring log for well B-11D indicates these wells are constructed with 2-inch PVC well screen and riser.

B-11A, B-11B and B-11D will be used as injection and testing points. Well B-11A is screened from approximately 50 to 60 feet below ground surface (bgs) within the partially weathered rock zone of the formation. Well B-11B is screened from approximately 92 to 102 feet bgs within the bedrock zone. This screen interval reportedly falls within a zone of weathered quartz gneiss with vertical fractures present. Well B-11D is screened within the bedrock zone from approximately 140 to 150 feet bgs, a highly fractured, possible water-producing zone is present from 146 to 147 feet bgs.

#### ISCO Injection Logistics

Oxidant will be mixed on-site to the desired concentration based on the oxidant demand testing. The necessary volume of oxidant solution will be gravity fed into the shallowest well, B-11A. It is anticipated that the solution will diffuse vertically from this well and be detected in well B-11B and B-11D. The solution will be allowed to diffuse within the formation. Field measurements of residual oxidant will then be taken in wells B-11B and B-11D using a portable spectrophotometer to confirm vertical transport mechanisms to the lower bedrock zone. If oxidant is not detected, additional oxidant will be injected into well B-11B. B-11B would then be allowed the same time for vertical oxidant migration to B-11D. Field measurements from B-11D would be taken to determine downward migration into the lower bedrock zone. If oxidant is not detected, injection into B-11D would be completed (if necessary).

#### Post-Injection Monitoring

In conjunction with the established site semi-annual groundwater monitoring schedule, post-injection monitoring for VOC concentrations will be completed. Each of the B-11 wells will be field measured for the presence of permanganate. If permanganate is detected in any of the injection wells, sampling for VOCs will not be performed. (The presence of permanganate means that VOC will not be present.) Wells with permanganate detections will be re-sampled after 30 days. If permanganate is not

detected, groundwater samples will be collected for the analysis of site specific VOC using EPA method 8021B from each of the wells. In addition, downgradient monitoring wells B-28, B-28A, B-28B, B-29, B-29A, and B-33B will be sampled to identify any down gradient migration of permanganate solution.

#### Health & Safety

This site is located just north of the building in a grassy area of the site. Employee traffic is a potential concern at this site. To allow for safe practices and reduce foot traffic through the work zone, proper notification will be given to the property manager prior to the start of site activities and the work area will be roped off using caution tape and safety cones or similar.

#### **Proposed Schedule of Activities**

<u>Activity</u>	<u>Duration</u>	<u>Timeframe</u>
GEPD Plan Review/ Acceptance	2-3 weeks	November/December 2008
Preliminary Assessment/Treatability Testing:	2-3 days	December 2008
Laboratory Analysis	2 weeks	December 2008
Injection Design	1 week	December 2008
Permanganate Injection	2-3 days	January 2009
Post-Injection Monitoring	1/2 days	January/February 2009

Initial post-injection monitoring will take place in conjunction with the scheduled semi-annual site monitoring program in January 2009. If permanganate is detected in the wells, the semi-annual sampling for these wells will be postponed until February 2009.

#### **Permitting**

The Environmental Protection Division of the Georgia Department of Natural Resources requires notification of any pilot test involving oxidant injection into a well. This notification allows for pilot testing of a remedial approach that requires injection for up to 90 days. The current pilot test activities are anticipated to be completed within 90 days and thus should not require an injection permit. However, GDNR EPD review and acceptance with this remedial enhancement will be necessary to serve as a post closure care modification to the facility's corrective action permit.

Xerox Corporation

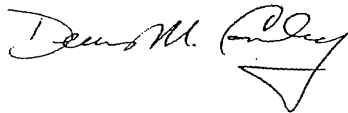
21 November 2008

Page 6

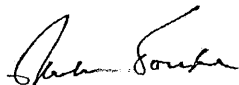
### Closing

Haley & Aldrich is prepared to implement the proposed permanganate injection remedial enhancement at the Xerox Corporation Former CRC facility in the Fulton County Industrial park as presented in our proposed schedule and subject to final confirmation of site conditions as outlined in this work plan. Thank you for requesting our assistance with this project. We look forward to achieving the closure of remediation activities at the site.

Sincerely yours,  
HALEY & ALDRICH OF NEW YORK



Denis M. Conley  
Project Manager/ Senior Scientist



Paul M. Tornatore, P.E.  
Vice President

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# Georgia Department of Natural Resources

2 Martin Luther King Jr. Dr. SE, Suite 1154 East Tower, Atlanta, GA 30334-0900

Noel Holcomb, Commissioner  
Environmental Protection Division  
Carol A. Couch, Ph.D., Director  
(404) 656-7802

**CERTIFIED MAIL**  
**Return Receipt Requested**

February 5, 2009

Elliot N. Duffney  
Program Manager  
Environmental Engineering  
Xerox Corporation  
800 Phillips Road  
Building 205-99F  
Webster, NY 14580

Re: Accelerated Remedial Program  
Interim Measure Work Plan  
Xerox Atlanta CRC Facility  
HW-070(D)  
GAD010103232

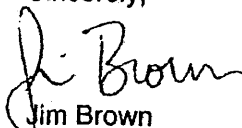
Dear Mr. Duffney:

The Environmental Protection Division (EPD) has reviewed Xerox Corporation's Accelerated Remedial Program Work Plan. EPD considers this an Interim Measure (IM) Work Plan pursuant to HW-070(D) Permit Condition IV.E. The IM Work Plan is conditionally approved with the following comments:

1. The IM Work Plan refers to increasing the site monitoring frequency from semi-annual to quarterly after the injection for a period of two years once levels reach MCL's in the POC wells. Xerox should be aware that in accordance with Permit Condition III.B.3., the compliance period is defined as continuing until the groundwater protection standard has not been exceeded for a period of three (3) consecutive years.
2. Please include the submission of the IM Report in the *Proposed Schedule of Activities*.

If the IM is sufficient in reducing groundwater concentrations to, or below, the groundwater protection standard, then Xerox should submit a site-wide revised Corrective Action Plan to terminate the Hazardous Waste Permit. The revised Corrective Action Plan must document that groundwater concentrations are at, or below, the groundwater protection standard and soil concentrations are at, or below, risk based standards. If you should have any questions, please contact Travis Steed at (404) 656-7802.

Sincerely,



Jim Brown  
Program Manager  
Corrective Action Program

**APPENDIX E-7**

**REPORT OF THE REMEDIAL ENHANCEMENT PROGRAM (INTERIM MEASURE) PREPARED  
BY HALEY & ALDRICH**

Haley & Aldrich of New York  
200 Town Centre Drive  
Suite 2  
Rochester, NY 14623-4264

Tel: 585.359.9000  
Fax: 585.359.4650  
HaleyAldrich.com

**HALEY &  
ALDRICH**

30 September 2009  
File No. 32077-107

Xerox Corporation  
800 Phillips Road  
Webster, New York

Attention: Elliott Duffney  
Program Manager

Subject: Remedial Enhancement Program – In-Situ Chemical Oxidation  
Xerox Former CRC Facility  
6077 Fulton County Boulevard  
Atlanta, Georgia

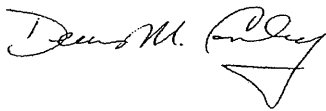
Dear Mr. Duffney:

Haley & Aldrich of New York (Haley & Aldrich) is pleased to present this letter report concerning the remedial enhancement program using in-situ chemical oxidation (ISCO) technology to reduce residual contaminant concentrations at the former Xerox Corporation CRC facility located at 6077 Fulton County Industrial Boulevard in Atlanta, Georgia. The purpose of the program is to reduce the contaminant concentrations at the point of compliance (POC) wells to below drinking water standards.

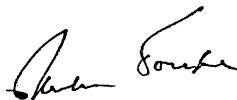
This letter report outlines the activities conducted by Haley & Aldrich as part of the ISCO injection program to reduce low level contaminant concentrations found in groundwater at the POC wells at the facility. The ISCO remedial program was implemented with the authorization of the Georgia Department of Natural Resources Environmental Protection Division (GA EPD). Subsequent to the execution of the program and confirmation of groundwater quality for a three (3) year compliance monitoring period, Xerox can request closure of the post closure care permit for the site from the GA EPD.

Please contact us if you have any questions regarding this report. Thank you for the opportunity to assist you with this project.

Sincerely yours,  
HALEY & ALDRICH OF NEW YORK



Denis M. Conley  
Project Manager/ Senior Scientist



Paul M. Tornatore, P.E.  
Vice President

**Remedial Enhancement Program  
In-situ Chemical Oxidation (ISCO)  
Xerox Former CRC Facility  
6077 Fulton County Boulevard  
Atlanta, Georgia**

**by**

**Haley & Aldrich of New York  
Rochester, New York**

**for**

**Xerox Corporation  
Webster, New York**

**File No. 32077-107  
30 September 2009**

**HALEY &  
ALDRICH**

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### FIGURES

**APPENDIX A** – Falling and Rising Head Test Data

**APPENDIX B** – Well Construction Details

**APPENDIX C** – Daily Field Reports – Injection Program

**APPENDIX D** – Regulatory Agency Correspondence



## LIST OF FIGURES

Figure No.	Title
1	Xerox Facility Location
2	Work Zone and Target Treatment Area
3	Hydrographs – B-11A; B11B; B11D

## 1. INTRODUCTION

The Xerox Corporation former CRC facility has undergone extensive investigation activities and soil and groundwater remediation through conventional groundwater pumping and the application of Xerox's patented 2-PHASE Extraction technology. Following the completion of active remediation, Xerox has conducted a compliance monitoring program at designated well locations across the site. The compliance monitoring program has demonstrated that the groundwater impacts are confined to the property and stable with low concentrations of trichloroethene (TCE) and tetrachloroethene (PCE) persisting at a few locations in the immediate vicinity of the facility. TCE concentrations detected at the POC well cluster; B11A, B11B and B11D have stabilized to a concentration below the USEPA maximum contaminant level (MCL) for drinking water (5 parts per billion (ppb)). PCE has persisted at concentrations ranging from 5 to 10 ppb, which is slightly above the 5 ppb MCL for PCE.

The goal of the ISCO injection program was to further reduce contaminant concentrations at the POC well locations. Figure 1 presents the location of the Xerox facility. Figure 2 presents the location of the POC well cluster where the injection was performed.

## 2. PRE-INJECTION ACTIVITIES

### 2.1 Hydrologic Assessment

Falling head and rising head tests were performed by Haley Aldrich in the POC cluster wells located in the target treatment area on 3 March 2009. The tests were performed to evaluate the permeability of the receiving formations and estimate the rate of fluid injection to assist in the scheduling of the injection program. The falling head test involved the displacement of a limited volume of water using a solid cylinder (slug) placed within the well to a depth below the top of the well screen while monitoring the change in the static water level versus time. The rising head test was performed following the falling head test by removing the slug from below the stabilized static water level to and measuring the rate of change in the static water level versus time. The falling head and rising head test results for each injection well location, B-11A, and B-11B are provided in Appendix A. The data indicates that injection rates of over 1 gallon per minute could be achieved in each location.

Seasonal changes in static water levels recorded for each injection well were evaluated to determine connectivity between the wells. Figure 3 presents the historical water level measurements for each of the POC wells. These data indicate that the water bearing units in the shallow, intermediate and deep bedrock wells are likely hydraulically connected through vertical fractures and/or secondary porosity.

### 2.2 Oxidant Demand Evaluation

A bench-scale treatability test was performed prior to the injection of oxidant at the Site to evaluate the natural oxidant demand, and the effects of the oxidant on secondary water quality. Approximately 1 gallon of groundwater was collected from the POC wells and transported to Exotech, Inc. treatability laboratory in Lilburn, GA. A known amount of the oxidant solution was added to the composite sample and tested for residual permanganate concentrations over time. The data from the jar test indicated that an oxidant concentration of approximately 0.1% or 1000 part per million (ppm) of sodium permanganate ( $\text{NaMnO}_4$ ) was sufficient to maintain residual oxidant at a concentration greater than 50 parts per million (ppm) for at least 20 minutes.

### 3. INJECTION PROGRAM

#### 3.1 Injection Points

The POC wells, B-11A, B-11B and B-11D located in the target treatment area were used for the oxidant injection program. Two of these wells, B-11B and B-11D had recent detections of PCE and TCE at levels less than 10 ppb. These wells are constructed with 2-inch PVC well screen and riser. B-11A is screened from approximately 50 to 60 feet below ground surface (bgs) within the partially weathered rock. B-11B is screened from approximately 92 to 102 feet bgs within a zone of weathered quartz gneiss with vertical fractures. B-11D is screened within the bedrock from approximately 140 to 150 feet bgs, a water-producing zone is present from 146 to 147 feet bgs. The well installation logs and well construction details are provided in Appendix B.

#### 3.2 ISCO Injection Procedures

The injection program was conducted on-site on 21 and 22 April 2009. Exotech, Inc. of Lilburn Georgia performed the oxidant injection with oversight by Haley & Aldrich personnel using a truck mounted tank and pump system. The oxidant solution ( $\text{NaMnO}_4$ ) used for the injection program was mixed on-site by Exotech, Inc. personnel within a polypropylene tank secured on the truck. The solution was prepared by volumetric dilution of one (1) liter of 40%  $\text{NaMnO}_4$  concentrate in 100 gallon of potable water for a final concentration of approximately 0.10%. The 0.10% solution was gravity fed from the tank using flexible hosing connected to a PVC drop tube placed within the well to a depth below the top of static water level and approximately in the middle of the well screen. The drop tube was secured in place with an inflatable packer was lowered to approximate 48 feet bgs and inflated to a pressure more than 40 pounds per square inch (psi) to ensure that groundwater and/or oxidant solution would not rise up in the well casing.

On 21 April 2009, a total of five (5) 100 gallon batches of 0.1%  $\text{NaMnO}_4$  were delivered to B-11A over approximately an 8-hour period. After the injection of each 100 gallon batch, a sample of groundwater was collected from B-11B and visually inspected for the presence of  $\text{NaMnO}_4$  to determine if the solution had migrated to the lower bedrock zone. Oxidant was not detected in B-11B during the injection process in B-11A. On 22 April 2009, additional oxidant solution was delivered into well B-11B in the same manner as B-11A. A total of five (5) 100 gallon batches of 0.1%  $\text{NaMnO}_4$  were delivered to B-11B over approximately an 8-hour period. Field measurements from groundwater extracted from B-11D using a disposable bailer were taken to determine if downward migration of the oxidant solution into the lower bedrock zone was achieved. Oxidant was not detected in B-11D during the injection process in B-11B. At the conclusion of the injection process in B-11B, one (1) liter of 40%  $\text{NaMnO}_4$  was mixed with approximately 100 gallons of groundwater within the B-11D well riser for a resulting concentration of 0.10%  $\text{NaMnO}_4$  solution. Potable water was then added to the well to induce infiltration into the lower bedrock formation. The Daily Field Reports (DFR) prepared by site personnel detailing the activities for 21 and 22 April 2009 is provided in Appendix C.

#### 3.3 Post-Injection Monitoring

Mactec Environmental, Kennesaw, GA has been under contract with Xerox to conduct the site-wide groundwater monitoring program at the facility. Prior to the execution of site semi-annual groundwater sampling scheduled for July 2009, the injection wells, B-11A, B-11B and B-11D were inspected by Mactec personnel for the presence of residual oxidant on June 5, 2009. Representative samples of groundwater were collected from each well and visually inspected and exhibited observable color indicating the presence of residual oxidant. Based on a qualitative comparison of the observed color, B-11D was determined to contain the highest concentration of residual oxidant. Following the inspection of

the wells, Exotech personnel returned to the facility on 25 June 2009 and injected an additional 100 gallons of potable water into well B-11D to induce infiltration of the residual oxidant into the bedrock matrix. The wells were then allowed to rest for an additional 60 days prior to the collection of groundwater samples for laboratory analysis.

Prior to the collection of the groundwater samples from the injection wells in August 2009, each well was purged using a submersible pump until the recovered groundwater did not contain observable color. After the purge water was determined to be clear of oxidant by visual inspection by the sampling team, groundwater samples were collected for the analysis of site-specific VOC using EPA Method 8021B and submitted to Columbia Analytical Services, Inc. in Rochester, New York. In addition, down gradient monitoring wells B-28, B-28A, B-28B, B-29, B-29A, and B-33B were sampled as part of the semi-annual monitoring event. None of the down gradient wells exhibited observable color during the sampling event indicating that the dispersion of oxidant was restricted to the vicinity of the B-11 well cluster.

### **3.4 Health & Safety Plan Compliance**

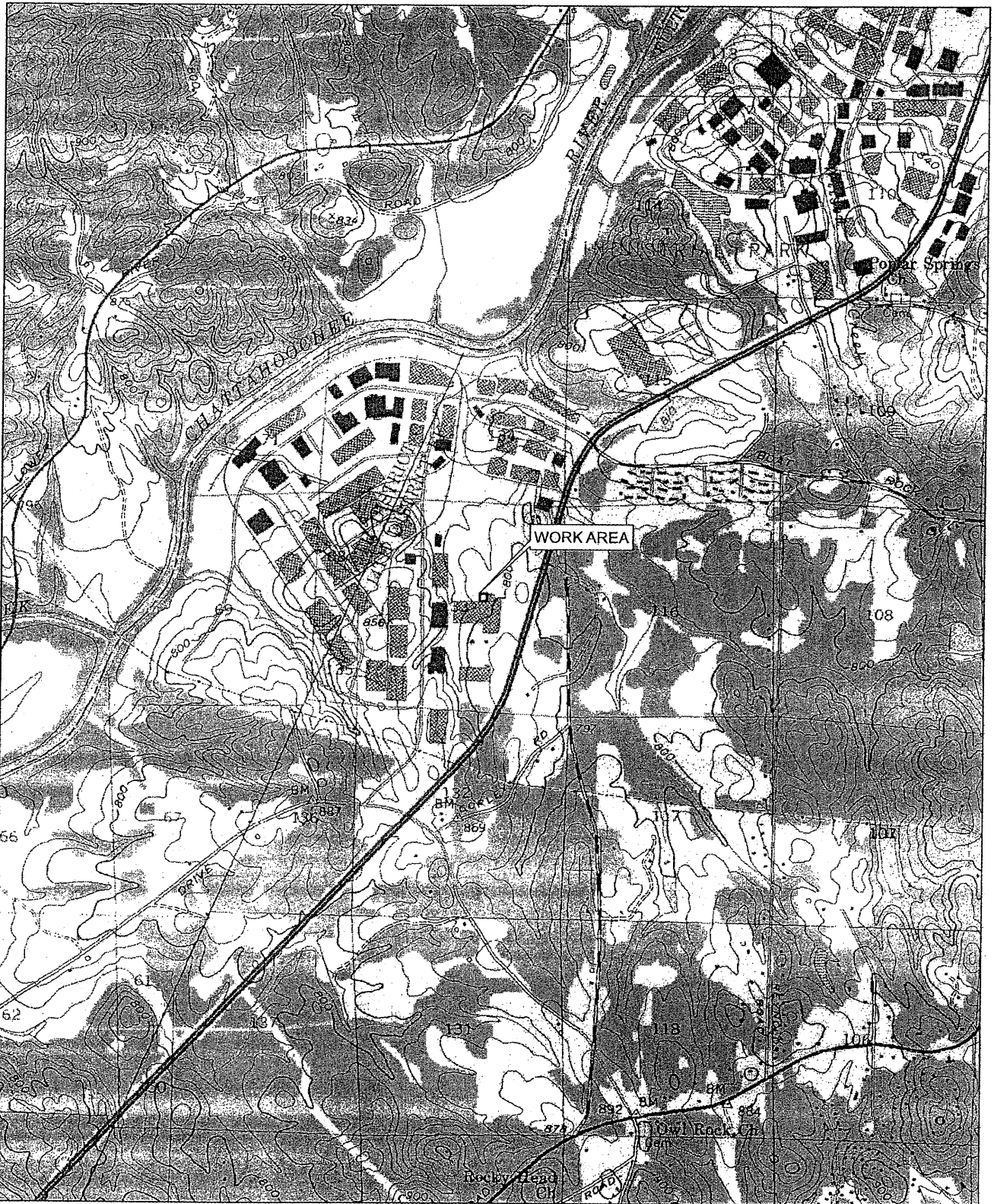
Prior to the initiation of field activities, the Facility Manager was notified by telephone at least 24 hours prior to the arrival of project personnel. To facilitate work safe practices and reduce access to the work zone, the work area was isolated using caution tape and safety cones prior to the start of site activities. There were no incidents during the execution of injection or sampling activities at the Facility. No accidents, reportable or near miss incidents occurred during the completion of the project.

### **3.5 Regulatory Compliance**

The Environmental Protection Division of the Georgia Department of Natural Resources was notified of the remedial enhancement program. This notification included the preparation and submission of the project work plan on 18 December 2008. GDNR EPD review and acceptance of the project work plan was received with modifications on 5 February 2009.

Prior to mobilization to the facility, an Underground Injection Control (UIC) Program, Pilot Test Injection Well Notification Form (EPD-UIC-003) detailing the scope and schedule of the program was submitted to the EPD UIC office on 6 April 2009. During the implementation of the program, EPD GDNR personnel visited the facility to observe the execution of the project. Regulatory correspondence submitted by Haley & Aldrich and received during the preparation and execution of the project is provided in Appendix D.

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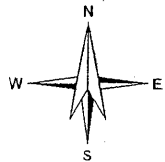


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GEORGIA

USGS QUADRANGLE: BEN HILL, GA



0 1,000 2,000

SCALE IN FEET

**HALEY & ALDRICH**

XEROX CORPORATION  
6077 FULTON INDUSTRIAL BLVD SW  
ATLANTA, GA 30336

PROJECT LOCUS

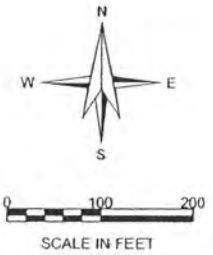
SCALE: AS SHOWN  
APRIL 2009

FIGURE 1





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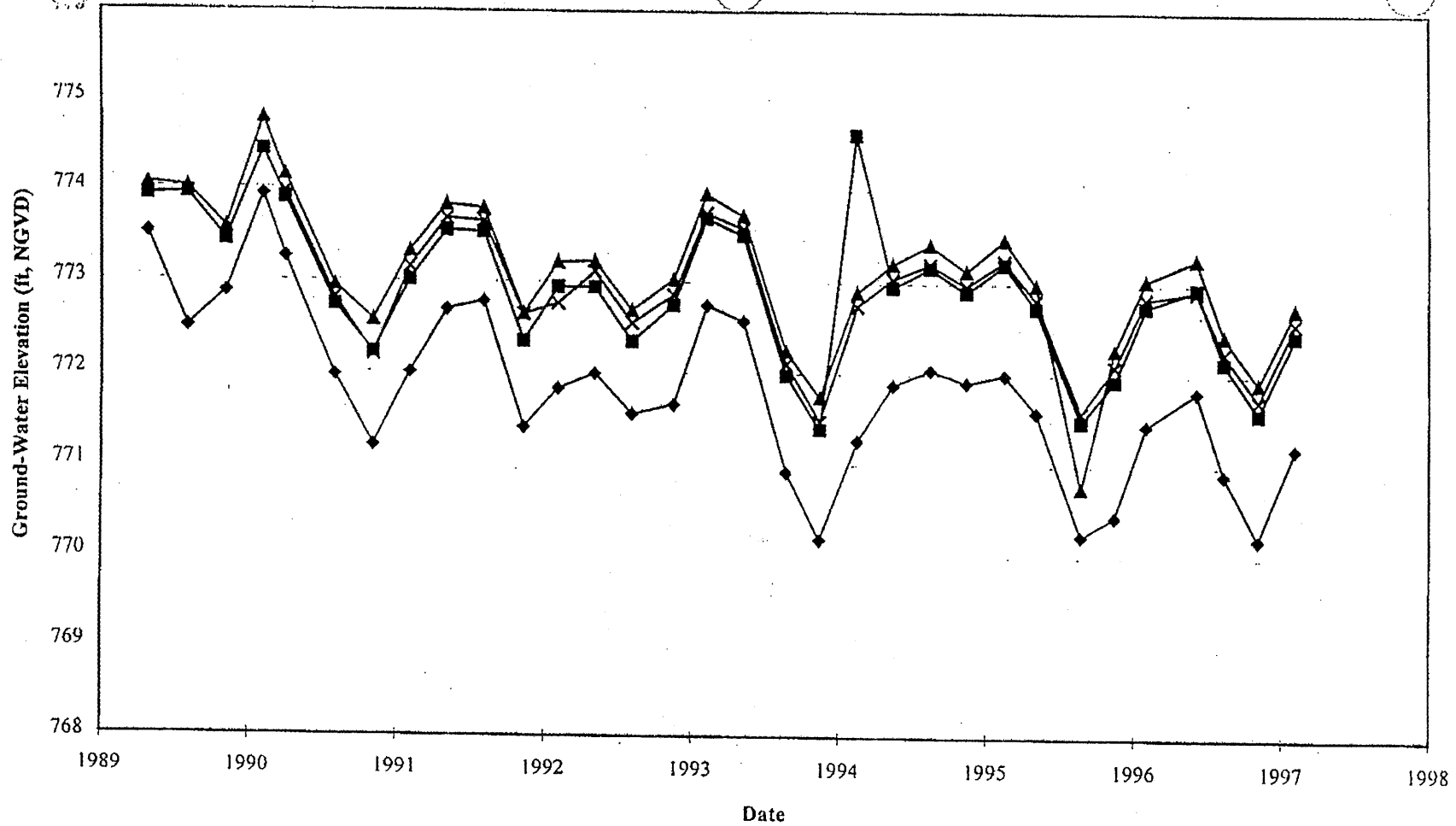
**HALEY & ALDRICH** XEROX CORPORATION  
6077 FULTON INDUSTRIAL BLVD SW  
ATLANTA, GA 30336

WORK AREA

SCALE: AS SHOWN  
APRIL 2009

FIGURE 2





Prepared By: DAS 4/7/97  
 Checked By: PER 4/18/97

◆ B-11 (S)    ■ B-11A (PWR)    ▲ B-11B (SR)    ✕ B-11D (DR)

Xerox Corporation  
 Fulton Industrial Park  
 Atlanta, Georgia

**LAW**

LAWGIBB Group Member



Hydraulic Interconnection  
 Demonstration  
 B-11 Well Cluster

JOB NO. 12000-8-0019

FIGURE E-6a



**APPENDIX A**

**Falling Head and Rising Head Tests**

## FALLING HEAD TEST SUMMARY

WELL NAME: B-11A  
 DATE OF TEST: 03-MAR-2009

Rising Head Permeability Calculation  
 Bouwer-Rice Method  
 $Kh = [(rc \cdot rc \cdot \ln(Re/rw))(\ln(Yo/Yt))]/2Lt$

Test Sectn. Radius (rw), in ft.:	0.67
Casing Radius (rc), in ft.:	0.08
Test Section length (L), in ft.:	10.0
C:	1.59
L/rw:	15.00
Saturated Thickness(H), in ft.:	39.5
ln (Re/rw):	2.66
Yo, in ft.:	1.85
Yt, in ft.:	1.831
t, in min.:	0.02

Kh (cm/sec) =	2.7E-04
Kh (ft/min) =	5.3E-04
Kh (ft/day) =	7.7E-01

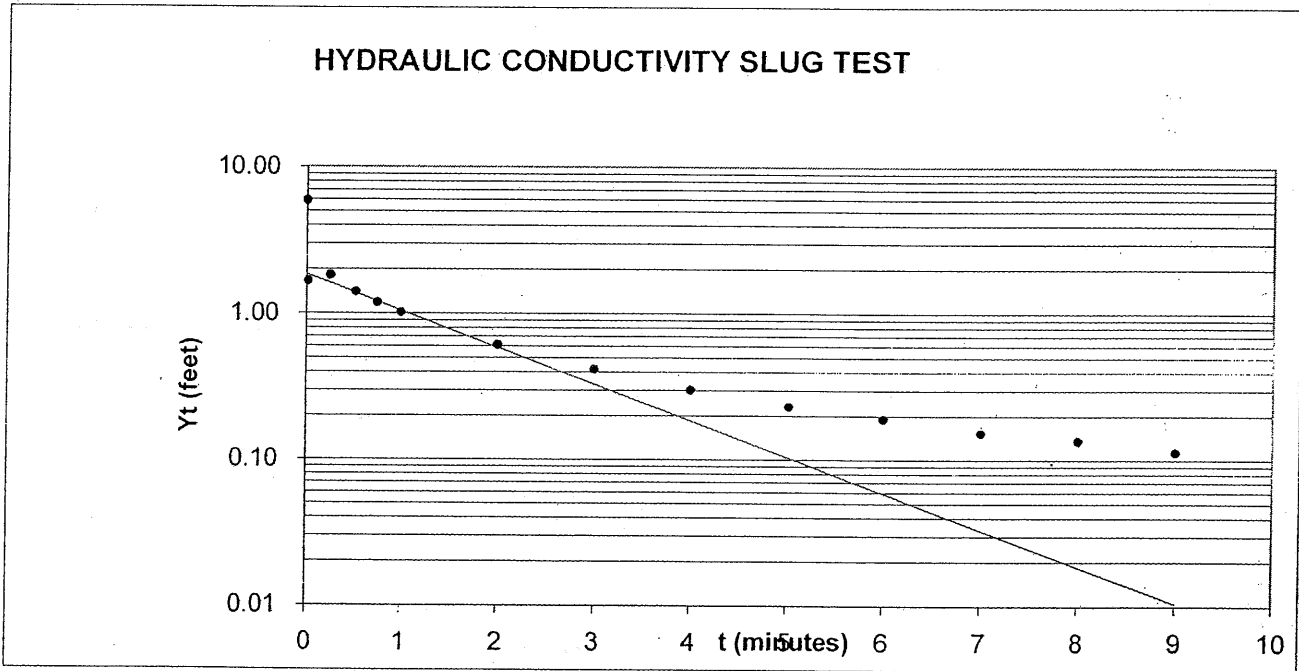
Static Water  
 21.38

### Rising Head Test Field Data

Depth Water (ft)	Elapsed Time (min)	Residual Head Y (ft)
15.50	0	5.88
19.73	0.017	1.65
19.57	0.025	1.81
19.98	0.05	1.40
20.20	0.154	1.18
20.37		1.01
20.77	2	0.61
20.96	3	0.42
21.08	4.002	0.30
21.15	5.02	0.23
21.19	6	0.19
21.23	7.002	0.15
21.25	8.003	0.14
21.27	9.002	0.11

#### NOTES

- $C = -2.343E-05(L/rw)^2 + .033(L/rw) + 1.103$
- ln(Re/rw) calculated from  $1/[(1.1/\ln(H/rw)) + (C/(L/rw))]$ .
- Test Section radius (rw) is equal to the borehole radius.
- Method taken from Bouwer and Rice, 1976.
- Best fit line defined by shaded time values and corresponding residual heads.



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## RISING HEAD TEST SUMMARY

WELL NAME: B-11A  
 DATE OF TEST: 03-MAR-2009

Rising Head Permeability Calculation  
 Bouwer-Rice Method  
 $Kh = \frac{(rc \cdot rc \cdot \ln(Re/rw)) \cdot (\ln(Yo/Yt))}{2Lt}$

Test Sectn. Radius (rw), in ft.:	0.67
Casing Radius (rc), in ft.:	0.08
Test Section length (L), in ft.:	10.0
C:	1.59
L/rw:	15.00
Saturated Thickness(H), in ft.:	39.5
ln (Re/rw):	2.66
Yo, in ft.:	2.23
Yt, in ft.:	2.204
t, in min.:	0.02
Kh (cm/sec) =	3.5E-04
Kh (ft/min) =	6.8E-04
Kh (ft/day) =	9.8E-01

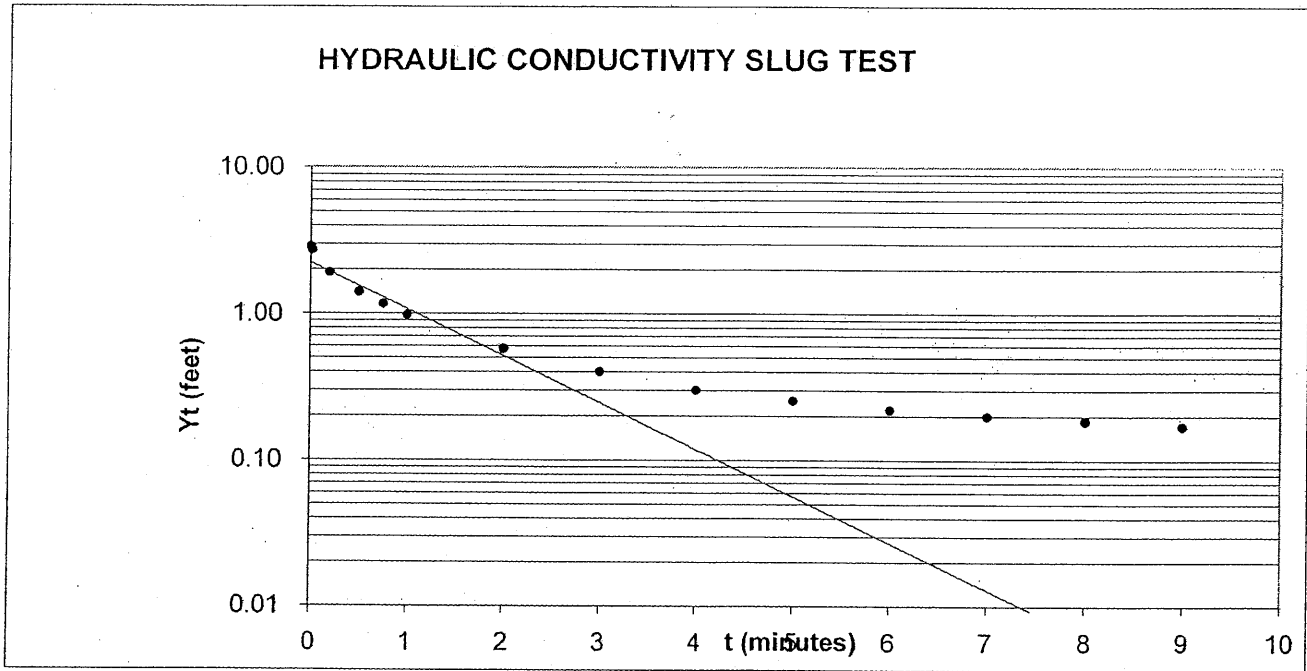
**NOTES**

1.  $C = -2.343E-05(L/rw)^2 + .033(L/rw) + 1.103$
2.  $\ln(Re/rw)$  calculated from  $1 / \{ [1 / \ln(H/rw)] + [C / (L/rw)] \}$ .
3. Test Section radius (rw) is equal to the borehole radius.
4. Method taken from Bouwer and Rice, 1976.
5. Best fit line defined by shaded time values and corresponding residual heads.

Static Water  
 21.38

Rising Head Test Field Data

Depth Water (ft)	Elapsed Time (min)	Residual Head Y (ft)
24.26	0	2.88
24.08	0.017	2.70
23.28	0.2	1.90
22.78	0.501	1.40
22.54	0.75	1.16
22.35	1	0.97
21.95	2.002	0.57
21.78	3	0.40
21.68	4.002	0.30
21.63	5	0.25
21.60	6	0.22
21.58	7.002	0.20
21.57	8.003	0.19
21.55	9.002	0.17



## FALLING HEAD TEST SUMMARY

WELL NAME: B-11B  
 DATE OF TEST: 03-MAR-2009

Rising Head Permeability Calculation  
 Bouwer-Rice Method

$$Kh = \frac{(rc \cdot rc \cdot \ln(Re/rw)) \ln(Yo/Yt)}{2Lt}$$

Test Sectn. Radius (rw), in ft.:	0.29
Casing Radius (rc), in ft.:	0.08
Test Section length (L), in ft.:	10.0
C:	2.21
L/rw:	34.29
Saturated Thickness(H), in ft.:	83.5
ln (Re/rw):	3.86
Yo, in ft.:	2.50
Yt, in ft.:	2.474
t, in min.:	0.02
Kh (cm/sec) =	3.5E-04
Kh (ft/min) =	6.9E-04
Kh (ft/day) =	9.9E-01

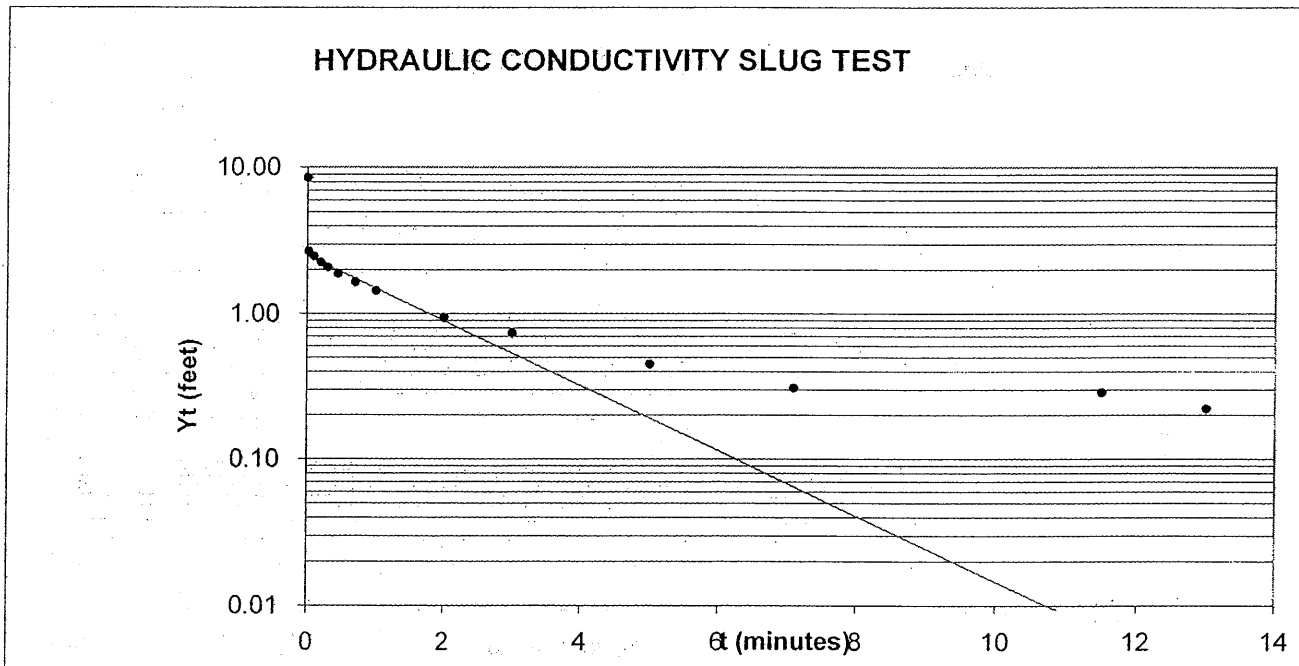
**NOTES**

1.  $C = -2.343E-05(L/rw)^2 + .033(L/rw) + 1.103$
2.  $\ln(Re/rw)$  calculated from  $1/\{[1.1/\ln(H/rw)] + [C/(L/rw)]\}$ .
3. Test Section radius (rw) is equal to the borehole radius.
4. Method taken from Bouwer and Rice, 1976.
5. Best fit line defined by shaded time values and corresponding residual heads.

Static Water  
 21.52

Rising Head Test Field Data

Depth Water	Elapsed Time	Residual Head Y
(ft)	(min)	(ft)
13.01	0	8.51
18.84	0.017	2.68
19.04	0.1	2.48
19.27	0.2	2.25
19.44	0.3	2.08
19.64	0.45	1.88
19.88	0.7	1.64
20.08	1	1.44
20.58	2	0.94
20.78	3	0.74
21.07	5	0.45
21.21	7.1	0.31
21.23	11.5	0.29
21.30	13	0.22



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## FALLING HEAD TEST SUMMARY

WELL NAME: B-11B  
 DATE OF TEST: 03-MAR-2009

Static Water  
 21.52

Rising Head Permeability Calculation  
 Bouwer-Rice Method  
 $Kh = [(rc \cdot rc \cdot \ln(Re/rw)) / (\ln(Yo/Yt))] / 2Lt$

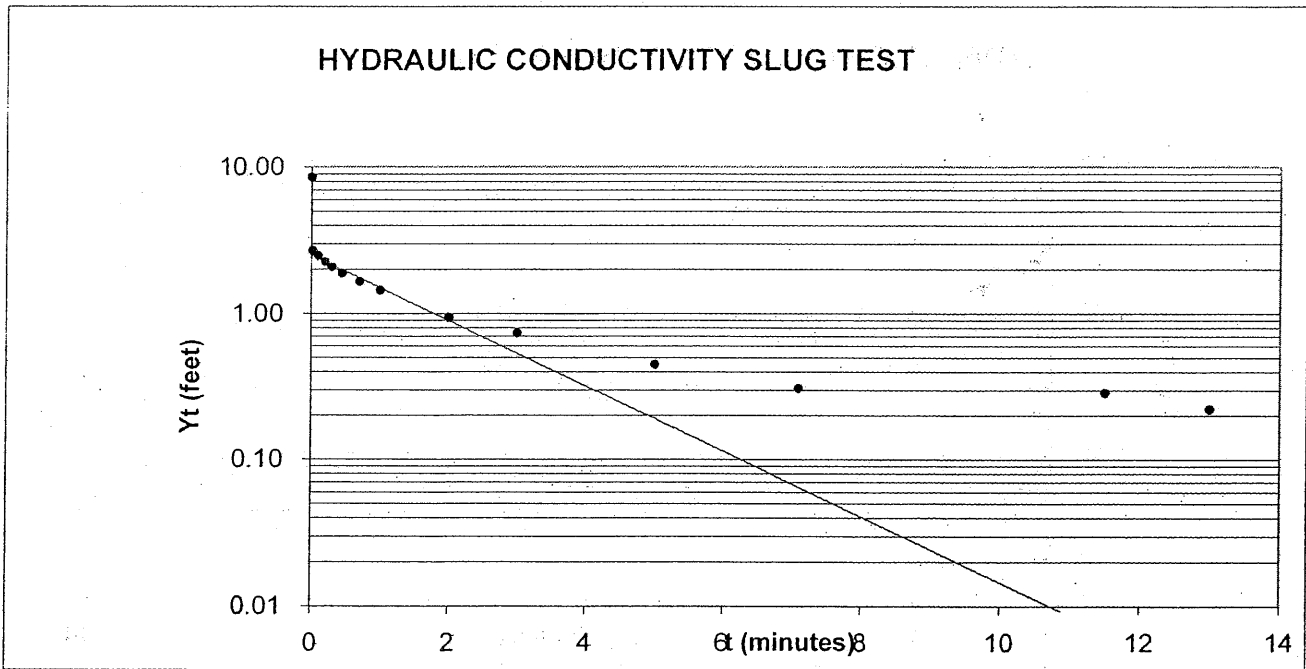
### Rising Head Test Field Data

Test Sectn. Radius (rw), in ft.:	0.29
Casing Radius (rc), in ft.:	0.08
Test Section length (L), in ft.:	10.0
C:	2.21
L/rw:	34.29
Saturated Thickness(H), in ft.:	83.5
ln (Re/rw):	3.86
Yo, in ft.:	2.50
Yt, in ft.:	2.474
t, in min.:	0.02
Kh (cm/sec) =	3.5E-04
Kh (ft/min) =	6.9E-04
Kh (ft/day) =	9.9E-01

Depth Water (ft)	Elapsed Time (min)	Residual Head Y (ft)
13.01	0	8.51
18.84	0.017	2.68
19.04	0.1	2.48
19.27	0.2	2.25
19.44	0.3	2.08
19.64	0.45	1.88
19.88	0.7	1.64
20.08	1	1.44
20.58	1	0.94
20.78	3	0.74
21.07	5	0.45
21.21	7.1	0.31
21.23	11.5	0.29
21.30	13	0.22

**NOTES**

1.  $C = -2.343E-05(L/rw)^2 + .033(L/rw) + 1.103$
2.  $\ln(Re/rw)$  calculated from  $1 / \{ [1.1 / \ln(H/rw)] + \{C / (L/rw)\} \}$ .
3. Test Section radius (rw) is equal to the borehole radius.
4. Method taken from Bouwer and Rice, 1976.
5. Best fit line defined by shaded time values and corresponding residual heads.



## RISING HEAD TEST SUMMARY

WELL NAME: B-11B  
 DATE OF TEST: 03-MAR-2009

Static Water  
 21.52

Rising Head Permeability Calculation  
 Bouwer-Rice Method  
 $Kh = \frac{(rc \cdot rc \cdot \ln(Re/rw)) \cdot (\ln(Yo/Yt))}{2Lt}$

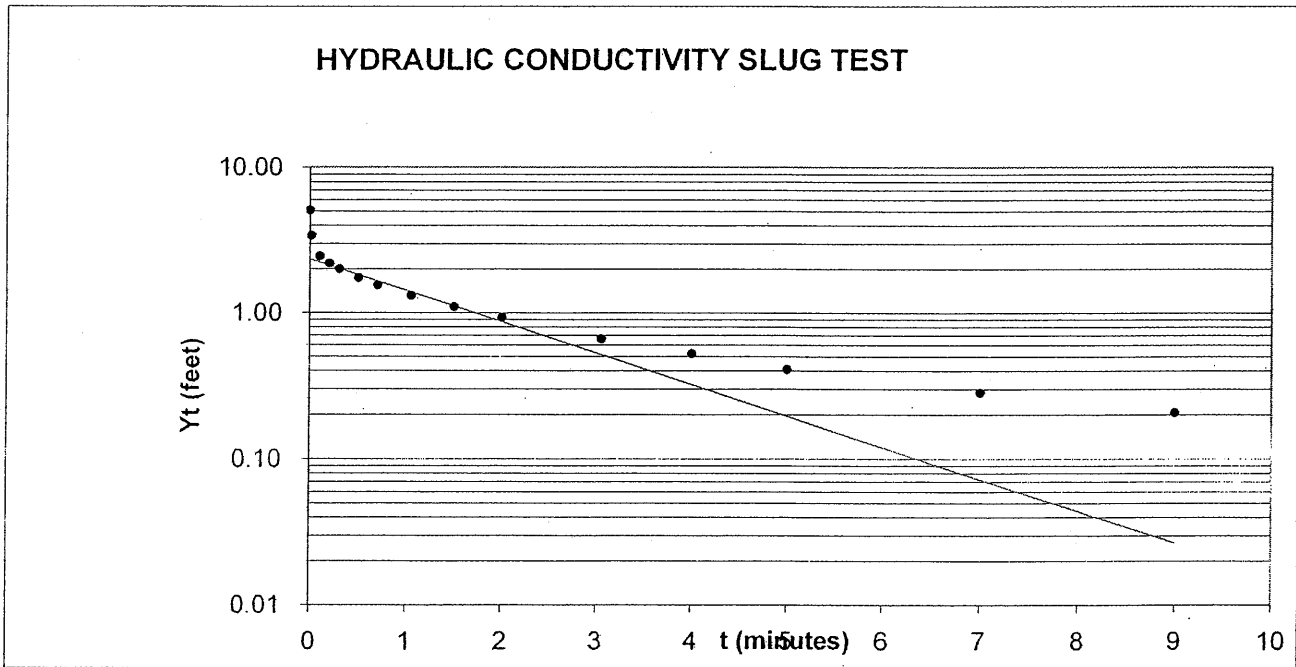
### Rising Head Test Field Data

Test Sectn. Radius (rw), in ft.:	0.29
Casing Radius (rc), in ft.:	0.08
Test Section length (L), in ft.:	10.0
C:	2.21
L/rw:	34.29
Saturated Thickness(H), in ft.:	83.5
ln (Re/rw):	3.86
Yo, in ft.:	2.34
Yt, in ft.:	2.316
t, in min.:	0.02
Kh (cm/sec) =	3.4E-04
Kh (ft/min) =	6.7E-04
Kh (ft/day) =	9.6E-01

Depth Water (ft)	Elapsed Time (min)	Residual Head Y (ft)
26.58	0	5.06
24.93	0.017	3.41
23.96	0.02	2.44
23.70	0.02	2.18
23.52	0.03	2.00
23.25	0.05	1.73
23.06	0.07	1.54
22.83	1.05	1.31
22.62	1.002	1.10
22.45	2.001	0.93
22.18	3.05	0.66
22.04	4	0.52
21.30	5	0.41
21.80	7.002	0.28
21.73	9	0.21

**NOTES**

1.  $C = -2.343E-05(L/rw)^2 + .033(L/rw) + 1.103$
2.  $\ln(Re/rw)$  calculated from  $1 / \{ [1.1/\ln(H/rw)] + \{C/(L/rw)\} \}$ .
3. Test Section radius (rw) is equal to the borehole radius.
4. Method taken from Bouwer and Rice, 1976.
5. Best fit line defined by shaded time values and corresponding residual heads.



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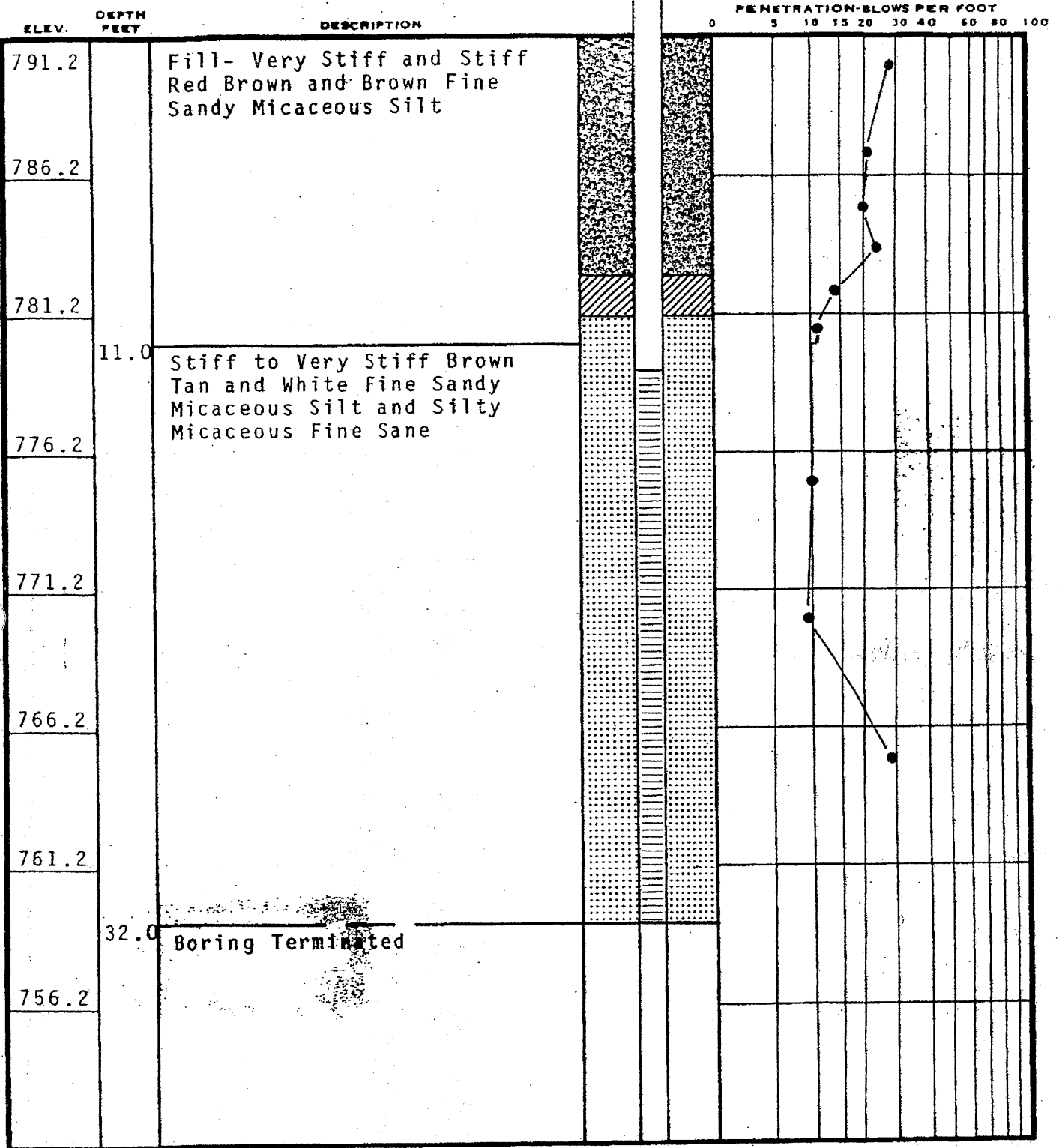
**APPENDIX B**

**Well Installation and Construction Details**

TEST BORING RECORD

Riser Stickup is 2.41 Feet

AF 33905



REMARKS:

DRILLED BY J.O.  
 LOGGED BY J.O.  
 CHECKED BY K.S.

BORING NUMBER B-11  
 DATE STARTED 10-22-84  
 DATE COMPLETED 10-22-84  
 JOB NUMBER MA-4333



TEST BORING RECORD

Riser Stickup is 2.70 feet

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT									
			0	5	10	15	20	30	40	60	80	100
791.0	0.0	From 0 - 60 feet see Boring Record B-11B for Lithology.										
786.0												
781.0												
776.0												
771.0												
766.0												
761.0												
756.0												
751.0	40.0											

REMARKS:

- \* Water level measured on 11-30-87.
- Pilot hole drilled with 3 7/8 inch roller
- Wash drilled with 7 7/8 inch roller to 59.7 feet.
- Developed by air-lift pumping on 12-1-87.

DRILLED BY Law-Atlanta  
 LOGGED BY R.Scott Ribes  
 CHECKED BY Kirk J. Kessler

BORING NUMBER B-11A  
 DATE STARTED 11-25-87  
 DATE COMPLETED 11-25-87  
 JOB NUMBER 55-4333

# TEST BORING RECORD

ELEV.	DEPTH FEET	DESCRIPTION	PENETRATION-BLOWS PER FOOT																	
			0	5	10	15	20	30	40	60	80	100								
751.0			0																	
746.0			5																	
741.0			10																	
736.0			15																	
731.0	59.7	Boring Terminated at 59.7 feet.	20																	
			25																	
			30																	
			35																	
			40																	
			45																	
			50																	
			55																	
			60																	
			65																	
			70																	
			75																	
			80																	
			85																	
			90																	
			95																	
			100																	

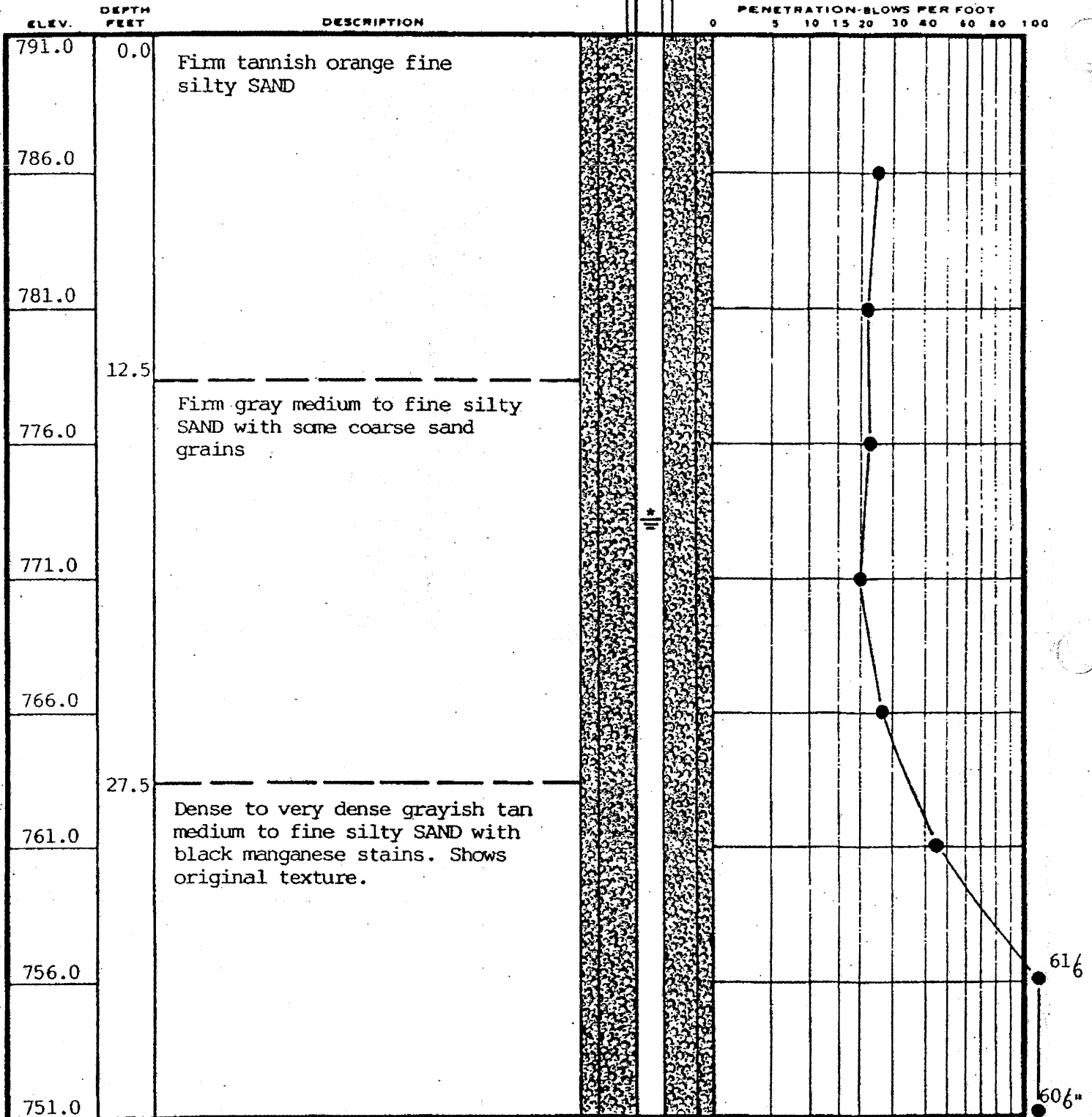
REMARKS:

DRILLED BY Law-Atlanta  
 LOGGED BY R. Scott Ribes  
 CHECKED BY Kirk J. Kessler

BORING NUMBER B-11A  
 DATE STARTED 11-25-87  
 DATE COMPLETED 11-25-87  
 JOB NUMBER 55-4333

TEST BORING RECORD

Riser Stickup is 2.54 feet



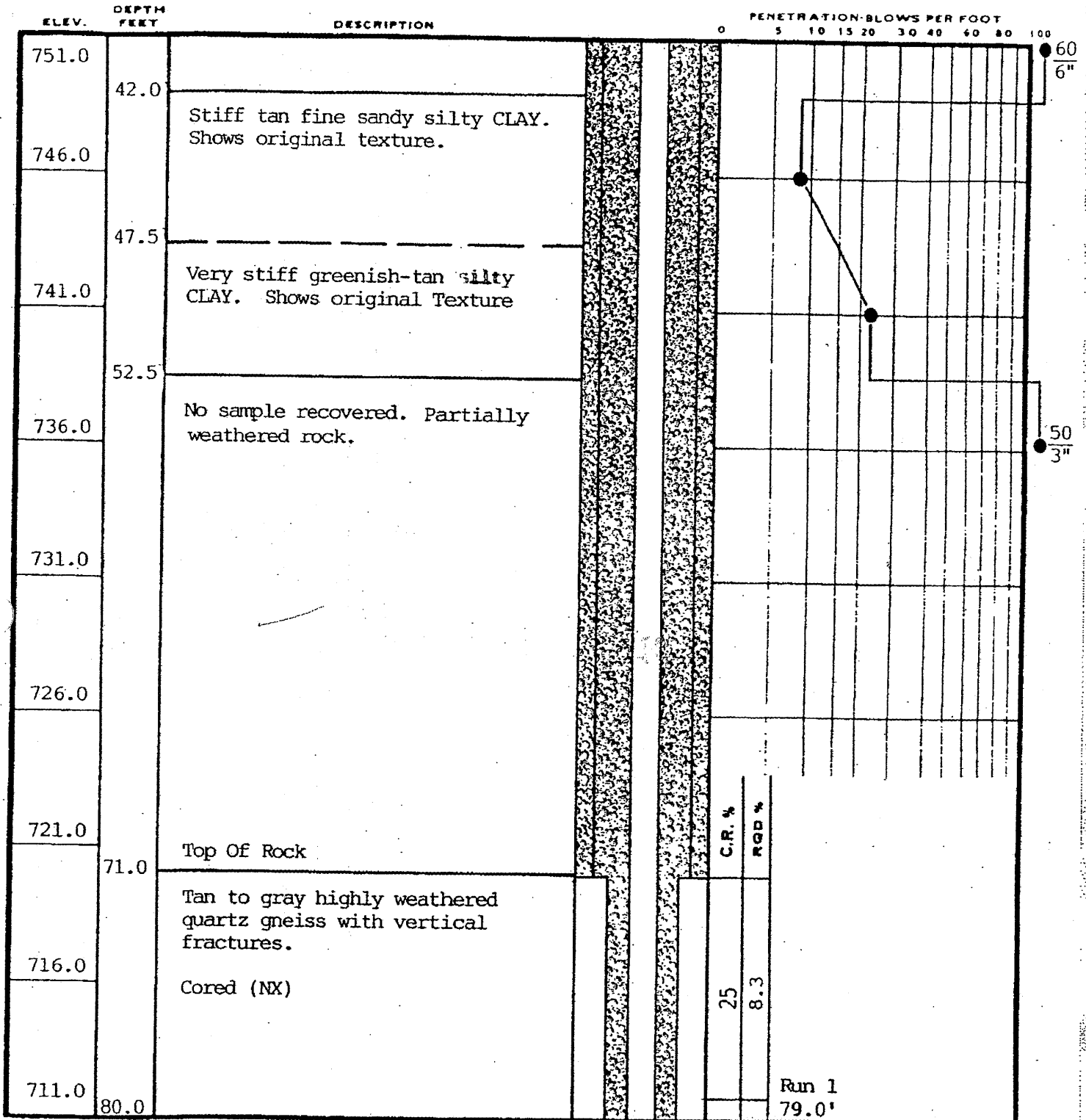
REMARKS:

- \* Water level measured on 11-30-87.
- Pilot hole drilled with 3 7/8 inch roller.
- Wash drilled with 7 7/8 inch roller bit to 71.0 feet.
- Developed by air-lift pumping on 12-2-87.

DRILLED BY Law-Atlanta  
 LOGGED BY R. Scott Ribes  
 CHECKED BY Kirk J. Kessler

BORING NUMBER B-11B  
 DATE STARTED 11-20-87  
 DATE COMPLETED 11-25-87  
 JOB NUMBER 55-4333  
 Page 1 of 3

# TEST BORING RECORD



**REMARKS:**

- NX core from 71.0 to 102.5 feet.

DRILLED BY Law-Atlanta  
 LOGGED BY R.Scott Ribes  
 CHECKED BY Kirk J. Kessler


BORING NUMBER B-11B  
 DATE STARTED 11-20-87  
 DATE COMPLETED 11-25-87  
 JOB NUMBER 55-4333







# TEST BORING RECORD

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	% REC	% ROD	Joints	REMARKS
		Partially weathered rock		86	0		Partially weathered rock
				82	0		Partially weathered rock
				96	0		Partially weathered rock
	94.0	Granite		96	28		Several low to high angle (45°) joints
				100	40		
				64	64		Several low to high angle (45°) joints
				140	58		
				123	88		
				90	60		

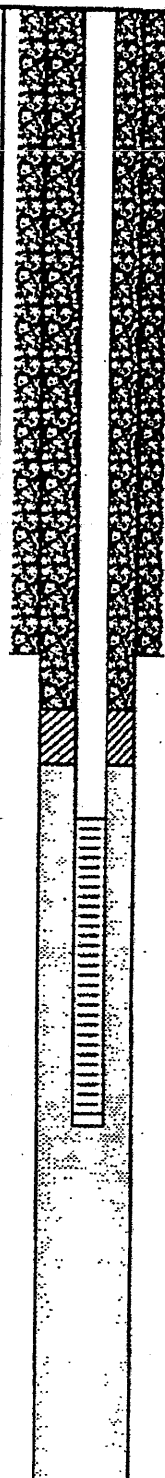
REMARKS:

DRILLED BY	LE-ATL	BORING NUMBER	B-11D
LOGGED BY	PNV	DATE STARTED	1-17-90
CHECKED BY	PER	DATE COMPLETED	2-28-90
		JOB NUMBER	55-433317





# TEST BORING RECORD

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	% REC	% RQD	Joints	REMARKS		
		Granite		90	60				
				112	50			Several low to high angle fractures with iron oxide staining and soft yellow deposits	
				106	84				
				92	86				
					102	75		Several low to high angle (45°) fractures with iron oxide staining  -145° to 147° highly fractured Possible water producing zone	
					100	50			
	150.0			Total depth of well installation		106	61		
						88	26		Several low to high angle (45°) fractures with iron oxide staining

REMARKS:

DRILLED BY LE-ATL  
 LOGGED BY PNV  
 CHECKED BY PER

BORING NUMBER B-11D  
 DATE STARTED 1-17-90  
 DATE COMPLETED 2-28-90  
 JOB NUMBER 55-433317



# TEST BORING RECORD

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	% REC	% ROD	Joints	REMARKS	
		Granite		100	60		Several high to low angle (45°) fractures with some iron oxide staining	
				100	80			
				100	59			Several high to low angle (45°) fractures with some iron oxide staining
				100	83			
				100	100			
	187.0			Coring terminated at 187.0 feet				

REMARKS:

DRILLED BY LE-ATL  
 LOGGED BY PNV  
 CHECKED BY PER

BORING NUMBER B-11D  
 DATE STARTED 1-17-90  
 DATE COMPLETED 2-28-90  
 JOB NUMBER 55-433317



**APPENDIX C**

**Daily Field Reports**

**ISCO Injection Program**

# DAILY FIELD REPORT

Project	Xerox Atlanta ISCO Pilot Test	Report No.	32077-107-001
Location	6077 Fulton Industrial Blvd SW, Atlanta, GA	Date	20-Apr-2009
Client	Xerox	Page	1 of 1
Contractor	ExoTech, Inc	File No.	32077-107
Weather	Partly Cloudy, brief rain showers	Temperature	65°F

Left ROC airport at 6:05 AM

Met on-site at 10:00 AM -Steve Yekich and Brett Ellington from ExoTech, Inc.  
 - Dave Nobb from Mactech.  
 - Mike Nickelsen from Haley & Aldrich.

Dave Nobb activated the pumps from wells B-11A and B-11B. Steve and Brett collected 1 liter of water from each well for oxidant demand testing at the ExoTech office.

All personnel left the site at 12:00 PM.

Traveled to ExoTech to perform oxidant demand testing, inspection of equipment and discussed injection protocol.

Hotel checkin at 4:45 PM

Field Representative(s)	Time on site	Report/Travel/Other	Total hours
Mike Nickelsen	3	10	13

Distribution:

Haley & Aldrich, Inc.

# DAILY FIELD REPORT

Project	Xerox Atlanta ISCO Pilot Test	Report No.	32077-107-002
Location	6077 Fulton Industrial Blvd SW, Atlanta, GA	Date	21-Apr-2009
Client	Xerox	Page	1 of 1
Contractor	ExoTech, Inc	File No.	32077-107
Weather	Partly Cloudy	Temperature	68°F

NAME	COMPANY	ARRIVED	DEPARTED
Mike Nickelsen	Haley & Aldrich	0830	1620
Steve Yekich	ExoTech, Inc	0830	1620
Brett Ellington	ExoTech, Inc	0845	1000
Gus Thompson	ExoTech, Inc	0845	1000
Brantley Rudd	ExoTech, Inc	0845	1620
Ken Avrett	ExoTech, Inc	0845	1620
Becky Furguson	Georgia Department of Natural Resources	1500	1620

0830 - established exclusion zone with orange cones and caution tape.

0900 - lowered inflatable packer 48' bgs and inflated to 40 psi.

0915 - prepared 0.1% NaMnO4 solution by adding 1L of RemOx-L (40% NaMnO4) to 100 gal of potable water.

0940 - started injection of 1st 100 gal batch (gravity feed) in B-11A.

1050 - finished 1st 100 gal batch injection. No visible permanganate in B-11B (sample collected with bailer).

1100 - started injection of 2nd 100 gal batch (gravity feed) in B-11A.

1200 - finished 2nd 100 gal batch injection. No visible permanganate in B-11B (sample collected with bailer).

1205 - started injection of 3rd 100 gal batch (gravity feed) in B-11A.

1305 - finished 3rd 100 gal batch injection. No visible permanganate in B-11B (sample collected with bailer).

1312 - started injection of 4th 100 gal batch (gravity feed) in B-11A.

1415 - finished 4th 100 gal batch injection. No visible permanganate in B-11B (sample collected with bailer).

1420 - started injection of 5th and last 100 gal batch (gravity feed) in B-11A.

1530 - finished 5th and last 100 gal batch injection. No visible permanganate in B-11B (sample collected with bailer).

1530 to 1620 - removed packer, site decon and clean-up.

1700 - arrived at hotel.

Becky Furguson was interested in observing the injection process and if any permanganated was seen in B-11B. She will prepare a trip report on her visit, but did not express any concerns regarding site activities.

Field Representative(s)	Time on site	Report/Travel/Other	Total hours
Mike Nickelsen	8.5	1	9.5

Distribution:

# DAILY FIELD REPORT

Project	Xerox Atlanta ISCO Pilot Test	Report No.	32077-107-003
Location	6077 Fulton Industrial Blvd SW, Atlanta, GA	Date	22-Apr-2009
Client	Xerox	Page	1 of 1
Contractor	ExoTech, Inc	File No.	32077-107
Weather	Partly Cloudy	Temperature	68°F

NAME	COMPANY	ARRIVED	DEPARTED
Mike Nickelsen	Haley & Aldrich	0830	1730
Steve Yekich	ExoTech, Inc	0830	1730
Brantley Rudd	ExoTech, Inc	0830	1730
Ken Avrett	ExoTech, Inc	0830	1730

0830 - established exclusion zone with orange cones and caution tape.

0845 - checked for visible permanganate in B-11B and B-11D; found none.

0950 - lowered inflatable packer to 90' bgs, inflated to 60 psi.

0900 - started injection of 1st 100 gal batch of 0.1% NaMnO4 (gravity feed) in B-11B.

1030 - finished 1st 100 gal batch injection. No visible permanganate in B-11D (sample collected with bailer).

1040 - started injection of 2nd 100 gal batch (gravity feed) in B-11B.

1150 - finished 2nd 100 gal batch injection. No visible permanganate in B-11D (sample collected with bailer).

1155 - started injection of 3rd 100 gal batch (gravity feed) in B-11B.

1330 - finished 3rd 100 gal batch injection. No visible permanganate in B-11D (sample collected with bailer).

1335 - started injection of 4th 100 gal batch (gravity feed) in B-11B.

1515 - finished 4th 100 gal batch injection. No visible permanganate in B-11D (sample collected with bailer).

1520 - started injection of 5th and last 100 gal batch (gravity feed) in B-11B.

1640 - finished 5th and last 100 gal batch injection. No visible permanganate in B-11D (sample collected with bailer).

1640 to 1705 - removed packer, site decon and clean-up.

1710 - Combined 1 L of 40% permanganate within B-11D standing water column (approximately 100 gallons), chased with potable water.

1730 - departed site and traveled to airport for 2135 flight.

Due to mechanical issues and delays arrived at ROC airport at 0200 on 04/23/09. Luggage arrived at 0240, arrived at home 0330.

Field Representative(s)	Time on site	Report/Travel/Other	Total hours
Mike Nickelsen	9	10	19

Distribution: \_\_\_\_\_

**APPENDIX D**

**Regulatory Correspondence**

# Georgia Department of Natural Resources

2 Martin Luther King Jr. Dr. SE, Suite 1154 East Tower, Atlanta, GA 30334-0900

Noel Holcomb, Commissioner

Environmental Protection Division

Carol A. Couch, Ph.D., Director

(404) 656-7802

**CERTIFIED MAIL**

**Return Receipt Requested**

November 10, 2008

Eliot N. Duffney  
Program Manager  
Environmental Engineering  
Xerox Corporation  
800 Phillips Road  
Building 205-99F  
Webster, NY 14580

Re: Cost Estimate  
Xerox Atlanta CRC Facility  
Permit No. HW - 070(D)  
GAD 010103232

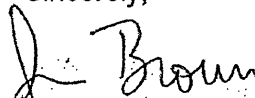
Dear Mr. Duffney:

In a letter dated March 21, 2008, the Georgia Environmental Protection Division (EPD) requested Xerox to submit a revised cost estimate for corrective action and post closure care for the Xerox CRC facility in Atlanta, Georgia (Xerox). EPD stated that pursuant to § 391-3-11-.05 of the Georgia Hazardous Waste Management Rules, unless Xerox can demonstrate that the site will meet all cleanup requirements in less than 30 years, cost estimates should be based on a 30-year period to ensure protection of human health and the environment. Currently, the cost estimate is based on a 10-year period.

In a letter dated April 11, 2008, Xerox proposed not to alter the financial assurance estimate in light of the timing and impacts to all of Xerox's pending financial assurance demonstrations, which were due for fiscal year 2007. In addition, Xerox agreed to pursue a remedial enhancement to target an accelerated final closure scenario for the site. To date, EPD has not received a remedial enhancement plan from Xerox.

Within thirty (30) days of receipt of this letter, please submit either a plan to remediate the site to cleanup requirements within the next 10 years or a revised cost estimate based on a 30-year period. If you should have any questions please call Travis Steed at (404) 656-7802.

Sincerely,



Jim Brown  
Program Manager  
Corrective Action Program

File: Xerox (R)



# Georgia Department of Natural Resources

2 Martin Luther King Jr. Dr. SE, Suite 1154 East Tower, Atlanta, GA 30334-0900

Noel Holcomb, Commissioner  
Environmental Protection Division  
Carol A. Couch, Ph.D., Director  
(404) 656-7802

**CERTIFIED MAIL**  
**Return Receipt Requested**

February 5, 2009

Elliot N. Duffney  
Program Manager  
Environmental Engineering  
Xerox Corporation  
800 Phillips Road  
Building 205-99F  
Webster, NY 14580

Re: Accelerated Remedial Program  
Interim Measure Work Plan  
Xerox Atlanta CRC Facility  
HW-070(D)  
GAD010103232

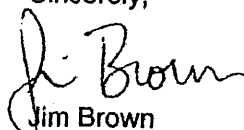
Dear Mr. Duffney:

The Environmental Protection Division (EPD) has reviewed Xerox Corporation's Accelerated Remedial Program Work Plan. EPD considers this an Interim Measure (IM) Work Plan pursuant to HW-070(D) Permit Condition IV.E. The IM Work Plan is conditionally approved with the following comments:

1. The IM Work Plan refers to increasing the site monitoring frequency from semi-annual to quarterly after the injection for a period of two years once levels reach MCL's in the POC wells. Xerox should be aware that in accordance with Permit Condition III.B.3., the compliance period is defined as continuing until the groundwater protection standard has not been exceeded for a period of three (3) consecutive years.
2. Please include the submission of the IM Report in the *Proposed Schedule of Activities*.

If the IM is sufficient in reducing groundwater concentrations to, or below, the groundwater protection standard, then Xerox should submit a site-wide revised Corrective Action Plan to terminate the Hazardous Waste Permit. The revised Corrective Action Plan must document that groundwater concentrations are at, or below, the groundwater protection standard and soil concentrations are at, or below, risk based standards. If you should have any questions, please contact Travis Steed at (404) 656-7802.

Sincerely,



Jim Brown  
Program Manager  
Corrective Action Program

Underground Injection Control Program  
Pilot Test Injection Well Notification Form

Attachment A  
EPD-UIC-003  
Revision 1  
Page 2 of 2

1.0 Address Facility Operator  
1.1 Name Xerox CRC Facility Xerox Corporation  
1.2 Street Address 6077 Fulton Industrial 800 Phillips Road B205-99F  
1.3 City, State Atlanta, Georgia Webster, New York  
1.4 ZIP Code 30336 14580  
1.5 Telephone \_\_\_\_\_ 585.422.5825  
2.0 Location: Latitude: 33°43'02" Longitude: 84°35'17"

3.0 What is the contaminant in the Ground Water? Tetrachloroethene  
4.0 Georgia Licensed Water Well Contractor or Bonded Driller: ExoTech, Inc.  
5.0 Professional Engineer or Geologist: Ken Summerour  
6.0 Well Data Table

	Injection Wells	Monitoring Wells
6.1 Number Wells	<u>B-11A; B-11B</u>	<u>B-11D</u>
6.2 Well Depth(s)	<u>59.7; 102.5 feet</u>	<u>150 feet</u>
6.3 Well Diameter	<u>2 inch (PVC)</u>	<u>2 inch (PVC)</u>
6.4 <del>Flow</del> volume <del>XXX</del> in/out	<u>500 gallons each</u>	
6.5 Sampling freq.		<u>Quarterly</u>

7.0 Responsible EPD Associate for site: Travis Steed  
8.0 Date injection started: April 21, 2009 (Scheduled)  
8.1 Date\* injection stopped: \_\_\_\_\_  
8.2 Reason Injection Stopped? \_\_\_\_\_  
8.3 Date these injection wells were logged in to the UIC Class V Well inventory and file: \_\_\_\_\_  
9.0 UIC Class V Well Inventory Number: \_\_\_\_\_  
10.0 UST/HWMB CAP tracking number: \_\_\_\_\_  
11.0 Pending UIC Class V Permit Number: \_\_\_\_\_

\*Note: This pilot test well form is valid only for 90 days from the start of injection.

\*\*Submit this form to:

Georgia Environmental Protection Division,  
Regulatory Support Program  
UIC Unit  
Room 400  
19 M.L. King, Jr. Dr., SW  
Atlanta, Georgia, 30334

**APPENDIX E-8**

**GROUNDWATER SAMPLING PROCEDURES**

## APPENDIX E-8

### GROUNDWATER SAMPLING PROCEDURES FORMER XEROX CENTRAL REFURBISHING CENTER (CRC) FACILITY - ATLANTA, GEORGIA

The following United States Environmental Protection Agency (USEPA) Region 4 Laboratory Services and Applied Science Division (LSASD) (formerly known as Science and Ecosystem Support Division, or SEDS) Standard Operating Procedures (SOPs) and Guidelines, or the most recent revisions thereof, are applicable to the sampling at the former Xerox-Atlanta CRC facility (facility or site). Any deviations from the listed procedures will be documented in the field book, and documented in a case narrative along with the reason for the deviation, in the Corrective Action Effectiveness Report (CAER).

<u>SOP Number</u>	<u>Title</u>
SESDPROC-106-R4	Field Measurement of Dissolved Oxygen
LSASDPROC-100-R5	Field pH Measurement
SESDPROC-113-R2	Field Measurement of Oxidation-Reduction Potential (ORP)
LSASDPROC-101-R7	Field Specific Conductance Measurement
SESDPROC-102-R5	Field Temperature Measurement
SESDPROC-103-R4	Field Turbidity Measurement
LSASDPROC-105-R4	Groundwater Level and Well Depth Measurement
LSASDPROC-205-R4	Field Equipment Cleaning and Decontamination
SESDPROC-301-R4	Groundwater Sampling
LSASDPROC-202-R4	Management of Investigation Derived Waste
LSASDPROC-209-R4	Packing, Marking, Labeling and Shipping of Environmental and Waste Samples
LSASDPROC-1001-R2	Control of Records
SESDPROC-011-R5	Field Sampling Quality Control
SESDPROC-1002-R0	Logbooks
SESDPROC-005-R3	Sample and Evidence Management
SESDGUID-203-R4	Pump Operation

#### **E-8.1 Groundwater Elevation and Total Well Depth Determination**

The determination of groundwater elevation and measurement of total depth will be performed in accordance with the procedures listed in SOP LSASDPROC-105-R4 (Groundwater Level and Well Depth Measurement). A Wood approved rental vendor supplies measurement tapes that are certified traceable to National Institute of Standards and Technology (NIST) standards, and inspected prior to shipment. Tapes may also be checked in the field against a second NIST source and, if necessary documented in the field book. A reference point marked at the top of the monitoring well riser and determined by a licensed surveyor to an accuracy of 0.01 feet, will

serve as the top of casing elevation. The depth to groundwater and total well depth will be measured relative to this reference point. An electronic water level indicator with a tape marked in graduations of 0.01 feet is used to measure the depth to groundwater and the total well depth. The entire length of the graduated indicator tape is cleaned prior to initial use by the Wood approved equipment rental agency. Prior to subsequent use and between measurement events the part of the tape placed within the well will be re-cleaned in accordance with SOP LSASDPROC-205-R4 (Field Equipment Cleaning and Decontamination).

The total depth of the well is measured by lowering the graduated (weighted) tape until the weight is felt to come into contact with the bottom of the well. In deep wells and/or in wells where sediment is present in the bottom of the well, the tape is lowered until the weight rests on the bottom of the well. The operator then raises the weight until a "tug" is felt as the weight is lifted from the well bottom. The total well depth is measured to the nearest 0.1 foot. Note: When measuring the well depth with the electronic indicator with a weighted tape, the operator performing the test must measure and add the length of the probe beneath the circuit-closing electrodes to the depth measured to determine the true depth in accordance with SOP LSASDPROC-105-R4.

In accordance with the procedures in SOP SESDPROC-1002-R0 (Logbooks), the details of the groundwater level and total depth determinations are recorded in pen in the logbook and/or an appropriate auxiliary field form, as well as recorded on the individual Field Sampling Reports (FSRs) provided in Attachment E-8A.

## **E-8.2 Well Purging and Sampling**

All wells will be purged prior to sampling in accordance with the procedures listed in SOP SESDPROC-301-R4 (Groundwater Sampling). Purging the wells eliminates stagnant water in the casing and/or screen that has undergone geochemical changes from loss of volatile organic compounds (VOCs) and reduces the turbidity to the point that the sample represents the dissolved concentration of contaminants. Purging will be conducted using a peristaltic pump in accordance with the procedures listed SOP SESDGUID-203-R4 (Pump Operation) after calibration of the instruments used to collect field parameters, such as pH, dissolved oxygen (DO), and oxidation-reduction potential (ORP).

### **E-8.2.1 Field Instrument Calibration, Preventative Maintenance, and Corrective Action**

Prior to testing field parameters, equipment will be calibrated daily according to the procedures described below, or according to the manufacturer's instructions. Calibration of field instruments will be recorded on a calibration log, provided in Attachment E-8B, and noted in the field logbook along with the instrument's type and calibration status. Each calibration log and

logbook entry will indicate the instrument type, model, serial number, date, and time of calibration. Field parameters will be measured with a multi-parameter instruments (such as the YSI® 6920) whenever possible, using the following procedures:

- The DO meter will be calibrated daily using at least a one-point calibration in accordance with the manufacturer's instructions and SOP SESDPROC-106-R4 (Field Measurement of Dissolved Oxygen). The barometric pressure obtained from a reliable on-line data source will be corrected using the site elevation, and the temperature obtained from the instrument (the thermometer will be calibrated by the manufacturer). If necessary, the meter may be checked at the discretion of the sampler.
- The pH meter will be calibrated with 2 or 3 standard buffer solutions that bracket the expected range of the pH values in groundwater in accordance with the manufacturer's instructions and SOP LSASDPROC-100-R5 (Field pH Measurement). Subsequently, the meter will be checked against 1 or 2 buffers as deemed necessary by the sampler.
- The specific conductivity meter will be calibrated using at least a 1-point calibration against a known conductivity standard in accordance with the manufacturer's instructions and SOP LSASDPROC-101-R7 (Field Specific Conductance Measurement). Subsequently, the meter may be checked against the standard at the discretion of the sampler.
- The turbidity meter will be calibrated daily using 1 or 2 standards, in accordance with the manufacturer instructions and SOP SESDPROC-103-R4 (Field Turbidity Measurement). If necessary, the meter may be checked against 1 or 2 standards at the discretion of the sampler.
- The ORP meter will be calibrated using at least a 1-point calibration against a known standard in accordance with the manufacturer's instructions and SOP SESDPROC-113-R2 (Field Measurement of Oxidation-Reduction Potential). Subsequently, the meter may be checked against the standard at the discretion of the sampler.

Preventative maintenance will be performed on field instruments as needed and in accordance with the instrument manufacturer's instructions. Notes of any maintenance performed will be recorded either on the daily calibration log and/or in the field logbook of and by the person performing the maintenance activities. The final instrument disposition after any maintenance activities will also be noted. If the maintenance fails to restore the instrument to a reliable and calibrated operative condition, then the instrument will be taken out of service and a calibrated replacement instrument will be employed.

When necessary, implementation of corrective actions will be the responsibility of the team members conducting the field activities after documenting and communicating the circumstances causing a need for corrective action to the project team leader and/or project manager. Corrective actions consist of recalibration, repair, or acquisition of another functioning and calibrated instrument.

### **E-8.2.2 Well Purging**

Wells will be purged using a peristaltic pump until a minimum of three well casing volumes of standing water have been removed and groundwater parameters (pH, specific conductance, turbidity, etc.) have stabilized.

Stabilization has been achieved when the parameters are within the specific criteria listed in SOP SESDPROC-301-R4 and found on the FSRs (see Attachment E-8A) for at least three consecutive readings, with the turbidity at or below 10 Nephelometric Turbidity Units (NTUs). While temperature is no longer used for determining parameter stability, it is still recorded for potential use in the interpretation of other parameters. If these parameters have not stabilized after 3 well casing volumes have been removed, additional well volumes, up to 5, will be removed before consulting the field team leader and or/ project manager for additional instructions.

Polyethylene (PE) tubing (Teflon® tubing will be used only for site closure sampling) will be connected to the flexible peristaltic pump tubing, and the PE tubing inlet will be lowered into the top of the water column. The pumping rate should not exceed the well's recovery rate, and the tubing will be lowered to accommodate any drawdown. The field measurements should be recorded in the table in the FSR that also includes the start time of purging, the purge volume and parameters measured at intervals during purging, the purge rate, depth to water, and other pertinent information.

### **E-8.2.3 Sample Collection and Analyses**

After purging, wells to be analyzed for site-specific VOCs only by USEPA Method SW8260C (or an appropriate equivalent method capable of achieving the required reporting limits) will be sampled using a peristaltic pump and the "soda straw" method in accordance with SOP SESDPROC-301-R4. The samples will be collected in a manner that will minimize sample disturbance and the potential for contamination. The tubing extending below the groundwater surface is crimped or capped and the tubing carefully pulled to the surface before the water is gently discharged into the appropriately pre-preserved sample vials.

During annual Appendix IX sampling, additional groundwater analyses are performed in accordance with Permit No. HW-070(D). In addition to VOCs by SW8260C, the samples will also be analyzed for Appendix IX semi-volatile organic compounds (SVOCs) by SW8270D, pesticides by SW8081B, polychlorinated biphenyls (PCBs) by SW8082A, herbicides by SW8151A, dioxins and furans by SW8290, metals and mercury by SW6010C and SW7470A, sulfide by SM4500-S2-F-2000, fluoride by SW9056A, and cyanide by SM4500-CN-E/SW9012B or equivalent appropriate methods capable of achieved the required reporting limits.

In accordance with SOP SESDPROC-301-R4, Appendix IX sampling will be performed by first filling the pre-preserved plastic containers for metals, cyanide, and sulfide, followed by the

plastic container for fluoride. Amber glass bottles (typically 1 liter) for SVOCs and other organic analyses are then filled using the vacuum bottle or vacuum transfer method in order to prevent the sample from contacting the flexible pump tubing, which could affect the representativeness of the sample. A commercially available 2-hole transfer cap, pre-fit internally with one short and one long tube, is inserted into the mouth of a sample bottle and the pump connected to the shorter tube, with the longer connected directly to the well tubing. The groundwater is then drawn into the bottom of the bottle by the suction generated at the top, and the pump allowed to fill each amber glass bottle to just below the neck. The pump is paused and tubing crimped after each bottle until 2 liters per method plus at least 1 extra liter per sample have been collected. Finally after the last 1L amber bottle has been filled, the samples for VOCs will then be collected by the "soda straw" method, as previously described.

#### **E-8.2.4 Investigative Derived Waste (IDW)**

In accordance with SOP LSASDPROC-202-R4 (Management of Investigation Derived Waste), purged groundwater will be containerized in steel 55-gallon drums on-site prior to disposal at a permitted off-site facility after proper characterization. The drums will be properly labeled and placed in an area out of the way of normal traffic but accessible to a properly licensed waste transportation company vehicle. Other IDW generated by the groundwater sampling (i.e., gloves, tubing, etc) are considered non-hazardous and will be collected and disposed as ordinary refuse.

#### **E-8.3 Field Quality Assurance/Quality Control (QA/QC)**

In order to protect the integrity of the field sampling process, qualitative and quantitative descriptors are used in interpreting the degree of acceptability or utility of the data. QA/QC procedures, which are implemented to evaluate precision, accuracy (bias), representativeness, comparability, and completeness, ensure that the data generated are valid and usable for the purposes of the project.

##### **E-8.3.1 Field Records**

In accordance with SOP SESDPROC-1002-R0, details of the field procedures will be recorded legibly in pen in the field logbook and/or on the various auxiliary field forms (FSRs, calibration logs, etc). These details include, but are not limited to, water level and total depth determinations, sampling methods, instrument calibrations, purge parameters, and general observations. Each page of the field logbook (and each auxiliary field form, if applicable) should include the date, job name and number, weather conditions, sampling personnel, and personal protective equipment requirements, and should be initialed and dated at the bottom. The field logbooks, collectively, should provide a clear and detailed narrative of each field team member's activities recorded in real time, or as closely as reasonably possible.



### E-8.3.2 QC Samples

In order to protect the integrity of the field sampling process, the following types of QC samples may be collected during each sampling event in accordance with SOP SESDPROC-011-R5 (Field Sampling Quality Control):

- Trip blanks samples are prepared by the laboratory using analyte-free distilled or de-ionized (DI) water which is shipped with the sample bottles to the field and then returned to the laboratory with the other samples. Trip blanks are used to verify that sample collection and handling procedures have not affected the quality of the samples, and to monitor sample cross-contamination in the event of highly contaminated samples. The trip blanks will not be separated from other samples and must be packaged with the VOC samples collected during the sampling event. One trip blank will be included with each sample cooler that contains samples for VOC analysis, and analyzed along with site samples.
- Field duplicates are two samples taken from the same location but submitted and analyzed separately in order to monitor sampling precision. The identity of the duplicate will be kept from the laboratory so that laboratory precision can also be evaluated. Water duplicates will be collected by alternately filling sample containers from the same sampling device for each parameter, and if possible collected from a location that will produce a positive result so that precision can be quantified (relative percent difference, or RPD). One field duplicate/sample pair will be collected during each event and analyzed for site specific VOCs.
- Rinsate blanks are samples prepared in the field to demonstrate that a re-usable sampling device has been effectively cleaned, and equipment blanks are similar field-prepared samples used to determine the possible effects of disposable equipment on sample results. Sampling equipment is not re-used during purging of the wells at the former Xerox facility, therefore no rinsate blanks will be necessary. If possible effects of disposable equipment on sample concentrations are suspected, the representative piece of equipment will be filled or rinsed with analyte-free DI water that is then transferred to the appropriate sample containers and analyzed for site specific VOCs.
- Matrix Spike/Matrix Spike Duplicates (MS/MSDs) are extra regular field samples collected and shipped concurrently, that are spiked by the laboratory with specific concentrations of the analytes of interest. The MS/MSDs are analyzed along with the regular samples according to standard laboratory procedures in order to check the laboratory's ability to recover the analytes from the sample matrix within method specific accuracy and precision limits. Although the laboratory may occasionally select a project sample for MS/MSD analysis, extra MS/MSDs will not be collected unless matrix interference is suspected.

### **E-8.3.3 Chain-of-Custody Procedures**

Chain-of-custody (COC) procedures, including labeling, shipment and transfer or custody, will be performed in accordance with SOP SESDPROC-005-R3 (Sample and Evidence Management). The COC form is used to determine that an accurate written record is developed which can be used to trace possession and handling of a sample from the moment of collection through laboratory analysis. The COC form will be filled out legibly in pen. By definition, a sample is in one's custody if:

- It is in one's actual physical possession.
- It is in one's view, after being in one's physical possession.
- It is in one's physical possession and then locked up so that no one can tamper with it.
- It is kept in a secured area, restricted to authorized personnel only.

#### Sample Labeling

Each sample is identified by affixing a pressure-sensitive gummed label or standardized tag on the container(s). The label will contain the site name and sample identification number, date and time of collection, analytical method or requested analysis, preservative, and identity of the sample collector. If a label is not available, the same information may be affixed directly to the sample container or written on a plastic zip-closure bag with an indelible, waterproof marking pen.

#### Sample Shipment

After proper labeling, the sample container shall then be carefully packed and placed in an insulated transportation chest or cooler along with the COC form in accordance with SOP LSDASDPROC-209-R4 (Packing, Marking, Labeling and Shipping of Environmental and Waste Samples). The coolers will normally be used to eliminate the need for close control of individual sample containers. However, on those occasions when the use of a chest will be inconvenient, a seal will be placed around the cap of the individual sample container or bagged group of containers, which would indicate tampering if removed.

#### Transfer of Custody

When transferring the possession of samples, the transferee must sign and record the date and time on the COC form in accordance with SOP SESDPROC-005-R3. Custody transfers, if made to a sample custodian in the field, will account for each individual sample, although samples may be transferred as a group. Every person who takes custody will fill in the appropriate section of the COC form. To prevent undue proliferation of custody records, the number of custodians in the chain of possession will be kept to a minimum.

#### **E-8.4 Laboratory QA/QC**

In order to ensure the quality of the data generated, the laboratory utilizes a quality assurance program, documented in their quality assurance manual (QAM), which includes general and specific guidance the laboratory must follow. The QAM is laboratory specific and updated regularly, however the following guidelines will be followed to ensure that the data generated are valid and usable for the purposes of the project.

##### Sample Receipt

In the laboratory, a sample custodian is assigned to receive and inspect the samples for evidence of leakage or tampering. A leaking container containing a multi-phase sample shall not be accepted for analysis, as it is no longer a representative sample. Analytical results from a sample that has been tampered with would not be admissible as evidence in court.

Observations are recorded on the laboratory sample receipt form and in the laboratory sample logbook. The custodian also reconciles the information on the sample label against that on the COC form, and assigns a unique laboratory identification number (often consecutive) to each to identify the samples further. The laboratory may also maintain a separate internal COC. Samples are stored in a secured sample storage area until assigned for analysis.

##### Instrument Calibration, Maintenance, and Corrective Action

The calibration and maintenance of laboratory instruments and support equipment is necessary to ensure that the analytical system is operating correctly and functioning within the guidelines of precision, accuracy, and sensitivity. The frequency and type of calibration and verification as well as preventative and corrective maintenance guidance are maintained in the laboratory's QAM and based on analytical and industry standards or project specific requirements.

The laboratory uses NIST traceable reference standards to calibrate the laboratory equipment. Physical reference standards include weights for scales and balances, and certified thermometers for calibrating working thermometers. Chemical reference standards include reference materials traceable to recognized standards suppliers and are generally associated with normal instrument calibrations. The standards must be verified by quantitation against a second known standard (2nd source) before the data is reported and must meet specified QC criteria for calibration verification.

At a minimum, the laboratory equipment must be calibrated and maintained at intervals prescribed by the method. An instrument is said to be calibrated when an instrument response can be directly related to the concentration of an analyte graphically using a calibration curve. The low standard of the curve shall be established by the laboratory as the method reporting

limit (RL). Results below the RL will not be reported without qualification. Results above the highest standard will be diluted into the calibration range and reanalyzed.

If an instrument requires repair (subjected to overloading or mishandling), gives suspect results, or otherwise has shown to be defective or outside of specified limits it shall be taken out of operation and tagged as out-of-service or otherwise isolated until such a time as the repairs have been made and the instrument can be demonstrated as operational by calibration and/or verification or other test to demonstrate acceptable performance. If possible, back-up instruments, which have been approved for the analysis, shall perform the analysis normally carried out by the malfunctioning instrument. If the back-up is not available and the analysis cannot be carried out within the needed timeframe, the samples shall be subcontracted. The laboratory shall examine the effect of this defect on previous analyses and prepare a non-conformance report if found to affect historical analytical results.

#### Data Reporting

The laboratory will assure that the data meets the specific QA/QC requirements listed in the method SOP prior to releasing the data to Wood. Any deviations must be noted and explained in the laboratory case narrative. The analytical group leader and QA manager are ultimately responsible for the quality of the data originating from their department and from the laboratory. The laboratory project manager is responsible for final sign-off on the consolidated data package.

The laboratory analytical results of the environmental and QC samples (known as a Level II deliverable) will be emailed to the Wood project manager and field team leader as soon as it is available. The preliminary data should be received by Wood no longer than 2 weeks after sample receipt, with final reviewed data packages available no longer than 4 weeks after sampling. The laboratory may also be asked to provide a more detailed data deliverable, if necessary, to Wood for further investigation of possible data quality issues.

The information from the laboratory including sample results, QC data, sample custody information, and other supporting documentation will be kept in project files, along with field documentation, logbooks, DQE forms, and qualified data tables in accordance with the conditions of the permit.

#### **E-8.5 Data Review and Validation**

The purpose of data review is to spot data outliers that indicate a potential error in the data collection equipment or data entry. The individual reviewing the data must have basic knowledge of the typical or expected results for environmental data. Data values considered questionable should be marked for verification, which involves further investigation and acceptance or rejection of the results. Any time data or process anomalies are identified, written

communication will be provided to the project manager to distribute to personnel involved, and corrective action will have been initiated.

The purpose of data validation is to detect and then verify any data values that may not represent actual environmental conditions at a particular sampling point. Wood Staff Chemists will perform data validation on 100% of the data using criteria in accordance with USEPA National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2020a), National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2020b), and National Functional Guidelines for High Resolution Superfund Methods Data Review (USEPA, 2020c).

The data validation (or data quality evaluation – DQE) will consist of checking samples and QC results to determine if the analyses are within prescribed criteria for precision, accuracy, completeness, sensitivity, blank contamination, etc. The DQE will consist of an evaluation of the routine QA/QC performed by the laboratory, including review of the following QA/QC controls:

- method, preparation, and/or extraction blanks;
- sample preservation and holding times;
- laboratory control samples (LCSs);
- matrix spike and matrix spike duplicates (MS/MSD);
- surrogate spikes, if applicable.

Certain criteria based upon field personnel and/or Wood chemist professional judgment, may also be used to invalidate or conditionally accept a sample or measurement, known as flagging data. A data flag is a result qualifier used to identify a potential problem with data or a sample and is an indicator of the fact and the reason that a data value produced a numeric result, but the result is qualified. Flags can be used both by the data validator and the laboratory to signify data that may be suspect due to contamination, special events, or other type of failure to meet the applicable QC limits. Flags can be used to determine if individual sample data, or samples from a particular instrument, will be conditioned or invalidated (rejected). In all cases, the sample data will be thoroughly reviewed by a Wood Senior Chemist prior to any data rejection.

Data validation will be documented using a basic Wood DQE checklist and the laboratory's method specific precision and accuracy limits, whenever applicable. The precision, measured in RPD, between field duplicate results should be less than or equal to 30%, and overall field and laboratory completeness should be no less than 95%. A brief DQE narrative will be generated that addresses any data quality issues, including the answers to the following questions, in order to address overall precision, accuracy, representativeness, completeness, and comparability:

- Were appropriate sample collection procedures followed?

- Was appropriate sample preservation used?
- Were the samples collected from all planned locations?
- Were problems, if encountered during sampling, described in the logbook or the FSR?
- Were the correct analytical methods/analyses requested on the COC?
- Were any problems noted in the Case Narratives associated with each data deliverable?
- Did the laboratory meet the prescribed RLs?
- Was re-analysis or resampling necessary?
- Were there any rejected or unusable data and if so, why?
- Are the data usable for the purposes of this project, as reported and qualified?

### **E-8.6 Reporting**

The results of the data validation, including the checklist(s) and the brief DQE narrative noted above, will be included in each permit required semi-annual report in the Appendix along with the laboratory data reports. Any effects on the usability of the data will be discussed in the text of the CAER.

### **E-8.7 Additional References**

USEPA, 2020a. *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, Office of Superfund Remediation and Technology Innovation, EPA-540/R-20-005, November 2020.

USEPA, 2020b. *USEPA National Functional Guidelines for Superfund Inorganic Methods Data Review*, Office of Superfund Remediation and Technology Innovation, EPA-542/R-20-006, November 2020.

USEPA, 2020c. *USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review*, Office of Superfund Remediation and Technology Innovation, EPA-542/R-20-007, November 2020.

**ATTACHMENTS**

**E-8A** Field Sampling Report

**E-8B** Daily Calibration Form





Date: \_\_\_\_\_  
 Time: \_\_\_\_\_  
 Prepared By: \_\_\_\_\_  
 Checked By: \_\_\_\_\_

Wood.  
 Project No.

Sonde ID: \_\_\_\_\_  
 Handset ID: \_\_\_\_\_  
 Battery Voltage %: \_\_\_\_\_

CALIBRATION PRIOR TO SAMPLING

DISSOLVED OXYGEN (DO)		VALUE
Was DO membrane changed?	Yes ___ No ___ Date: ___ Time: ___	
Current Air Temperature °C (meter reading):		
Current Barometric Pressure (from Weather Channel or NOAA.gov, which is corrected to sea level):		
Elevation Corrected Barometric Pressure to enter into YSI DO calibration:	Ex.: 30.02 in. Hg x 25.4 = mm Hg; <b>subtract</b> 2.54 mm Hg for every 100 ft. above sea level: 565/100 x 2.54 = 14.4 mm Hg	
Theoretical DO (mg/L) from DO table based on current temperature and elevation corrected pressure:		
DO concentration before Calibration (mg/L):	Depending on meter version, this may not be available.	
DO concentration after Calibration (mg/L):		
% Recovery (actual/theory x 100)	Range is 90 to 110% Recovery	
DO Charge (DO ch):	Acceptable Range is 25 to 75	
DO Gain (should be between -0.7 and 1.5)	Exit Calibration menu and go to Advanced/Cal Constants	
<b>Note:</b>		
<b>CONDUCTIVITY</b> <b>Note:</b> Calibrate before pH to avoid carry-over from pH standards (i.e. pH buffers are conductive)		
Calibration standard used (mS/cm)		
Temperature (°C)		
Reading before Calibration (mS/cm)		
Reading AFTER Calibration (mS/cm)		
Conductivity Cell Constant (unitless):		
<b>Note:</b> Be sure conductivity cell is submerged and free of bubbles (gently tap sonde on table)		
<b>pH</b>		
pH 7.0 value before calibration:		
pH 7.0 value after calibration:		
pH 7.0 mV (range is -50 to +50 mV):		
pH 10 value before calibration		
pH 10 value after calibration:		
pH 10 mV (range is -130 to -230 mV):		
pH 4.0 value before calibration:		
pH 4.0 value after calibration:		
pH 4.0 mV (range is 130 to 230 mV):		
<b>Note:</b> Span between pH 4 and 7, and 7 and 10 should be between 165 to 180 mV		
<b>OXIDATION/REDUCTION POTENTIAL (ORP)</b>		
Calibration Temperature (°C):		
Theoretical Calibration standard (mV)	$0.231 + 0.0013(25 - T) \times 1000 = \text{mV}$ (T is Temperature °C)	
Reading before calibration (mV):		
Reading after calibration (mV):		
<b>Note:</b> mV theory will change with temperature, so calculate based on your current temp.		
<b>TURBIDITY</b> <b>Note:</b> Lens wiper should be parked 180 degrees from the optics.		
___ NTU Turbidity Standard	Before Cal:	After Cal:
___ NTU Turbidity Standard	Before Cal:	After Cal:
___ NTU Turbidity Standard	Before Cal:	After Cal:
___ NTU Turbidity Check STD	Before Cal:	After Cal:
___ NTU Turbidity Check STD	Before Cal:	After Cal:
<b>CALIBRATION SUCCESSFUL?</b>		

**APPENDIX E-9**

**PRELIMINARY REPORT OF SUPPLEMENTAL SOIL INVESTIGATION (JULY 19, 2011)**

**PRELIMINARY REPORT OF SUPPLEMENTAL SOIL INVESTIGATION  
XEROX FACILITY, ATLANTA, GEORGIA**

**Prepared for:**

**XEROX CORPORATION**

**Webster, New York**

**Prepared by:**

**AMEC E&I, Inc.**

**Kennesaw, Georgia**

**July 19, 2011**

**Project No. 12000-8-0019-2**

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APPENDIX B:	GROUND-WATER SAMPLING PROGRAM
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## **1.0 INTRODUCTION**

AMEC is pleased to present this preliminary report of the Supplemental Soil Investigation at the (former) Xerox Facility in Atlanta, Georgia. Xerox and EPD met in November 2010 to discuss requirements to pursue site closure. To demonstrate that constituent concentrations in site soils meet risk-based standards, an essential closure requirement, existing soils data from historic site investigations was reviewed and a work plan prepared to collect additional (supplemental) and current soils data as necessary to support the risk-based closure. Selected ground-water samples were also to be collected from locations in the vicinity of the former release to provide data for further evaluation of site closure.

An initial Work Plan was submitted to EPD on March 15, 2011. Revised Work Plans were submitted on April 1 and April 29 to incorporate responses to EPD comments. The April 29, 2011 Work Plan and associated Temporary Authorization Request were approved by GA EPD in Mr. Barnes' May 19, 2011 letter.

## **2.0 FIELD INVESTIGATION**

The sampling program presented in the April 29 Work Plan consisted of collecting soil samples from 12 locations and ground-water samples from three of the 12 locations. Two proposed sampling locations were adjacent to the excavation for the former solvent tanks, four locations were adjacent to the outside pad in the area of the (former) piping elbow leak, two locations were on (through) the exterior RCRA cap in the area of the elbow leak, and four locations were inside the building in areas where three solvent spray booths were formerly located. Temporary monitoring wells for ground-water sampling were located in and downgradient from the former elbow and spray booths.

Field sampling as outlined in the Work Plan was conducted on June 14 through June 16, 2011. Georgia EPD personnel visited the site during the sampling event. Sampling locations are shown on Figure 1. Direct-push technology (DPT) was used to advance the borings and install the temporary monitoring wells. Drilling and soil sampling procedures are described in Appendix A; procedures for installing the temporary monitoring wells and for ground-water sampling are described in Appendix B.

In accordance with the Work Plan, temporary monitoring well GW-1 was installed prior to conducting the soil sampling event to allow the depth to ground water to be established; ground water in GW-1 stabilized at a depth of approximately 12 feet below ground surface (bgs). During initial site assessment studies conducted in the 1980s, ground water was measured in monitoring wells installed in this area (B-2, B-3 and B-4) at depths of 10 to 12 feet below ground or slab levels. Accordingly, for the purpose of this investigation, soil samples were collected to a maximum depth of 10 feet (bgs), the depth of current and/or previously saturated soils.

Sampling locations DPT-6 and DPT-7 were located on the outside pad that covered the excavation previously made to remove the leaky piping elbow and adjacent impacted soils (Figure 1). Prior reports indicate that this excavation was 10 feet deep. Borings for DPT-6 and DPT-7 extended to a depth of 12 feet. Loose gravel backfill was encountered to a depth of approximately 11 to 11.5 feet, underlain by a wet sandy silt. No PID response was recorded in the gravel backfill or in the underlying silt. Having confirmed that the backfill extend down to saturated soils, no soil samples were collected from these two borings.

### **3.0 RESULTS OF INVESTIGATION**

Thirty soil samples and three ground-water samples were collected and analyzed for 8260B volatile organic compounds (VOCs). The results are presented on Table 1. Tetrachloroethene (PCE) was detected in one soil sample (DPT-8 at a depth of 2 feet at 37 µg/kg). Acetone was detected in soil samples from three different locations, at concentrations of 250 to 450 µg/kg, while methyl acetate was reported in soil samples from two other locations, at concentrations of 100 and 680 µg/kg. PCE was detected in samples collected from the two inside temporary monitoring wells, GW-2 and GW-3, at concentrations of 11 and 180 µg/L, respectively. Chloroform was reported in one of three ground-water samples (GW-3) at 8 µg/L.

PCE was the primary VOC detected in the 1984-1986 soil sampling conducted in this area and in subsequent ground-water sampling events. PCE was reported as being non-detect in the 18 soil samples and 1 ground-water sample collected from locations outside the building. PCE was reported in one of 12 soil samples collected from locations inside the building and at relatively low concentrations in the two ground-water samples collected from locations inside the building.

Chloroform was reported in the ground-water sample from one of the three temporary monitoring wells, GW-3, at a concentration of 8 µg/L vs. its reporting limit of 5 µg/L; it was not detected in any of the soil samples. Chloroform was not detected in the 1984-1986 soil sampling conducted in this area. Chloroform was previously reported sporadically and very infrequently in early Xerox site ground-water sampling results, at single digit concentrations. Chloroform was not identified as a site-specific constituent in the 1999 or subsequent Permits. The chloroform reported as being detected in the GW-3 sample is likely associated with field sampling or laboratory-related operations.

Acetone was detected in three soil samples, at concentrations ranging from 250 to 450 µg/kg. Acetone was not reported as being detected in the 1984-1986 soil sampling conducted in this area or in historic ground-water sampling events. Acetone was not identified as a site-specific constituent in the 1989 or subsequent Permits. It is well documented that acetone reported as being detected in soil samples preserved in sodium bisulfate may result from microbial processes. Based on these observations, it is unlikely that acetone is present in these soils.

Methyl acetate, reported as being present in two soil samples, is not an identified site constituent, was not detected in the 1984-1986 soil sampling conducted in this area, has never been reported as being detected

in ground-water sampling events, and has never been listed in Xerox's Permit as a site-specific constituent. The source of the reported methyl acetate is unknown; it may possibly be associated with field sampling or laboratory-related activities. Based on these observations, it is unlikely that methyl acetate is present in these soils.

These results appear to reflect the absence of any significant releases associated with the use of solvents in the operations of the spray cleaning booths and/or the effectiveness of the years of ground-water recovery and 2-PHASE remedial extraction conducted both inside and outside of the building in this immediate area.

These results and those from previous investigations will be reviewed with EPD to assess if constituents in site soils meet risk-based standards.



## **APPENDIX A**

### **DIRECT-PUSH TECHNOLOGY DRILLING AND SOIL SAMPLING PROCEDURES**

Soil borings were advanced and soil samples collected using direct push technology (DPT) equipment. The concrete slab outside the building and the floor in the building were cored to provide access to drilling. A DPT rig was used to advance soil borings by hammering metal rods through soils with hydraulic rams to selected depths. As the rods are advanced down through the soil, soil samples were collected in discrete intervals, four feet in length, in a metal soil sampling tube lined with a disposable vinyl acetate sleeve. Soil samples were collected on a continuous basis beginning at the ground surface and continuing until groundwater was encountered. After each soil interval was collected, the rods were removed from the borehole and the soil sample encased in the vinyl acetate sleeve was removed from the metal sampling tube. After placing a new vinyl acetate sleeve in the metal sampling tube, the rods were reinserted into the borehole and advanced down through the next four-foot interval of soil.

The vinyl acetate sleeves were labeled with the boring number and sample depth. The ends of the tube were capped with food grade plastic wrap and secured with tape. Holes were drilled into the tube and soil at one foot intervals along the length of the tube. Polyethylene straws will be placed in each hole and a Photoionization Detector (PID) was used to qualitatively screen the soil in the field for volatile organic compounds (VOCs). Upon completion of field screening, the holes were sealed with tape and the sleeves were placed on ice, pending the results of the field screening of all of the soil samples from the boring. The soils were inspected visually for staining or discoloration and noted for the presence of an odor. The lithology of the soil samples were classified in accordance with the Unified Soil Classification System (USCS). The PID was calibrated on a daily basis according to the manufacturer's instructions and documented in the project field book. Soil samples were selected for laboratory analysis based on the field screening results where the PID indicated the most likely presence of VOCs in the soils and on the presence of staining and/or odor. The soil samples were selected from each boring for laboratory analysis after all of the soil samples from that boring had been screened. In the absence of a screening response or the presence of staining and/or an odor, samples were collected from depths of 2, 6 and 10 feet below ground (or slab) surface. Soil not selected for laboratory analysis was placed in a drum pending evaluation for disposal.

Upon completion of soil sampling, the borings were abandoned by filling with bentonite/cement grout. The cored concrete holes were repaired using a non-shrunk grout. The repairs meet the requirements of 40 CFR 264.310(a).

Soil samples for VOC analysis were collected from the disposable sleeve using 5-gram disposable syringes and extruded into pre preserved VOC vials. Additional soil were collected for moisture analysis as required by the VOC analysis. The sample containers and preservatives was supplied by the analyzing laboratory. Field personnel documented the location and depth of the samples, the date and time the samples were obtained, the type of sample, type of preservative, and the site name. This information was collected on field forms. This same information were placed on the sample identification label and affixed to the sample containers. Sample labels were filled out with indelible ink, the samples packaged with ice and shipped under chain-of-custody protocol to the laboratory for analysis (Analytical Environmental Services, Inc. of Atlanta) for 8260B VOCs.

## **APPENDIX B**

### **GROUND-WATER SAMPLING PROGRAM**

Xerox collected ground-water samples from temporary monitoring wells installed at two locations in the former parts washer area and at one location downgradient from the area of the elbow release (Figure 1). The samples were analyzed and reported for 8260B VOCs.

Temporary monitoring wells were installed using DPT equipment. The temporary monitoring wells were installed using ¾-inch diameter PVC well screen and casing, with a 10-foot long pre-pack, 0.010-inch slotted well screen with the sand pack extending 2 feet above the screen interval. A minimum 2-foot bentonite seal were installed above the filter pack and hydrated prior to installing a cement grout seal to land surface. Each temporary monitoring well was developed after installation by surging and pumping until water quality parameters (pH, specific conductance, temperature) had stabilized and relatively clear water was produced, in accordance with the operating procedures and guidance outlined in the USEPA Region 4 Quality System and Technical Procedures guidance documents (USEPA, 2009).

The temporary wells were purged and sampled for VOCs using a peristaltic pump. The collected ground-water samples were placed in an iced container along with a trip blank and shipped under chain-of-custody protocol to Analytical Environmental Services, Inc. for analysis. Upon completion of sampling, the temporary wells were abandoned by pulling the casing and tremie grouting from the bottom to land surface. The cored concrete holes were repaired using a non-shrink grout.

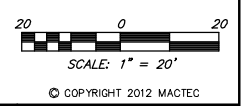
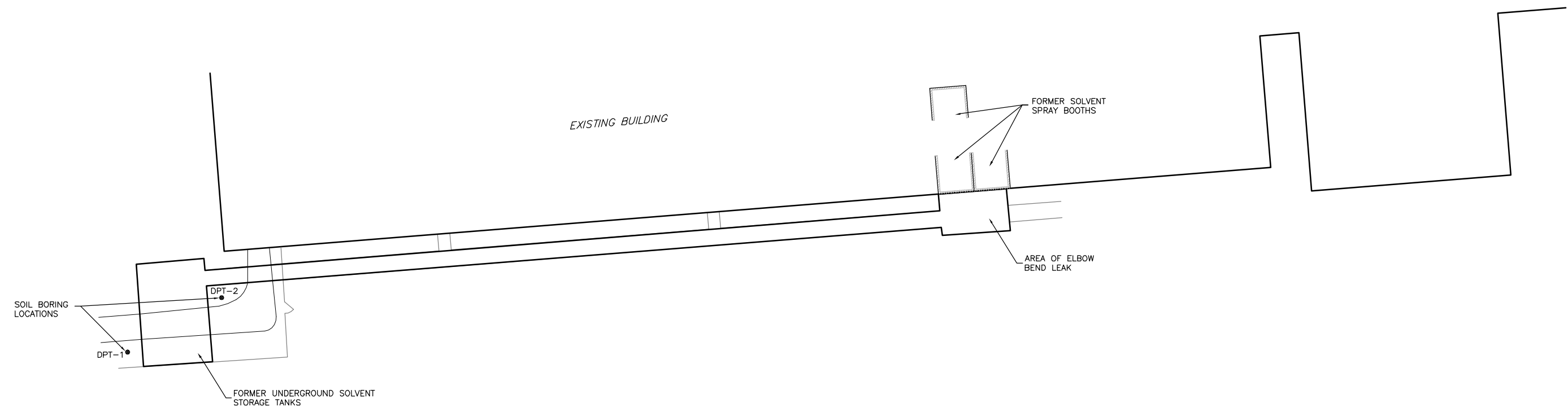
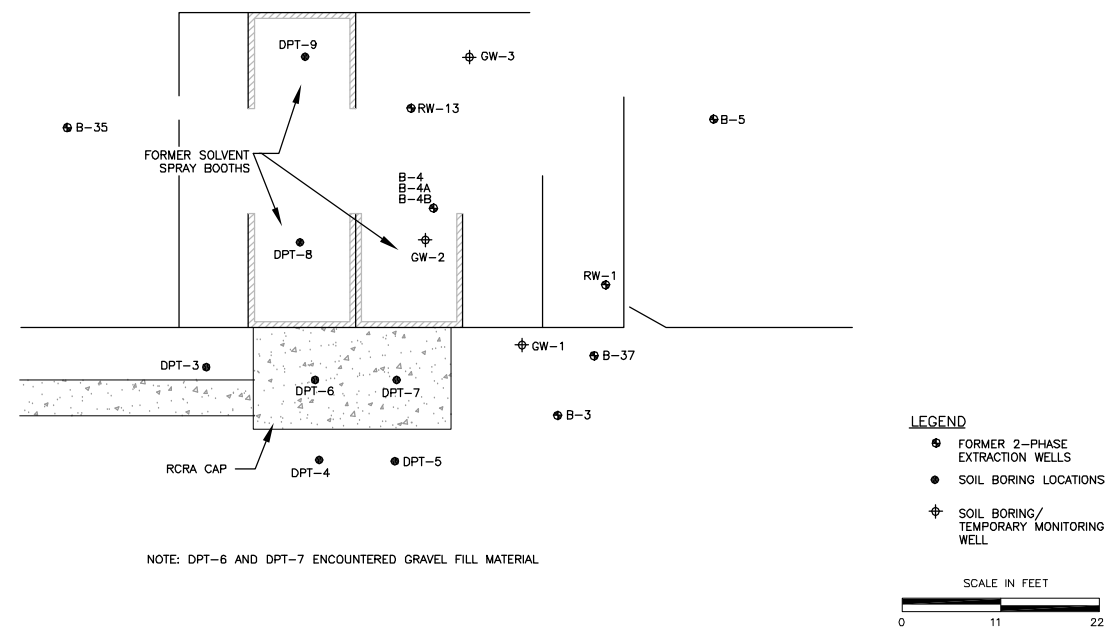
**TABLES**

**TABLE 1**  
**RESULTS OF SUPPLEMENTAL INVESTIGATION**

<b>Soil</b>						
<b>Sampling Location</b>	<b>Analyte</b>					
	<b>PCE (µg/kg)</b>	<b>Reporting Limit</b>	<b>Acetone (µg/kg)</b>	<b>Reporting Limit</b>	<b>Methyl Acetate (µg/kg)</b>	<b>Reporting Limit</b>
DPT-4-2	ND	28	ND	530	100	28
GW-2-10	ND	23	ND	460	680	23
DPT-8-2	37	8.8	450	180	ND	8.8
GW-3-10	ND	8.6	250	170	ND	8.6
DPT-5-10	ND	10	380	200	ND	10

<b>Groundwater</b>				
<b>Well ID</b>	<b>Analyte</b>			
	<b>PCE (µg/L)</b>	<b>Reporting Limit</b>	<b>Chloroform (µg/L)</b>	<b>Reporting Limit</b>
GW-2	11	5.0	ND	5.0
GW-3	180	5.0	8.0	5.0

**FIGURES**



REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED  
 T. GLADSTONE  
 DRAWN  
 CHECKED  
 D. ALCOTT  
 IN CHARGE  
 D. ALCOTT  
 DATE 6/29/2011

**XEROX CORPORATION**  
 6077 FULTON INDUSTRIAL BOULEVARD, FULTON COUNTY, GEORGIA

**MACTEC** MACTEC Engineering and Consulting, Inc.  
 3200 TOWN POINT DRIVE, SUITE 100  
 KENNESAW, GEORGIA 30144 (770) 421-3400

**BORING/ WELL LOCATIONS**

SCALE  
 AS SHOWN

CONTRACT  
**12000-8-0019-2**

DWG. NO. REV. PAGE NO.  
**FIG. 1**

**APPENDIX C**  
**LABORATORY REPORT**





June 23, 2011

David Knaub  
Mactec Engineering and Consulting, Inc.  
3200 Town Point Dr.  
Kennesaw GA 30144

TEL: (770) 421-3400  
FAX: (770) 421-3486

RE: Xerox

Dear David Knaub:

Order No: 1106G32

Analytical Environmental Services, Inc. received 34 samples on 6/17/2011 12:42:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/10-06/30/11.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

James Forrest  
Project Manager







**Client:** Mactec Engineering and Consulting, Inc.  
**Project:** Xerox  
**Lab ID:** 1106G32

**Case Narrative**

Samples 1106G32-006, -007, -022C, -025C, -028C, and -030C were received with an opened methanol vial. New methanol vials were prepared at the lab from the soil jar.

Volatiles Organic Compounds Analysis by Method 8260B:

Due to sample matrix, samples 1106G32-008A, -009A, and -012A required dilution during preparation and/or analysis resulting in elevated reporting limits.

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-1-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 8:45:00 AM
<b>Lab ID:</b> 1106G32-001	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
1,1,2,2-Tetrachloroethane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
1,1,2-Trichloroethane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
1,1-Dichloroethane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
1,1-Dichloroethene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
1,2,4-Trichlorobenzene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
1,2-Dibromo-3-chloropropane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
1,2-Dibromoethane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
1,2-Dichlorobenzene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
1,2-Dichloroethane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
1,2-Dichloropropane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
1,3-Dichlorobenzene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
1,4-Dichlorobenzene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
2-Butanone	BRL	80		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
2-Hexanone	BRL	16		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
4-Methyl-2-pentanone	BRL	16		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Acetone	BRL	160		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Benzene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Bromodichloromethane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Bromoform	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Bromomethane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Carbon disulfide	BRL	16		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Carbon tetrachloride	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Chlorobenzene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Chloroethane	BRL	16		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Chloroform	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Chloromethane	BRL	16		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
cis-1,2-Dichloroethene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
cis-1,3-Dichloropropene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Cyclohexane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Dibromochloromethane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Dichlorodifluoromethane	BRL	16		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Ethylbenzene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Freon-113	BRL	16		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Isopropylbenzene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
m,p-Xylene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Methyl acetate	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Methyl tert-butyl ether	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Methylcyclohexane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Methylene chloride	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
o-Xylene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-1-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 8:45:00 AM
<b>Lab ID:</b> 1106G32-001	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Tetrachloroethene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Toluene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
trans-1,2-Dichloroethene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
trans-1,3-Dichloropropene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Trichloroethene	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Trichlorofluoromethane	BRL	8.0		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Vinyl chloride	BRL	16		ug/Kg-dry	147982	1	06/21/2011 03:11	JE
Surr: 4-Bromofluorobenzene	93.6	56-137		%REC	147982	1	06/21/2011 03:11	JE
Surr: Dibromofluoromethane	93.4	73.7-137		%REC	147982	1	06/21/2011 03:11	JE
Surr: Toluene-d8	100	69.2-126		%REC	147982	1	06/21/2011 03:11	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	15.9	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-1-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 9:25:00 AM
<b>Lab ID:</b> 1106G32-002	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
1,1,2,2-Tetrachloroethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
1,1,2-Trichloroethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
1,1-Dichloroethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
1,1-Dichloroethene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
1,2,4-Trichlorobenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
1,2-Dibromo-3-chloropropane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
1,2-Dibromoethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
1,2-Dichlorobenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
1,2-Dichloroethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
1,2-Dichloropropane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
1,3-Dichlorobenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
1,4-Dichlorobenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
2-Butanone	BRL	100		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
2-Hexanone	BRL	20		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
4-Methyl-2-pentanone	BRL	20		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Acetone	BRL	200		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Benzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Bromodichloromethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Bromoform	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Bromomethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Carbon disulfide	BRL	20		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Carbon tetrachloride	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Chlorobenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Chloroethane	BRL	20		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Chloroform	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Chloromethane	BRL	20		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
cis-1,2-Dichloroethene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
cis-1,3-Dichloropropene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Cyclohexane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Dibromochloromethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Dichlorodifluoromethane	BRL	20		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Ethylbenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Freon-113	BRL	20		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Isopropylbenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
m,p-Xylene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Methyl acetate	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Methyl tert-butyl ether	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Methylcyclohexane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Methylene chloride	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
o-Xylene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit



**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-1-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 9:25:00 AM
<b>Lab ID:</b> 1106G32-002	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Tetrachloroethene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Toluene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
trans-1,2-Dichloroethene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
trans-1,3-Dichloropropene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Trichloroethene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Trichlorofluoromethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Vinyl chloride	BRL	20		ug/Kg-dry	147982	1	06/21/2011 03:37	JE
Surr: 4-Bromofluorobenzene	93.2	56-137		%REC	147982	1	06/21/2011 03:37	JE
Surr: Dibromofluoromethane	97.7	73.7-137		%REC	147982	1	06/21/2011 03:37	JE
Surr: Toluene-d8	99	69.2-126		%REC	147982	1	06/21/2011 03:37	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	14.0	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-1-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 9:33:00 AM
<b>Lab ID:</b> 1106G32-003	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
1,1,2,2-Tetrachloroethane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
1,1,2-Trichloroethane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
1,1-Dichloroethane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
1,1-Dichloroethene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
1,2,4-Trichlorobenzene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
1,2-Dibromo-3-chloropropane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
1,2-Dibromoethane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
1,2-Dichlorobenzene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
1,2-Dichloroethane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
1,2-Dichloropropane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
1,3-Dichlorobenzene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
1,4-Dichlorobenzene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
2-Butanone	BRL	86		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
2-Hexanone	BRL	17		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
4-Methyl-2-pentanone	BRL	17		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Acetone	BRL	170		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Benzene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Bromodichloromethane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Bromoform	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Bromomethane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Carbon disulfide	BRL	17		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Carbon tetrachloride	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Chlorobenzene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Chloroethane	BRL	17		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Chloroform	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Chloromethane	BRL	17		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
cis-1,2-Dichloroethene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
cis-1,3-Dichloropropene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Cyclohexane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Dibromochloromethane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Dichlorodifluoromethane	BRL	17		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Ethylbenzene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Freon-113	BRL	17		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Isopropylbenzene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
m,p-Xylene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Methyl acetate	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Methyl tert-butyl ether	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Methylcyclohexane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Methylene chloride	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
o-Xylene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-1-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 9:33:00 AM
<b>Lab ID:</b> 1106G32-003	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Tetrachloroethene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Toluene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
trans-1,2-Dichloroethene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
trans-1,3-Dichloropropene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Trichloroethene	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Trichlorofluoromethane	BRL	8.6		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Vinyl chloride	BRL	17		ug/Kg-dry	147982	1	06/21/2011 04:02	JE
Surr: 4-Bromofluorobenzene	93.5	56-137		%REC	147982	1	06/21/2011 04:02	JE
Surr: Dibromofluoromethane	97.4	73.7-137		%REC	147982	1	06/21/2011 04:02	JE
Surr: Toluene-d8	98.9	69.2-126		%REC	147982	1	06/21/2011 04:02	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	18.2	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-5-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 11:09:00 AM
<b>Lab ID:</b> 1106G32-004	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
1,1,2,2-Tetrachloroethane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
1,1,2-Trichloroethane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
1,1-Dichloroethane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
1,1-Dichloroethene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
1,2,4-Trichlorobenzene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
1,2-Dibromo-3-chloropropane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
1,2-Dibromoethane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
1,2-Dichlorobenzene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
1,2-Dichloroethane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
1,2-Dichloropropane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
1,3-Dichlorobenzene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
1,4-Dichlorobenzene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
2-Butanone	BRL	88		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
2-Hexanone	BRL	18		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
4-Methyl-2-pentanone	BRL	18		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Acetone	BRL	180		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Benzene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Bromodichloromethane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Bromoform	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Bromomethane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Carbon disulfide	BRL	18		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Carbon tetrachloride	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Chlorobenzene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Chloroethane	BRL	18		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Chloroform	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Chloromethane	BRL	18		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
cis-1,2-Dichloroethene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
cis-1,3-Dichloropropene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Cyclohexane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Dibromochloromethane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Dichlorodifluoromethane	BRL	18		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Ethylbenzene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Freon-113	BRL	18		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Isopropylbenzene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
m,p-Xylene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Methyl acetate	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Methyl tert-butyl ether	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Methylcyclohexane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Methylene chloride	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
o-Xylene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-5-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 11:09:00 AM
<b>Lab ID:</b> 1106G32-004	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Tetrachloroethene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Toluene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
trans-1,2-Dichloroethene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
trans-1,3-Dichloropropene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Trichloroethene	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Trichlorofluoromethane	BRL	8.8		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Vinyl chloride	BRL	18		ug/Kg-dry	147982	1	06/21/2011 04:27	JE
Surr: 4-Bromofluorobenzene	97	56-137		%REC	147982	1	06/21/2011 04:27	JE
Surr: Dibromofluoromethane	101	73.7-137		%REC	147982	1	06/21/2011 04:27	JE
Surr: Toluene-d8	102	69.2-126		%REC	147982	1	06/21/2011 04:27	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	15.9	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-5-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 11:12:00 AM
<b>Lab ID:</b> 1106G32-005	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
1,1,2,2-Tetrachloroethane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
1,1,2-Trichloroethane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
1,1-Dichloroethane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
1,1-Dichloroethene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
1,2,4-Trichlorobenzene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
1,2-Dibromo-3-chloropropane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
1,2-Dibromoethane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
1,2-Dichlorobenzene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
1,2-Dichloroethane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
1,2-Dichloropropane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
1,3-Dichlorobenzene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
1,4-Dichlorobenzene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
2-Butanone	BRL	110		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
2-Hexanone	BRL	22		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
4-Methyl-2-pentanone	BRL	22		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Acetone	BRL	220		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Benzene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Bromodichloromethane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Bromoform	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Bromomethane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Carbon disulfide	BRL	22		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Carbon tetrachloride	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Chlorobenzene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Chloroethane	BRL	22		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Chloroform	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Chloromethane	BRL	22		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
cis-1,2-Dichloroethene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
cis-1,3-Dichloropropene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Cyclohexane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Dibromochloromethane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Dichlorodifluoromethane	BRL	22		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Ethylbenzene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Freon-113	BRL	22		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Isopropylbenzene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
m,p-Xylene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Methyl acetate	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Methyl tert-butyl ether	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Methylcyclohexane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Methylene chloride	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
o-Xylene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-5-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 11:12:00 AM
<b>Lab ID:</b> 1106G32-005	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Tetrachloroethene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Toluene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
trans-1,2-Dichloroethene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
trans-1,3-Dichloropropene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Trichloroethene	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Trichlorofluoromethane	BRL	11		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Vinyl chloride	BRL	22		ug/Kg-dry	147982	1	06/21/2011 04:52	JE
Surr: 4-Bromofluorobenzene	95.8	56-137		%REC	147982	1	06/21/2011 04:52	JE
Surr: Dibromofluoromethane	95.6	73.7-137		%REC	147982	1	06/21/2011 04:52	JE
Surr: Toluene-d8	98.7	69.2-126		%REC	147982	1	06/21/2011 04:52	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	22.5	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-5-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 11:16:00 AM
<b>Lab ID:</b> 1106G32-006	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
1,1,2,2-Tetrachloroethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
1,1,2-Trichloroethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
1,1-Dichloroethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
1,1-Dichloroethene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
1,2,4-Trichlorobenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
1,2-Dibromo-3-chloropropane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
1,2-Dibromoethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
1,2-Dichlorobenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
1,2-Dichloroethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
1,2-Dichloropropane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
1,3-Dichlorobenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
1,4-Dichlorobenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
2-Butanone	BRL	100		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
2-Hexanone	BRL	20		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
4-Methyl-2-pentanone	BRL	20		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Acetone	380	200		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Benzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Bromodichloromethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Bromoform	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Bromomethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Carbon disulfide	BRL	20		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Carbon tetrachloride	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Chlorobenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Chloroethane	BRL	20		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Chloroform	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Chloromethane	BRL	20		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
cis-1,2-Dichloroethene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
cis-1,3-Dichloropropene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Cyclohexane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Dibromochloromethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Dichlorodifluoromethane	BRL	20		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Ethylbenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Freon-113	BRL	20		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Isopropylbenzene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
m,p-Xylene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Methyl acetate	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Methyl tert-butyl ether	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Methylcyclohexane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Methylene chloride	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
o-Xylene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit



**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-5-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 11:16:00 AM
<b>Lab ID:</b> 1106G32-006	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Tetrachloroethene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Toluene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
trans-1,2-Dichloroethene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
trans-1,3-Dichloropropene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Trichloroethene	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Trichlorofluoromethane	BRL	10		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Vinyl chloride	BRL	20		ug/Kg-dry	147982	1	06/21/2011 05:18	JE
Surr: 4-Bromofluorobenzene	97.5	56-137		%REC	147982	1	06/21/2011 05:18	JE
Surr: Dibromofluoromethane	91.1	73.7-137		%REC	147982	1	06/21/2011 05:18	JE
Surr: Toluene-d8	99	69.2-126		%REC	147982	1	06/21/2011 05:18	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	15.8	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-4-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 12:47:00 PM
<b>Lab ID:</b> 1106G32-007	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
1,1,2,2-Tetrachloroethane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
1,1,2-Trichloroethane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
1,1-Dichloroethane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
1,1-Dichloroethene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
1,2,4-Trichlorobenzene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
1,2-Dibromo-3-chloropropane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
1,2-Dibromoethane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
1,2-Dichlorobenzene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
1,2-Dichloroethane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
1,2-Dichloropropane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
1,3-Dichlorobenzene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
1,4-Dichlorobenzene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
2-Butanone	BRL	280		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
2-Hexanone	BRL	55		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
4-Methyl-2-pentanone	BRL	55		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Acetone	BRL	550		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Benzene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Bromodichloromethane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Bromoform	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Bromomethane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Carbon disulfide	BRL	55		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Carbon tetrachloride	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Chlorobenzene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Chloroethane	BRL	55		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Chloroform	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Chloromethane	BRL	55		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
cis-1,2-Dichloroethene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
cis-1,3-Dichloropropene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Cyclohexane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Dibromochloromethane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Dichlorodifluoromethane	BRL	55		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Ethylbenzene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Freon-113	BRL	55		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Isopropylbenzene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
m,p-Xylene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Methyl acetate	100	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Methyl tert-butyl ether	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Methylcyclohexane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Methylene chloride	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
o-Xylene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-4-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 12:47:00 PM
<b>Lab ID:</b> 1106G32-007	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>				<b>(SW5035)</b>				
Styrene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Tetrachloroethene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Toluene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
trans-1,2-Dichloroethene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
trans-1,3-Dichloropropene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Trichloroethene	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Trichlorofluoromethane	BRL	28		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Vinyl chloride	BRL	55		ug/Kg-dry	147982	1	06/21/2011 05:43	JE
Surr: 4-Bromofluorobenzene	90.5	56-137		%REC	147982	1	06/21/2011 05:43	JE
Surr: Dibromofluoromethane	84.9	73.7-137		%REC	147982	1	06/21/2011 05:43	JE
Surr: Toluene-d8	95.7	69.2-126		%REC	147982	1	06/21/2011 05:43	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	14.8	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-4-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 12:50:00 PM
<b>Lab ID:</b> 1106G32-008	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
1,1,2,2-Tetrachloroethane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
1,1,2-Trichloroethane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
1,1-Dichloroethane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
1,1-Dichloroethene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
1,2,4-Trichlorobenzene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
1,2-Dibromo-3-chloropropane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
1,2-Dibromoethane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
1,2-Dichlorobenzene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
1,2-Dichloroethane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
1,2-Dichloropropane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
1,3-Dichlorobenzene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
1,4-Dichlorobenzene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
2-Butanone	BRL	4600		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
2-Hexanone	BRL	920		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
4-Methyl-2-pentanone	BRL	920		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Acetone	BRL	9200		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Benzene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Bromodichloromethane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Bromoform	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Bromomethane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Carbon disulfide	BRL	920		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Carbon tetrachloride	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Chlorobenzene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Chloroethane	BRL	920		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Chloroform	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Chloromethane	BRL	920		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
cis-1,2-Dichloroethene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
cis-1,3-Dichloropropene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Cyclohexane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Dibromochloromethane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Dichlorodifluoromethane	BRL	920		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Ethylbenzene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Freon-113	BRL	920		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Isopropylbenzene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
m,p-Xylene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Methyl acetate	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Methyl tert-butyl ether	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Methylcyclohexane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Methylene chloride	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
o-Xylene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-4-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 12:50:00 PM
<b>Lab ID:</b> 1106G32-008	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Tetrachloroethene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Toluene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
trans-1,2-Dichloroethene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
trans-1,3-Dichloropropene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Trichloroethene	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Trichlorofluoromethane	BRL	460		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Vinyl chloride	BRL	920		ug/Kg-dry	147921	50	06/23/2011 12:49	MC
Surr: 4-Bromofluorobenzene	89	56-137		%REC	147921	50	06/23/2011 12:49	MC
Surr: Dibromofluoromethane	94.9	73.7-137		%REC	147921	50	06/23/2011 12:49	MC
Surr: Toluene-d8	104	69.2-126		%REC	147921	50	06/23/2011 12:49	MC
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	16.6	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-4-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 12:53:00 PM
<b>Lab ID:</b> 1106G32-009	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
1,1,2,2-Tetrachloroethane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
1,1,2-Trichloroethane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
1,1-Dichloroethane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
1,1-Dichloroethene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
1,2,4-Trichlorobenzene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
1,2-Dibromo-3-chloropropane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
1,2-Dibromoethane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
1,2-Dichlorobenzene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
1,2-Dichloroethane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
1,2-Dichloropropane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
1,3-Dichlorobenzene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
1,4-Dichlorobenzene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
2-Butanone	BRL	4900		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
2-Hexanone	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
4-Methyl-2-pentanone	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Acetone	BRL	9700		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Benzene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Bromodichloromethane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Bromoform	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Bromomethane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Carbon disulfide	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Carbon tetrachloride	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Chlorobenzene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Chloroethane	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Chloroform	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Chloromethane	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
cis-1,2-Dichloroethene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
cis-1,3-Dichloropropene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Cyclohexane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Dibromochloromethane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Dichlorodifluoromethane	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Ethylbenzene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Freon-113	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Isopropylbenzene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
m,p-Xylene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Methyl acetate	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Methyl tert-butyl ether	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Methylcyclohexane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Methylene chloride	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
o-Xylene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-4-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 12:53:00 PM
<b>Lab ID:</b> 1106G32-009	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Tetrachloroethene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Toluene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
trans-1,2-Dichloroethene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
trans-1,3-Dichloropropene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Trichloroethene	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Trichlorofluoromethane	BRL	490		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Vinyl chloride	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:12	MC
Surr: 4-Bromofluorobenzene	90.5	56-137		%REC	147921	50	06/23/2011 14:12	MC
Surr: Dibromofluoromethane	92.3	73.7-137		%REC	147921	50	06/23/2011 14:12	MC
Surr: Toluene-d8	101	69.2-126		%REC	147921	50	06/23/2011 14:12	MC
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	18.4	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-3-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 1:22:00 PM
<b>Lab ID:</b> 1106G32-010	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
1,1,2,2-Tetrachloroethane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
1,1,2-Trichloroethane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
1,1-Dichloroethane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
1,1-Dichloroethene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
1,2,4-Trichlorobenzene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
1,2-Dibromo-3-chloropropane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
1,2-Dibromoethane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
1,2-Dichlorobenzene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
1,2-Dichloroethane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
1,2-Dichloropropane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
1,3-Dichlorobenzene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
1,4-Dichlorobenzene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
2-Butanone	BRL	100		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
2-Hexanone	BRL	20		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
4-Methyl-2-pentanone	BRL	20		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Acetone	BRL	200		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Benzene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Bromodichloromethane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Bromoform	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Bromomethane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Carbon disulfide	BRL	20		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Carbon tetrachloride	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Chlorobenzene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Chloroethane	BRL	20		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Chloroform	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Chloromethane	BRL	20		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
cis-1,2-Dichloroethene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
cis-1,3-Dichloropropene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Cyclohexane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Dibromochloromethane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Dichlorodifluoromethane	BRL	20		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Ethylbenzene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Freon-113	BRL	20		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Isopropylbenzene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
m,p-Xylene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Methyl acetate	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Methyl tert-butyl ether	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Methylcyclohexane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Methylene chloride	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
o-Xylene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit



**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-3-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 1:22:00 PM
<b>Lab ID:</b> 1106G32-010	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Tetrachloroethene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Toluene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
trans-1,2-Dichloroethene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
trans-1,3-Dichloropropene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Trichloroethene	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Trichlorofluoromethane	BRL	10		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Vinyl chloride	BRL	20		ug/Kg-dry	148072	1	06/21/2011 14:35	JE
Surr: 4-Bromofluorobenzene	93.4	56-137		%REC	148072	1	06/21/2011 14:35	JE
Surr: Dibromofluoromethane	99.6	73.7-137		%REC	148072	1	06/21/2011 14:35	JE
Surr: Toluene-d8	102	69.2-126		%REC	148072	1	06/21/2011 14:35	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	10.8	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-3-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 1:25:00 PM
<b>Lab ID:</b> 1106G32-011	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
1,1,2,2-Tetrachloroethane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
1,1,2-Trichloroethane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
1,1-Dichloroethane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
1,1-Dichloroethene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
1,2,4-Trichlorobenzene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
1,2-Dibromo-3-chloropropane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
1,2-Dibromoethane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
1,2-Dichlorobenzene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
1,2-Dichloroethane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
1,2-Dichloropropane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
1,3-Dichlorobenzene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
1,4-Dichlorobenzene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
2-Butanone	BRL	90		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
2-Hexanone	BRL	18		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
4-Methyl-2-pentanone	BRL	18		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Acetone	BRL	180		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Benzene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Bromodichloromethane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Bromoform	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Bromomethane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Carbon disulfide	BRL	18		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Carbon tetrachloride	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Chlorobenzene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Chloroethane	BRL	18		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Chloroform	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Chloromethane	BRL	18		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
cis-1,2-Dichloroethene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
cis-1,3-Dichloropropene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Cyclohexane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Dibromochloromethane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Dichlorodifluoromethane	BRL	18		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Ethylbenzene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Freon-113	BRL	18		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Isopropylbenzene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
m,p-Xylene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Methyl acetate	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Methyl tert-butyl ether	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Methylcyclohexane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Methylene chloride	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
o-Xylene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-3-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 1:25:00 PM
<b>Lab ID:</b> 1106G32-011	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Tetrachloroethene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Toluene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
trans-1,2-Dichloroethene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
trans-1,3-Dichloropropene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Trichloroethene	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Trichlorofluoromethane	BRL	9.0		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Vinyl chloride	BRL	18		ug/Kg-dry	148072	1	06/23/2011 11:56	JE
Surr: 4-Bromofluorobenzene	88.1	56-137		%REC	148072	1	06/23/2011 11:56	JE
Surr: Dibromofluoromethane	92.8	73.7-137		%REC	148072	1	06/23/2011 11:56	JE
Surr: Toluene-d8	95.4	69.2-126		%REC	148072	1	06/23/2011 11:56	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	16.1	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-3-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 1:30:00 PM
<b>Lab ID:</b> 1106G32-012	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
1,1,2,2-Tetrachloroethane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
1,1,2-Trichloroethane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
1,1-Dichloroethane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
1,1-Dichloroethene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
1,2,4-Trichlorobenzene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
1,2-Dibromo-3-chloropropane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
1,2-Dibromoethane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
1,2-Dichlorobenzene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
1,2-Dichloroethane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
1,2-Dichloropropane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
1,3-Dichlorobenzene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
1,4-Dichlorobenzene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
2-Butanone	BRL	4800		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
2-Hexanone	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
4-Methyl-2-pentanone	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Acetone	BRL	9700		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Benzene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Bromodichloromethane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Bromoform	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Bromomethane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Carbon disulfide	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Carbon tetrachloride	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Chlorobenzene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Chloroethane	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Chloroform	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Chloromethane	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
cis-1,2-Dichloroethene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
cis-1,3-Dichloropropene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Cyclohexane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Dibromochloromethane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Dichlorodifluoromethane	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Ethylbenzene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Freon-113	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Isopropylbenzene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
m,p-Xylene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Methyl acetate	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Methyl tert-butyl ether	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Methylcyclohexane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Methylene chloride	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
o-Xylene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-3-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 1:30:00 PM
<b>Lab ID:</b> 1106G32-012	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Tetrachloroethene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Toluene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
trans-1,2-Dichloroethene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
trans-1,3-Dichloropropene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Trichloroethene	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Trichlorofluoromethane	BRL	480		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Vinyl chloride	BRL	970		ug/Kg-dry	147921	50	06/23/2011 14:39	MC
Surr: 4-Bromofluorobenzene	89.1	56-137		%REC	147921	50	06/23/2011 14:39	MC
Surr: Dibromofluoromethane	93.2	73.7-137		%REC	147921	50	06/23/2011 14:39	MC
Surr: Toluene-d8	104	69.2-126		%REC	147921	50	06/23/2011 14:39	MC
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	20.0	0		wt%	R199744	1	06/22/2011 16:30	AS

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-2-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 2:00:00 PM
<b>Lab ID:</b> 1106G32-013	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
1,1,2,2-Tetrachloroethane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
1,1,2-Trichloroethane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
1,1-Dichloroethane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
1,1-Dichloroethene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
1,2,4-Trichlorobenzene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
1,2-Dibromo-3-chloropropane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
1,2-Dibromoethane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
1,2-Dichlorobenzene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
1,2-Dichloroethane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
1,2-Dichloropropane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
1,3-Dichlorobenzene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
1,4-Dichlorobenzene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
2-Butanone	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
2-Hexanone	BRL	16		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
4-Methyl-2-pentanone	BRL	16		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Acetone	BRL	160		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Benzene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Bromodichloromethane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Bromoform	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Bromomethane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Carbon disulfide	BRL	16		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Carbon tetrachloride	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Chlorobenzene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Chloroethane	BRL	16		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Chloroform	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Chloromethane	BRL	16		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
cis-1,2-Dichloroethene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
cis-1,3-Dichloropropene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Cyclohexane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Dibromochloromethane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Dichlorodifluoromethane	BRL	16		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Ethylbenzene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Freon-113	BRL	16		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Isopropylbenzene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
m,p-Xylene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Methyl acetate	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Methyl tert-butyl ether	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Methylcyclohexane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Methylene chloride	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
o-Xylene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-2-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 2:00:00 PM
<b>Lab ID:</b> 1106G32-013	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Tetrachloroethene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Toluene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
trans-1,2-Dichloroethene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
trans-1,3-Dichloropropene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Trichloroethene	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Trichlorofluoromethane	BRL	7.9		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Vinyl chloride	BRL	16		ug/Kg-dry	148072	1	06/21/2011 17:53	JE
Surr: 4-Bromofluorobenzene	92.8	56-137		%REC	148072	1	06/21/2011 17:53	JE
Surr: Dibromofluoromethane	98.8	73.7-137		%REC	148072	1	06/21/2011 17:53	JE
Surr: Toluene-d8	103	69.2-126		%REC	148072	1	06/21/2011 17:53	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	7.43	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-2-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 2:03:00 PM
<b>Lab ID:</b> 1106G32-014	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
1,1,2,2-Tetrachloroethane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
1,1,2-Trichloroethane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
1,1-Dichloroethane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
1,1-Dichloroethene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
1,2,4-Trichlorobenzene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
1,2-Dibromo-3-chloropropane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
1,2-Dibromoethane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
1,2-Dichlorobenzene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
1,2-Dichloroethane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
1,2-Dichloropropane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
1,3-Dichlorobenzene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
1,4-Dichlorobenzene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
2-Butanone	BRL	98		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
2-Hexanone	BRL	20		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
4-Methyl-2-pentanone	BRL	20		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Acetone	BRL	200		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Benzene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Bromodichloromethane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Bromoform	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Bromomethane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Carbon disulfide	BRL	20		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Carbon tetrachloride	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Chlorobenzene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Chloroethane	BRL	20		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Chloroform	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Chloromethane	BRL	20		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
cis-1,2-Dichloroethene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
cis-1,3-Dichloropropene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Cyclohexane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Dibromochloromethane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Dichlorodifluoromethane	BRL	20		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Ethylbenzene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Freon-113	BRL	20		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Isopropylbenzene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
m,p-Xylene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Methyl acetate	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Methyl tert-butyl ether	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Methylcyclohexane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Methylene chloride	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
o-Xylene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit



**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-2-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 2:03:00 PM
<b>Lab ID:</b> 1106G32-014	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>				<b>(SW5035)</b>				
Styrene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Tetrachloroethene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Toluene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
trans-1,2-Dichloroethene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
trans-1,3-Dichloropropene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Trichloroethene	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Trichlorofluoromethane	BRL	9.8		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Vinyl chloride	BRL	20		ug/Kg-dry	148072	1	06/21/2011 18:19	JE
Surr: 4-Bromofluorobenzene	92.5	56-137		%REC	148072	1	06/21/2011 18:19	JE
Surr: Dibromofluoromethane	95.2	73.7-137		%REC	148072	1	06/21/2011 18:19	JE
Surr: Toluene-d8	99.7	69.2-126		%REC	148072	1	06/21/2011 18:19	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	10.9	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

Date: 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-2-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 2:09:00 PM
<b>Lab ID:</b> 1106G32-015	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
1,1,2,2-Tetrachloroethane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
1,1,2-Trichloroethane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
1,1-Dichloroethane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
1,1-Dichloroethene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
1,2,4-Trichlorobenzene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
1,2-Dibromo-3-chloropropane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
1,2-Dibromoethane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
1,2-Dichlorobenzene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
1,2-Dichloroethane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
1,2-Dichloropropane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
1,3-Dichlorobenzene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
1,4-Dichlorobenzene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
2-Butanone	BRL	87		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
2-Hexanone	BRL	17		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
4-Methyl-2-pentanone	BRL	17		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Acetone	BRL	170		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Benzene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Bromodichloromethane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Bromoform	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Bromomethane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Carbon disulfide	BRL	17		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Carbon tetrachloride	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Chlorobenzene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Chloroethane	BRL	17		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Chloroform	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Chloromethane	BRL	17		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
cis-1,2-Dichloroethene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
cis-1,3-Dichloropropene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Cyclohexane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Dibromochloromethane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Dichlorodifluoromethane	BRL	17		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Ethylbenzene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Freon-113	BRL	17		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Isopropylbenzene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
m,p-Xylene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Methyl acetate	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Methyl tert-butyl ether	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Methylcyclohexane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Methylene chloride	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
o-Xylene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-2-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 2:09:00 PM
<b>Lab ID:</b> 1106G32-015	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>				<b>(SW5035)</b>				
Styrene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Tetrachloroethene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Toluene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
trans-1,2-Dichloroethene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
trans-1,3-Dichloropropene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Trichloroethene	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Trichlorofluoromethane	BRL	8.7		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Vinyl chloride	BRL	17		ug/Kg-dry	148072	1	06/21/2011 18:44	JE
Surr: 4-Bromofluorobenzene	91.6	56-137		%REC	148072	1	06/21/2011 18:44	JE
Surr: Dibromofluoromethane	95.1	73.7-137		%REC	148072	1	06/21/2011 18:44	JE
Surr: Toluene-d8	98.1	69.2-126		%REC	148072	1	06/21/2011 18:44	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	16.5	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-1-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 2:38:00 PM
<b>Lab ID:</b> 1106G32-016	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
1,1,2,2-Tetrachloroethane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
1,1,2-Trichloroethane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
1,1-Dichloroethane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
1,1-Dichloroethene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
1,2,4-Trichlorobenzene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
1,2-Dibromo-3-chloropropane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
1,2-Dibromoethane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
1,2-Dichlorobenzene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
1,2-Dichloroethane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
1,2-Dichloropropane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
1,3-Dichlorobenzene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
1,4-Dichlorobenzene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
2-Butanone	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
2-Hexanone	BRL	15		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
4-Methyl-2-pentanone	BRL	15		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Acetone	BRL	150		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Benzene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Bromodichloromethane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Bromoform	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Bromomethane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Carbon disulfide	BRL	15		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Carbon tetrachloride	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Chlorobenzene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Chloroethane	BRL	15		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Chloroform	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Chloromethane	BRL	15		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
cis-1,2-Dichloroethene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
cis-1,3-Dichloropropene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Cyclohexane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Dibromochloromethane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Dichlorodifluoromethane	BRL	15		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Ethylbenzene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Freon-113	BRL	15		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Isopropylbenzene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
m,p-Xylene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Methyl acetate	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Methyl tert-butyl ether	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Methylcyclohexane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Methylene chloride	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
o-Xylene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-1-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 2:38:00 PM
<b>Lab ID:</b> 1106G32-016	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Tetrachloroethene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Toluene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
trans-1,2-Dichloroethene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
trans-1,3-Dichloropropene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Trichloroethene	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Trichlorofluoromethane	BRL	7.6		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Vinyl chloride	BRL	15		ug/Kg-dry	148072	1	06/23/2011 12:49	JE
Surr: 4-Bromofluorobenzene	89.1	56-137		%REC	148072	1	06/23/2011 12:49	JE
Surr: Dibromofluoromethane	88.5	73.7-137		%REC	148072	1	06/23/2011 12:49	JE
Surr: Toluene-d8	95.6	69.2-126		%REC	148072	1	06/23/2011 12:49	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	6.80	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-1-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 2:42:00 PM
<b>Lab ID:</b> 1106G32-017	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
1,1,2,2-Tetrachloroethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
1,1,2-Trichloroethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
1,1-Dichloroethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
1,1-Dichloroethene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
1,2,4-Trichlorobenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
1,2-Dibromo-3-chloropropane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
1,2-Dibromoethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
1,2-Dichlorobenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
1,2-Dichloroethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
1,2-Dichloropropane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
1,3-Dichlorobenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
1,4-Dichlorobenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
2-Butanone	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
2-Hexanone	BRL	18		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
4-Methyl-2-pentanone	BRL	18		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Acetone	BRL	180		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Benzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Bromodichloromethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Bromoform	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Bromomethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Carbon disulfide	BRL	18		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Carbon tetrachloride	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Chlorobenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Chloroethane	BRL	18		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Chloroform	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Chloromethane	BRL	18		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
cis-1,2-Dichloroethene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
cis-1,3-Dichloropropene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Cyclohexane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Dibromochloromethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Dichlorodifluoromethane	BRL	18		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Ethylbenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Freon-113	BRL	18		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Isopropylbenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
m,p-Xylene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Methyl acetate	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Methyl tert-butyl ether	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Methylcyclohexane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Methylene chloride	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
o-Xylene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-1-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 2:42:00 PM
<b>Lab ID:</b> 1106G32-017	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Tetrachloroethene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Toluene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
trans-1,2-Dichloroethene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
trans-1,3-Dichloropropene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Trichloroethene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Trichlorofluoromethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Vinyl chloride	BRL	18		ug/Kg-dry	148072	1	06/21/2011 19:35	JE
Surr: 4-Bromofluorobenzene	93.3	56-137		%REC	148072	1	06/21/2011 19:35	JE
Surr: Dibromofluoromethane	93.9	73.7-137		%REC	148072	1	06/21/2011 19:35	JE
Surr: Toluene-d8	100	69.2-126		%REC	148072	1	06/21/2011 19:35	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	13.6	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-1-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 2:46:00 PM
<b>Lab ID:</b> 1106G32-018	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
1,1,2,2-Tetrachloroethane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
1,1,2-Trichloroethane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
1,1-Dichloroethane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
1,1-Dichloroethene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
1,2,4-Trichlorobenzene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
1,2-Dibromo-3-chloropropane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
1,2-Dibromoethane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
1,2-Dichlorobenzene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
1,2-Dichloroethane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
1,2-Dichloropropane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
1,3-Dichlorobenzene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
1,4-Dichlorobenzene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
2-Butanone	BRL	91		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
2-Hexanone	BRL	18		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
4-Methyl-2-pentanone	BRL	18		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Acetone	BRL	180		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Benzene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Bromodichloromethane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Bromoform	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Bromomethane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Carbon disulfide	BRL	18		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Carbon tetrachloride	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Chlorobenzene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Chloroethane	BRL	18		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Chloroform	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Chloromethane	BRL	18		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
cis-1,2-Dichloroethene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
cis-1,3-Dichloropropene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Cyclohexane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Dibromochloromethane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Dichlorodifluoromethane	BRL	18		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Ethylbenzene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Freon-113	BRL	18		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Isopropylbenzene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
m,p-Xylene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Methyl acetate	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Methyl tert-butyl ether	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Methylcyclohexane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Methylene chloride	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
o-Xylene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit



**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-1-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/14/2011 2:46:00 PM
<b>Lab ID:</b> 1106G32-018	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Tetrachloroethene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Toluene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
trans-1,2-Dichloroethene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
trans-1,3-Dichloropropene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Trichloroethene	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Trichlorofluoromethane	BRL	9.1		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Vinyl chloride	BRL	18		ug/Kg-dry	148072	1	06/23/2011 13:14	JE
Surr: 4-Bromofluorobenzene	88.5	56-137		%REC	148072	1	06/23/2011 13:14	JE
Surr: Dibromofluoromethane	90.4	73.7-137		%REC	148072	1	06/23/2011 13:14	JE
Surr: Toluene-d8	99.4	69.2-126		%REC	148072	1	06/23/2011 13:14	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	25.4	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-2-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 8:27:00 AM
<b>Lab ID:</b> 1106G32-019	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
1,1,2,2-Tetrachloroethane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
1,1,2-Trichloroethane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
1,1-Dichloroethane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
1,1-Dichloroethene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
1,2,4-Trichlorobenzene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
1,2-Dibromo-3-chloropropane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
1,2-Dibromoethane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
1,2-Dichlorobenzene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
1,2-Dichloroethane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
1,2-Dichloropropane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
1,3-Dichlorobenzene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
1,4-Dichlorobenzene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
2-Butanone	BRL	85		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
2-Hexanone	BRL	17		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
4-Methyl-2-pentanone	BRL	17		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Acetone	BRL	170		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Benzene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Bromodichloromethane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Bromoform	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Bromomethane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Carbon disulfide	BRL	17		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Carbon tetrachloride	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Chlorobenzene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Chloroethane	BRL	17		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Chloroform	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Chloromethane	BRL	17		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
cis-1,2-Dichloroethene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
cis-1,3-Dichloropropene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Cyclohexane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Dibromochloromethane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Dichlorodifluoromethane	BRL	17		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Ethylbenzene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Freon-113	BRL	17		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Isopropylbenzene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
m,p-Xylene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Methyl acetate	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Methyl tert-butyl ether	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Methylcyclohexane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Methylene chloride	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
o-Xylene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-2-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 8:27:00 AM
<b>Lab ID:</b> 1106G32-019	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Tetrachloroethene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Toluene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
trans-1,2-Dichloroethene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
trans-1,3-Dichloropropene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Trichloroethene	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Trichlorofluoromethane	BRL	8.5		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Vinyl chloride	BRL	17		ug/Kg-dry	148072	1	06/23/2011 13:40	JE
Surr: 4-Bromofluorobenzene	87.8	56-137		%REC	148072	1	06/23/2011 13:40	JE
Surr: Dibromofluoromethane	93.1	73.7-137		%REC	148072	1	06/23/2011 13:40	JE
Surr: Toluene-d8	99	69.2-126		%REC	148072	1	06/23/2011 13:40	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	14.3	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-2-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 8:30:00 AM
<b>Lab ID:</b> 1106G32-020	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
1,1,2,2-Tetrachloroethane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
1,1,2-Trichloroethane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
1,1-Dichloroethane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
1,1-Dichloroethene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
1,2,4-Trichlorobenzene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
1,2-Dibromo-3-chloropropane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
1,2-Dibromoethane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
1,2-Dichlorobenzene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
1,2-Dichloroethane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
1,2-Dichloropropane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
1,3-Dichlorobenzene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
1,4-Dichlorobenzene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
2-Butanone	BRL	140		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
2-Hexanone	BRL	29		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
4-Methyl-2-pentanone	BRL	29		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Acetone	BRL	290		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Benzene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Bromodichloromethane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Bromoform	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Bromomethane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Carbon disulfide	BRL	29		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Carbon tetrachloride	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Chlorobenzene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Chloroethane	BRL	29		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Chloroform	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Chloromethane	BRL	29		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
cis-1,2-Dichloroethene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
cis-1,3-Dichloropropene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Cyclohexane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Dibromochloromethane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Dichlorodifluoromethane	BRL	29		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Ethylbenzene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Freon-113	BRL	29		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Isopropylbenzene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
m,p-Xylene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Methyl acetate	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Methyl tert-butyl ether	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Methylcyclohexane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Methylene chloride	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
o-Xylene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-2-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 8:30:00 AM
<b>Lab ID:</b> 1106G32-020	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Tetrachloroethene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Toluene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
trans-1,2-Dichloroethene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
trans-1,3-Dichloropropene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Trichloroethene	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Trichlorofluoromethane	BRL	14		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Vinyl chloride	BRL	29		ug/Kg-dry	148072	1	06/23/2011 14:05	JE
Surr: 4-Bromofluorobenzene	90.9	56-137		%REC	148072	1	06/23/2011 14:05	JE
Surr: Dibromofluoromethane	94.2	73.7-137		%REC	148072	1	06/23/2011 14:05	JE
Surr: Toluene-d8	98.6	69.2-126		%REC	148072	1	06/23/2011 14:05	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	15.9	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-2-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 8:34:00 AM
<b>Lab ID:</b> 1106G32-021	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
1,1,2,2-Tetrachloroethane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
1,1,2-Trichloroethane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
1,1-Dichloroethane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
1,1-Dichloroethene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
1,2,4-Trichlorobenzene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
1,2-Dibromo-3-chloropropane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
1,2-Dibromoethane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
1,2-Dichlorobenzene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
1,2-Dichloroethane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
1,2-Dichloropropane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
1,3-Dichlorobenzene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
1,4-Dichlorobenzene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
2-Butanone	BRL	230		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
2-Hexanone	BRL	46		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
4-Methyl-2-pentanone	BRL	46		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Acetone	BRL	460		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Benzene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Bromodichloromethane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Bromoform	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Bromomethane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Carbon disulfide	BRL	46		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Carbon tetrachloride	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Chlorobenzene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Chloroethane	BRL	46		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Chloroform	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Chloromethane	BRL	46		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
cis-1,2-Dichloroethene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
cis-1,3-Dichloropropene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Cyclohexane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Dibromochloromethane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Dichlorodifluoromethane	BRL	46		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Ethylbenzene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Freon-113	BRL	46		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Isopropylbenzene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
m,p-Xylene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Methyl acetate	680	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Methyl tert-butyl ether	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Methylcyclohexane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Methylene chloride	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
o-Xylene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-2-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 8:34:00 AM
<b>Lab ID:</b> 1106G32-021	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Tetrachloroethene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Toluene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
trans-1,2-Dichloroethene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
trans-1,3-Dichloropropene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Trichloroethene	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Trichlorofluoromethane	BRL	23		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Vinyl chloride	BRL	46		ug/Kg-dry	148072	1	06/21/2011 21:42	JE
Surr: 4-Bromofluorobenzene	87.7	56-137		%REC	148072	1	06/21/2011 21:42	JE
Surr: Dibromofluoromethane	88.6	73.7-137		%REC	148072	1	06/21/2011 21:42	JE
Surr: Toluene-d8	99.7	69.2-126		%REC	148072	1	06/21/2011 21:42	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	15.5	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-8-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 9:27:00 AM
<b>Lab ID:</b> 1106G32-022	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
1,1,2,2-Tetrachloroethane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
1,1,2-Trichloroethane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
1,1-Dichloroethane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
1,1-Dichloroethene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
1,2,4-Trichlorobenzene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
1,2-Dibromo-3-chloropropane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
1,2-Dibromoethane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
1,2-Dichlorobenzene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
1,2-Dichloroethane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
1,2-Dichloropropane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
1,3-Dichlorobenzene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
1,4-Dichlorobenzene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
2-Butanone	BRL	88		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
2-Hexanone	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
4-Methyl-2-pentanone	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Acetone	450	180		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Benzene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Bromodichloromethane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Bromoform	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Bromomethane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Carbon disulfide	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Carbon tetrachloride	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Chlorobenzene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Chloroethane	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Chloroform	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Chloromethane	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
cis-1,2-Dichloroethene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
cis-1,3-Dichloropropene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Cyclohexane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Dibromochloromethane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Dichlorodifluoromethane	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Ethylbenzene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Freon-113	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Isopropylbenzene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
m,p-Xylene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Methyl acetate	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Methyl tert-butyl ether	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Methylcyclohexane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Methylene chloride	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
o-Xylene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit



**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-8-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 9:27:00 AM
<b>Lab ID:</b> 1106G32-022	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Tetrachloroethene	37	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Toluene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
trans-1,2-Dichloroethene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
trans-1,3-Dichloropropene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Trichloroethene	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Trichlorofluoromethane	BRL	8.8		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Vinyl chloride	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:08	JE
Surr: 4-Bromofluorobenzene	95.5	56-137		%REC	148072	1	06/21/2011 22:08	JE
Surr: Dibromofluoromethane	91.9	73.7-137		%REC	148072	1	06/21/2011 22:08	JE
Surr: Toluene-d8	97.6	69.2-126		%REC	148072	1	06/21/2011 22:08	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	11.8	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-8-5
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 9:29:00 AM
<b>Lab ID:</b> 1106G32-023	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
1,1,2,2-Tetrachloroethane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
1,1,2-Trichloroethane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
1,1-Dichloroethane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
1,1-Dichloroethene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
1,2,4-Trichlorobenzene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
1,2-Dibromo-3-chloropropane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
1,2-Dibromoethane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
1,2-Dichlorobenzene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
1,2-Dichloroethane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
1,2-Dichloropropane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
1,3-Dichlorobenzene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
1,4-Dichlorobenzene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
2-Butanone	BRL	110		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
2-Hexanone	BRL	21		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
4-Methyl-2-pentanone	BRL	21		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Acetone	BRL	210		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Benzene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Bromodichloromethane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Bromoform	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Bromomethane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Carbon disulfide	BRL	21		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Carbon tetrachloride	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Chlorobenzene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Chloroethane	BRL	21		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Chloroform	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Chloromethane	BRL	21		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
cis-1,2-Dichloroethene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
cis-1,3-Dichloropropene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Cyclohexane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Dibromochloromethane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Dichlorodifluoromethane	BRL	21		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Ethylbenzene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Freon-113	BRL	21		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Isopropylbenzene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
m,p-Xylene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Methyl acetate	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Methyl tert-butyl ether	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Methylcyclohexane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Methylene chloride	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
o-Xylene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-8-5
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 9:29:00 AM
<b>Lab ID:</b> 1106G32-023	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Tetrachloroethene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Toluene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
trans-1,2-Dichloroethene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
trans-1,3-Dichloropropene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Trichloroethene	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Trichlorofluoromethane	BRL	11		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Vinyl chloride	BRL	21		ug/Kg-dry	148072	1	06/21/2011 22:33	JE
Surr: 4-Bromofluorobenzene	93.7	56-137		%REC	148072	1	06/21/2011 22:33	JE
Surr: Dibromofluoromethane	100	73.7-137		%REC	148072	1	06/21/2011 22:33	JE
Surr: Toluene-d8	111	69.2-126		%REC	148072	1	06/21/2011 22:33	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	15.8	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-8-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 9:34:00 AM
<b>Lab ID:</b> 1106G32-024	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
1,1,2,2-Tetrachloroethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
1,1,2-Trichloroethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
1,1-Dichloroethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
1,1-Dichloroethene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
1,2,4-Trichlorobenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
1,2-Dibromo-3-chloropropane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
1,2-Dibromoethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
1,2-Dichlorobenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
1,2-Dichloroethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
1,2-Dichloropropane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
1,3-Dichlorobenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
1,4-Dichlorobenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
2-Butanone	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
2-Hexanone	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
4-Methyl-2-pentanone	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Acetone	BRL	180		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Benzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Bromodichloromethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Bromoform	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Bromomethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Carbon disulfide	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Carbon tetrachloride	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Chlorobenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Chloroethane	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Chloroform	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Chloromethane	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
cis-1,2-Dichloroethene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
cis-1,3-Dichloropropene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Cyclohexane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Dibromochloromethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Dichlorodifluoromethane	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Ethylbenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Freon-113	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Isopropylbenzene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
m,p-Xylene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Methyl acetate	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Methyl tert-butyl ether	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Methylcyclohexane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Methylene chloride	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
o-Xylene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-8-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 9:34:00 AM
<b>Lab ID:</b> 1106G32-024	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Tetrachloroethene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Toluene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
trans-1,2-Dichloroethene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
trans-1,3-Dichloropropene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Trichloroethene	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Trichlorofluoromethane	BRL	9.2		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Vinyl chloride	BRL	18		ug/Kg-dry	148072	1	06/21/2011 22:59	JE
Surr: 4-Bromofluorobenzene	94.9	56-137		%REC	148072	1	06/21/2011 22:59	JE
Surr: Dibromofluoromethane	92.8	73.7-137		%REC	148072	1	06/21/2011 22:59	JE
Surr: Toluene-d8	99.5	69.2-126		%REC	148072	1	06/21/2011 22:59	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	17.4	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-9-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 10:24:00 AM
<b>Lab ID:</b> 1106G32-025	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
1,1,2,2-Tetrachloroethane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
1,1,2-Trichloroethane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
1,1-Dichloroethane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
1,1-Dichloroethene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
1,2,4-Trichlorobenzene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
1,2-Dibromo-3-chloropropane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
1,2-Dibromoethane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
1,2-Dichlorobenzene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
1,2-Dichloroethane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
1,2-Dichloropropane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
1,3-Dichlorobenzene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
1,4-Dichlorobenzene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
2-Butanone	BRL	80		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
2-Hexanone	BRL	16		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
4-Methyl-2-pentanone	BRL	16		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Acetone	BRL	160		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Benzene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Bromodichloromethane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Bromoform	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Bromomethane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Carbon disulfide	BRL	16		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Carbon tetrachloride	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Chlorobenzene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Chloroethane	BRL	16		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Chloroform	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Chloromethane	BRL	16		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
cis-1,2-Dichloroethene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
cis-1,3-Dichloropropene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Cyclohexane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Dibromochloromethane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Dichlorodifluoromethane	BRL	16		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Ethylbenzene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Freon-113	BRL	16		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Isopropylbenzene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
m,p-Xylene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Methyl acetate	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Methyl tert-butyl ether	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Methylcyclohexane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Methylene chloride	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
o-Xylene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-9-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 10:24:00 AM
<b>Lab ID:</b> 1106G32-025	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>				<b>(SW5035)</b>				
Styrene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Tetrachloroethene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Toluene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
trans-1,2-Dichloroethene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
trans-1,3-Dichloropropene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Trichloroethene	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Trichlorofluoromethane	BRL	8.0		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Vinyl chloride	BRL	16		ug/Kg-dry	148072	1	06/23/2011 14:31	JE
Surr: 4-Bromofluorobenzene	89.3	56-137		%REC	148072	1	06/23/2011 14:31	JE
Surr: Dibromofluoromethane	92.9	73.7-137		%REC	148072	1	06/23/2011 14:31	JE
Surr: Toluene-d8	100	69.2-126		%REC	148072	1	06/23/2011 14:31	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	14.3	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-9-5
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 10:26:00 AM
<b>Lab ID:</b> 1106G32-026	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
1,1,2,2-Tetrachloroethane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
1,1,2-Trichloroethane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
1,1-Dichloroethane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
1,1-Dichloroethene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
1,2,4-Trichlorobenzene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
1,2-Dibromo-3-chloropropane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
1,2-Dibromoethane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
1,2-Dichlorobenzene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
1,2-Dichloroethane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
1,2-Dichloropropane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
1,3-Dichlorobenzene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
1,4-Dichlorobenzene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
2-Butanone	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
2-Hexanone	BRL	17		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
4-Methyl-2-pentanone	BRL	17		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Acetone	BRL	170		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Benzene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Bromodichloromethane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Bromoform	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Bromomethane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Carbon disulfide	BRL	17		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Carbon tetrachloride	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Chlorobenzene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Chloroethane	BRL	17		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Chloroform	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Chloromethane	BRL	17		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
cis-1,2-Dichloroethene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
cis-1,3-Dichloropropene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Cyclohexane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Dibromochloromethane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Dichlorodifluoromethane	BRL	17		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Ethylbenzene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Freon-113	BRL	17		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Isopropylbenzene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
m,p-Xylene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Methyl acetate	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Methyl tert-butyl ether	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Methylcyclohexane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Methylene chloride	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
o-Xylene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit



**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-9-5
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 10:26:00 AM
<b>Lab ID:</b> 1106G32-026	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>				<b>(SW5035)</b>				
Styrene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Tetrachloroethene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Toluene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
trans-1,2-Dichloroethene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
trans-1,3-Dichloropropene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Trichloroethene	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Trichlorofluoromethane	BRL	8.3		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Vinyl chloride	BRL	17		ug/Kg-dry	148072	1	06/23/2011 14:56	JE
Surr: 4-Bromofluorobenzene	88.3	56-137		%REC	148072	1	06/23/2011 14:56	JE
Surr: Dibromofluoromethane	92.7	73.7-137		%REC	148072	1	06/23/2011 14:56	JE
Surr: Toluene-d8	100	69.2-126		%REC	148072	1	06/23/2011 14:56	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	11.3	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-9-9
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 10:31:00 AM
<b>Lab ID:</b> 1106G32-027	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
1,1,2,2-Tetrachloroethane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
1,1,2-Trichloroethane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
1,1-Dichloroethane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
1,1-Dichloroethene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
1,2,4-Trichlorobenzene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
1,2-Dibromo-3-chloropropane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
1,2-Dibromoethane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
1,2-Dichlorobenzene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
1,2-Dichloroethane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
1,2-Dichloropropane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
1,3-Dichlorobenzene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
1,4-Dichlorobenzene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
2-Butanone	BRL	86		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
2-Hexanone	BRL	17		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
4-Methyl-2-pentanone	BRL	17		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Acetone	BRL	170		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Benzene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Bromodichloromethane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Bromoform	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Bromomethane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Carbon disulfide	BRL	17		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Carbon tetrachloride	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Chlorobenzene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Chloroethane	BRL	17		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Chloroform	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Chloromethane	BRL	17		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
cis-1,2-Dichloroethene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
cis-1,3-Dichloropropene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Cyclohexane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Dibromochloromethane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Dichlorodifluoromethane	BRL	17		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Ethylbenzene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Freon-113	BRL	17		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Isopropylbenzene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
m,p-Xylene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Methyl acetate	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Methyl tert-butyl ether	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Methylcyclohexane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Methylene chloride	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
o-Xylene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> DPT-9-9
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 10:31:00 AM
<b>Lab ID:</b> 1106G32-027	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Tetrachloroethene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Toluene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
trans-1,2-Dichloroethene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
trans-1,3-Dichloropropene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Trichloroethene	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Trichlorofluoromethane	BRL	8.6		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Vinyl chloride	BRL	17		ug/Kg-dry	148072	1	06/22/2011 00:41	JE
Surr: 4-Bromofluorobenzene	109	56-137		%REC	148072	1	06/22/2011 00:41	JE
Surr: Dibromofluoromethane	94.1	73.7-137		%REC	148072	1	06/22/2011 00:41	JE
Surr: Toluene-d8	99.4	69.2-126		%REC	148072	1	06/22/2011 00:41	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	15.4	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-3-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 11:17:00 AM
<b>Lab ID:</b> 1106G32-028	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
1,1,2,2-Tetrachloroethane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
1,1,2-Trichloroethane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
1,1-Dichloroethane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
1,1-Dichloroethene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
1,2,4-Trichlorobenzene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
1,2-Dibromo-3-chloropropane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
1,2-Dibromoethane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
1,2-Dichlorobenzene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
1,2-Dichloroethane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
1,2-Dichloropropane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
1,3-Dichlorobenzene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
1,4-Dichlorobenzene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
2-Butanone	BRL	97		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
2-Hexanone	BRL	19		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
4-Methyl-2-pentanone	BRL	19		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Acetone	BRL	190		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Benzene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Bromodichloromethane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Bromoform	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Bromomethane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Carbon disulfide	BRL	19		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Carbon tetrachloride	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Chlorobenzene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Chloroethane	BRL	19		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Chloroform	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Chloromethane	BRL	19		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
cis-1,2-Dichloroethene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
cis-1,3-Dichloropropene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Cyclohexane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Dibromochloromethane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Dichlorodifluoromethane	BRL	19		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Ethylbenzene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Freon-113	BRL	19		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Isopropylbenzene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
m,p-Xylene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Methyl acetate	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Methyl tert-butyl ether	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Methylcyclohexane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Methylene chloride	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
o-Xylene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-3-2
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 11:17:00 AM
<b>Lab ID:</b> 1106G32-028	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Tetrachloroethene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Toluene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
trans-1,2-Dichloroethene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
trans-1,3-Dichloropropene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Trichloroethene	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Trichlorofluoromethane	BRL	9.7		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Vinyl chloride	BRL	19		ug/Kg-dry	148072	1	06/23/2011 15:23	JE
Surr: 4-Bromofluorobenzene	92.5	56-137		%REC	148072	1	06/23/2011 15:23	JE
Surr: Dibromofluoromethane	91.7	73.7-137		%REC	148072	1	06/23/2011 15:23	JE
Surr: Toluene-d8	96.8	69.2-126		%REC	148072	1	06/23/2011 15:23	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	16.1	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-3-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 11:20:00 AM
<b>Lab ID:</b> 1106G32-029	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
1,1,2,2-Tetrachloroethane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
1,1,2-Trichloroethane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
1,1-Dichloroethane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
1,1-Dichloroethene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
1,2,4-Trichlorobenzene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
1,2-Dibromo-3-chloropropane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
1,2-Dibromoethane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
1,2-Dichlorobenzene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
1,2-Dichloroethane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
1,2-Dichloropropane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
1,3-Dichlorobenzene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
1,4-Dichlorobenzene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
2-Butanone	BRL	100		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
2-Hexanone	BRL	21		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
4-Methyl-2-pentanone	BRL	21		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Acetone	BRL	210		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Benzene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Bromodichloromethane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Bromoform	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Bromomethane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Carbon disulfide	BRL	21		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Carbon tetrachloride	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Chlorobenzene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Chloroethane	BRL	21		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Chloroform	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Chloromethane	BRL	21		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
cis-1,2-Dichloroethene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
cis-1,3-Dichloropropene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Cyclohexane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Dibromochloromethane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Dichlorodifluoromethane	BRL	21		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Ethylbenzene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Freon-113	BRL	21		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Isopropylbenzene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
m,p-Xylene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Methyl acetate	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Methyl tert-butyl ether	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Methylcyclohexane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Methylene chloride	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
o-Xylene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-3-6
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 11:20:00 AM
<b>Lab ID:</b> 1106G32-029	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Tetrachloroethene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Toluene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
trans-1,2-Dichloroethene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
trans-1,3-Dichloropropene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Trichloroethene	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Trichlorofluoromethane	BRL	10		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Vinyl chloride	BRL	21		ug/Kg-dry	148072	1	06/22/2011 01:06	JE
Surr: 4-Bromofluorobenzene	95.4	56-137		%REC	148072	1	06/22/2011 01:06	JE
Surr: Dibromofluoromethane	89	73.7-137		%REC	148072	1	06/22/2011 01:06	JE
Surr: Toluene-d8	101	69.2-126		%REC	148072	1	06/22/2011 01:06	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	24.7	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-3-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 11:25:00 AM
<b>Lab ID:</b> 1106G32-030	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5035)</b>								
1,1,1-Trichloroethane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
1,1,2,2-Tetrachloroethane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
1,1,2-Trichloroethane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
1,1-Dichloroethane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
1,1-Dichloroethene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
1,2,4-Trichlorobenzene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
1,2-Dibromo-3-chloropropane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
1,2-Dibromoethane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
1,2-Dichlorobenzene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
1,2-Dichloroethane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
1,2-Dichloropropane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
1,3-Dichlorobenzene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
1,4-Dichlorobenzene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
2-Butanone	BRL	86		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
2-Hexanone	BRL	17		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
4-Methyl-2-pentanone	BRL	17		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Acetone	250	170		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Benzene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Bromodichloromethane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Bromoform	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Bromomethane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Carbon disulfide	BRL	17		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Carbon tetrachloride	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Chlorobenzene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Chloroethane	BRL	17		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Chloroform	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Chloromethane	BRL	17		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
cis-1,2-Dichloroethene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
cis-1,3-Dichloropropene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Cyclohexane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Dibromochloromethane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Dichlorodifluoromethane	BRL	17		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Ethylbenzene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Freon-113	BRL	17		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Isopropylbenzene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
m,p-Xylene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Methyl acetate	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Methyl tert-butyl ether	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Methylcyclohexane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Methylene chloride	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
o-Xylene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit



**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-3-10
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 11:25:00 AM
<b>Lab ID:</b> 1106G32-030	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5035)</b>			
Styrene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Tetrachloroethene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Toluene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
trans-1,2-Dichloroethene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
trans-1,3-Dichloropropene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Trichloroethene	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Trichlorofluoromethane	BRL	8.6		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Vinyl chloride	BRL	17		ug/Kg-dry	147982	1	06/23/2011 15:48	JE
Surr: 4-Bromofluorobenzene	97.3	56-137		%REC	147982	1	06/23/2011 15:48	JE
Surr: Dibromofluoromethane	93.3	73.7-137		%REC	147982	1	06/23/2011 15:48	JE
Surr: Toluene-d8	100	69.2-126		%REC	147982	1	06/23/2011 15:48	JE
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	21.5	0		wt%	R199744	1	06/22/2011 16:30	AS

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-1-61511
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 2:37:00 PM
<b>Lab ID:</b> 1106G32-031	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>		<b>(SW5030B)</b>						
1,1,1-Trichloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
1,1,2-Trichloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
1,1-Dichloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
1,1-Dichloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
1,2-Dibromoethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
1,2-Dichlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
1,2-Dichloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
1,2-Dichloropropane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
1,3-Dichlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
1,4-Dichlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
2-Butanone	BRL	50		ug/L	148074	1	06/23/2011 04:30	MC
2-Hexanone	BRL	10		ug/L	148074	1	06/23/2011 04:30	MC
4-Methyl-2-pentanone	BRL	10		ug/L	148074	1	06/23/2011 04:30	MC
Acetone	BRL	50		ug/L	148074	1	06/23/2011 04:30	MC
Benzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Bromodichloromethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Bromoform	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Bromomethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Carbon disulfide	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Carbon tetrachloride	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Chlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Chloroethane	BRL	10		ug/L	148074	1	06/23/2011 04:30	MC
Chloroform	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Chloromethane	BRL	10		ug/L	148074	1	06/23/2011 04:30	MC
cis-1,2-Dichloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
cis-1,3-Dichloropropene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Cyclohexane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Dibromochloromethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Dichlorodifluoromethane	BRL	10		ug/L	148074	1	06/23/2011 04:30	MC
Ethylbenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Freon-113	BRL	10		ug/L	148074	1	06/23/2011 04:30	MC
Isopropylbenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
m,p-Xylene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Methyl acetate	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Methyl tert-butyl ether	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Methylcyclohexane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Methylene chloride	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
o-Xylene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-1-61511
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/15/2011 2:37:00 PM
<b>Lab ID:</b> 1106G32-031	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5030B)</b>			
Styrene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Tetrachloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Toluene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
trans-1,2-Dichloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
trans-1,3-Dichloropropene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Trichloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Trichlorofluoromethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:30	MC
Vinyl chloride	BRL	2.0		ug/L	148074	1	06/23/2011 04:30	MC
Surr: 4-Bromofluorobenzene	99.5	64.7-130		%REC	148074	1	06/23/2011 04:30	MC
Surr: Dibromofluoromethane	114	80.7-129		%REC	148074	1	06/23/2011 04:30	MC
Surr: Toluene-d8	101	71.1-120		%REC	148074	1	06/23/2011 04:30	MC

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-2-61611
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/16/2011 9:17:00 AM
<b>Lab ID:</b> 1106G32-032	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5030B)</b>			
1,1,1-Trichloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
1,1,2-Trichloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
1,1-Dichloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
1,1-Dichloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
1,2-Dibromoethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
1,2-Dichlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
1,2-Dichloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
1,2-Dichloropropane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
1,3-Dichlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
1,4-Dichlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
2-Butanone	BRL	50		ug/L	148074	1	06/23/2011 04:58	MC
2-Hexanone	BRL	10		ug/L	148074	1	06/23/2011 04:58	MC
4-Methyl-2-pentanone	BRL	10		ug/L	148074	1	06/23/2011 04:58	MC
Acetone	BRL	50		ug/L	148074	1	06/23/2011 04:58	MC
Benzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Bromodichloromethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Bromoform	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Bromomethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Carbon disulfide	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Carbon tetrachloride	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Chlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Chloroethane	BRL	10		ug/L	148074	1	06/23/2011 04:58	MC
Chloroform	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Chloromethane	BRL	10		ug/L	148074	1	06/23/2011 04:58	MC
cis-1,2-Dichloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
cis-1,3-Dichloropropene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Cyclohexane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Dibromochloromethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Dichlorodifluoromethane	BRL	10		ug/L	148074	1	06/23/2011 04:58	MC
Ethylbenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Freon-113	BRL	10		ug/L	148074	1	06/23/2011 04:58	MC
Isopropylbenzene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
m,p-Xylene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Methyl acetate	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Methyl tert-butyl ether	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Methylcyclohexane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Methylene chloride	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
o-Xylene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-2-61611
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/16/2011 9:17:00 AM
<b>Lab ID:</b> 1106G32-032	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5030B)</b>			
Styrene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Tetrachloroethene	11	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Toluene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
trans-1,2-Dichloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
trans-1,3-Dichloropropene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Trichloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Trichlorofluoromethane	BRL	5.0		ug/L	148074	1	06/23/2011 04:58	MC
Vinyl chloride	BRL	2.0		ug/L	148074	1	06/23/2011 04:58	MC
Surr: 4-Bromofluorobenzene	87.8	64.7-130		%REC	148074	1	06/23/2011 04:58	MC
Surr: Dibromofluoromethane	97.3	80.7-129		%REC	148074	1	06/23/2011 04:58	MC
Surr: Toluene-d8	105	71.1-120		%REC	148074	1	06/23/2011 04:58	MC

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-3-61611
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/16/2011 10:03:00 AM
<b>Lab ID:</b> 1106G32-033	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
1,1,2-Trichloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
1,1-Dichloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
1,1-Dichloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
1,2-Dibromoethane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
1,2-Dichlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
1,2-Dichloroethane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
1,2-Dichloropropane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
1,3-Dichlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
1,4-Dichlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
2-Butanone	BRL	50		ug/L	148074	1	06/23/2011 13:16	MC
2-Hexanone	BRL	10		ug/L	148074	1	06/23/2011 13:16	MC
4-Methyl-2-pentanone	BRL	10		ug/L	148074	1	06/23/2011 13:16	MC
Acetone	BRL	50		ug/L	148074	1	06/23/2011 13:16	MC
Benzene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Bromodichloromethane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Bromoform	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Bromomethane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Carbon disulfide	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Carbon tetrachloride	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Chlorobenzene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Chloroethane	BRL	10		ug/L	148074	1	06/23/2011 13:16	MC
Chloroform	8.0	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Chloromethane	BRL	10		ug/L	148074	1	06/23/2011 13:16	MC
cis-1,2-Dichloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
cis-1,3-Dichloropropene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Cyclohexane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Dibromochloromethane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Dichlorodifluoromethane	BRL	10		ug/L	148074	1	06/23/2011 13:16	MC
Ethylbenzene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Freon-113	BRL	10		ug/L	148074	1	06/23/2011 13:16	MC
Isopropylbenzene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
m,p-Xylene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Methyl acetate	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Methyl tert-butyl ether	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Methylcyclohexane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Methylene chloride	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
o-Xylene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> GW-3-61611
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/16/2011 10:03:00 AM
<b>Lab ID:</b> 1106G32-033	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5030B)</b>			
Styrene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Tetrachloroethene	180	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Toluene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
trans-1,2-Dichloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
trans-1,3-Dichloropropene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Trichloroethene	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Trichlorofluoromethane	BRL	5.0		ug/L	148074	1	06/23/2011 13:16	MC
Vinyl chloride	BRL	2.0		ug/L	148074	1	06/23/2011 13:16	MC
Surr: 4-Bromofluorobenzene	95.8	64.7-130		%REC	148074	1	06/23/2011 13:16	MC
Surr: Dibromofluoromethane	99.4	80.7-129		%REC	148074	1	06/23/2011 13:16	MC
Surr: Toluene-d8	104	71.1-120		%REC	148074	1	06/23/2011 13:16	MC

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> TRIP BLANK
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/17/2011
<b>Lab ID:</b> 1106G32-034	<b>Matrix:</b> Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>		<b>(SW5030B)</b>						
1,1,1-Trichloroethane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
1,1,2-Trichloroethane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
1,1-Dichloroethane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
1,1-Dichloroethene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
1,2-Dibromoethane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
1,2-Dichlorobenzene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
1,2-Dichloroethane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
1,2-Dichloropropane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
1,3-Dichlorobenzene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
1,4-Dichlorobenzene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
2-Butanone	BRL	50		ug/L	148074	1	06/22/2011 23:53	MC
2-Hexanone	BRL	10		ug/L	148074	1	06/22/2011 23:53	MC
4-Methyl-2-pentanone	BRL	10		ug/L	148074	1	06/22/2011 23:53	MC
Acetone	BRL	50		ug/L	148074	1	06/22/2011 23:53	MC
Benzene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Bromodichloromethane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Bromoform	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Bromomethane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Carbon disulfide	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Carbon tetrachloride	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Chlorobenzene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Chloroethane	BRL	10		ug/L	148074	1	06/22/2011 23:53	MC
Chloroform	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Chloromethane	BRL	10		ug/L	148074	1	06/22/2011 23:53	MC
cis-1,2-Dichloroethene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
cis-1,3-Dichloropropene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Cyclohexane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Dibromochloromethane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Dichlorodifluoromethane	BRL	10		ug/L	148074	1	06/22/2011 23:53	MC
Ethylbenzene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Freon-113	BRL	10		ug/L	148074	1	06/22/2011 23:53	MC
Isopropylbenzene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
m,p-Xylene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Methyl acetate	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Methyl tert-butyl ether	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Methylcyclohexane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Methylene chloride	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
o-Xylene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit



**Analytical Environmental Services, Inc**

**Date:** 27-Jun-11

<b>Client:</b> Mactec Engineering and Consulting, Inc.	<b>Client Sample ID:</b> TRIP BLANK
<b>Project Name:</b> Xerox	<b>Collection Date:</b> 6/17/2011
<b>Lab ID:</b> 1106G32-034	<b>Matrix:</b> Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>					<b>(SW5030B)</b>			
Styrene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Tetrachloroethene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Toluene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
trans-1,2-Dichloroethene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
trans-1,3-Dichloropropene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Trichloroethene	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Trichlorofluoromethane	BRL	5.0		ug/L	148074	1	06/22/2011 23:53	MC
Vinyl chloride	BRL	2.0		ug/L	148074	1	06/22/2011 23:53	MC
Surr: 4-Bromofluorobenzene	95.8	64.7-130		%REC	148074	1	06/22/2011 23:53	MC
Surr: Dibromofluoromethane	104	80.7-129		%REC	148074	1	06/22/2011 23:53	MC
Surr: Toluene-d8	101	71.1-120		%REC	148074	1	06/22/2011 23:53	MC

<b>Qualifiers:</b>	* Value exceeds maximum contaminant level	E Estimated (value above quantitation range)
	BRL Below reporting limit	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	Narr See case narrative
	N Analyte not NELAC certified	NC Not confirmed
	B Analyte detected in the associated method blank	< Less than Result value
	> Greater than Result value	J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Mactec

Work Order Number 1106G32

Checklist completed by M. J. Signature Date 6/18/11

Carrier name: FedEx  UPS  Courier  Client  US Mail  Other

Shipping container/cooler in good condition? Yes  No  Not Present

Custody seals intact on shipping container/cooler? Yes  No  Not Present

Custody seals intact on sample bottles? Yes  No  Not Present

Container/Temp Blank temperature in compliance? (4°C±2)\* Yes  No

Cooler #1 3.4c Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_ Cooler #4 \_\_\_\_\_ Cooler#5 \_\_\_\_\_ Cooler #6 \_\_\_\_\_

Chain of custody present? Yes  No

Chain of custody signed when relinquished and received? Yes  No

Chain of custody agrees with sample labels? Yes  No

Samples in proper container/bottle? Yes  No

Sample containers intact? Yes  No

Sufficient sample volume for indicated test? Yes  No

All samples received within holding time? Yes  No

Was TAT marked on the COC? Yes  No

Proceed with Standard TAT as per project history? Yes  No  Not Applicable

Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No

Water - pH acceptable upon receipt? Yes  No  Not Applicable

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Sample Condition: Good  Other(Explain) Vial caps received open

(For diffusive samples or AIHA lead) Is a known blank included? Yes  No

See Case Narrative for resolution of the Non-Conformance.

\* Samples do not have to comply with the given range for certain parameters.

Client: Mactec Engineering and Consulting, Inc.  
 Project Name: Xerox  
 Workorder: 1106G32

**ANALYTICAL QC SUMMARY REPORT**

BatchID: 147921

Sample ID: <b>MB-147921</b>	Client ID:	Units: <b>ug/Kg</b>	Prep Date: <b>06/18/2011</b>	Run No: <b>199378</b>
Sample Type: <b>MBLK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>147921</b>	Analysis Date: <b>06/18/2011</b>	Seq No: <b>4167921</b>

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	250	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	250	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	250	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	250	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	250	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	250	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	250	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	250	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	250	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	250	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	250	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	250	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	250	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	2500	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	500	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	500	0	0	0	0	0	0	0	0	0
Acetone	BRL	5000	0	0	0	0	0	0	0	0	0
Benzene	BRL	250	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	250	0	0	0	0	0	0	0	0	0
Bromoform	BRL	250	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	250	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	500	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	250	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	250	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	500	0	0	0	0	0	0	0	0	0
Chloroform	BRL	250	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	500	0	0	0	0	0	0	0	0	0

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** Mactec Engineering and Consulting, Inc.  
**Project Name:** Xerox  
**Workorder:** 1106G32

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 147921**

Sample ID: <b>MB-147921</b>	Client ID:	Units: <b>ug/Kg</b>	Prep Date: <b>06/18/2011</b>	Run No: <b>199378</b>							
SampleType: <b>MBLK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>147921</b>	Analysis Date: <b>06/18/2011</b>	Seq No: <b>4167921</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	250	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	250	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	250	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	250	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	500	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	250	0	0	0	0	0	0	0	0	
Freon-113	BRL	500	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	250	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	250	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	250	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	250	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	250	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	250	0	0	0	0	0	0	0	0	
o-Xylene	BRL	250	0	0	0	0	0	0	0	0	
Styrene	BRL	250	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	250	0	0	0	0	0	0	0	0	
Toluene	BRL	250	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	250	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	250	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	250	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	250	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	500	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	2454	0	2500	0	98.2	56	137	0	0	0	
Surr: Dibromofluoromethane	2256	0	2500	0	90.2	73.7	137	0	0	0	
Surr: Toluene-d8	2090	0	2500	0	83.6	69.2	126	0	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** Mactec Engineering and Consulting, Inc.  
**Project Name:** Xerox  
**Workorder:** 1106G32

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 147921**

Sample ID: <b>LCS-147921</b>	Client ID:	Units: <b>ug/Kg</b>	Prep Date: <b>06/18/2011</b>	Run No: <b>199378</b>							
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>147921</b>	Analysis Date: <b>06/18/2011</b>	Seq No: <b>4167919</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	2216	250	2500	0	88.6	60	140	0	0	0	
Benzene	2651	250	2500	0	106	70	130	0	0	0	
Chlorobenzene	2664	250	2500	0	107	70	130	0	0	0	
Toluene	2468	250	2500	0	98.7	70	130	0	0	0	
Trichloroethene	2618	250	2500	0	105	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	2675	0	2500	0	107	56	137	0	0	0	
Surr: Dibromofluoromethane	2214	0	2500	0	88.6	73.7	137	0	0	0	
Surr: Toluene-d8	2323	0	2500	0	92.9	69.2	126	0	0	0	

Sample ID: <b>1106F51-004AMS</b>	Client ID:	Units: <b>ug/Kg-dry</b>	Prep Date: <b>06/18/2011</b>	Run No: <b>199378</b>							
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>147921</b>	Analysis Date: <b>06/18/2011</b>	Seq No: <b>4167923</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	4446	470	4739	0	93.8	55.2	163	0	0	0	
Benzene	4555	470	4739	0	96.1	67.4	144	0	0	0	
Chlorobenzene	4431	470	4739	0	93.5	73.6	140	0	0	0	
Toluene	4145	470	4739	0	87.5	64.6	145	0	0	0	
Trichloroethene	4602	470	4739	0	97.1	70.1	149	0	0	0	
Surr: 4-Bromofluorobenzene	4581	0	4739	0	96.7	56	137	0	0	0	
Surr: Dibromofluoromethane	4073	0	4739	0	85.9	73.7	137	0	0	0	
Surr: Toluene-d8	4016	0	4739	0	84.7	69.2	126	0	0	0	

Sample ID: <b>1106F51-004AMSD</b>	Client ID:	Units: <b>ug/Kg-dry</b>	Prep Date: <b>06/18/2011</b>	Run No: <b>199378</b>							
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>147921</b>	Analysis Date: <b>06/18/2011</b>	Seq No: <b>4167924</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	4412	470	4739	0	93.1	55.2	163	4446	0.77	34.9	
Benzene	4415	470	4739	0	93.2	67.4	144	4555	3.13	27.2	

**Qualifiers:** > Greater than Result value < Less than Result value B Analyte detected in the associated method blank  
 BRL Below reporting limit E Estimated (value above quantitation range) H Holding times for preparation or analysis exceeded  
 J Estimated value detected below Reporting Limit N Analyte not NELAC certified R RPD outside limits due to matrix  
 Rpt Lim Reporting Limit S Spike Recovery outside limits due to matrix

**Client:** Mactec Engineering and Consulting, Inc.  
**Project Name:** Xerox  
**Workorder:** 1106G32

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 147921**

Sample ID: <b>1106F51-004AMSD</b>	Client ID:	Units: <b>ug/Kg-dry</b>	Prep Date: <b>06/18/2011</b>	Run No: <b>199378</b>
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>147921</b>	Analysis Date: <b>06/18/2011</b>	Seq No: <b>4167924</b>

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	4322	470	4739	0	91.2	73.6	140	4431	2.49	33.4	
Toluene	4003	470	4739	0	84.5	64.6	145	4145	3.49	26.8	
Trichloroethene	4429	470	4739	0	93.5	70.1	149	4602	3.82	34	
Surr: 4-Bromofluorobenzene	4735	0	4739	0	99.9	56	137	4581	0	0	
Surr: Dibromofluoromethane	4056	0	4739	0	85.6	73.7	137	4073	0	0	
Surr: Toluene-d8	3958	0	4739	0	83.5	69.2	126	4016	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Mactec Engineering and Consulting, Inc.  
 Project Name: Xerox  
 Workorder: 1106G32

**ANALYTICAL QC SUMMARY REPORT**

BatchID: 147982

Sample ID: <b>MB-147982</b>	Client ID:	Units: <b>ug/Kg</b>	Prep Date: <b>06/20/2011</b>	Run No: <b>199443</b>
SampleType: <b>MBLK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>147982</b>	Analysis Date: <b>06/20/2011</b>	Seq No: <b>4166335</b>

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	100	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	10	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** Mactec Engineering and Consulting, Inc.  
**Project Name:** Xerox  
**Workorder:** 1106G32

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 147982**

Sample ID: <b>MB-147982</b>	Client ID:	Units: <b>ug/Kg</b>	Prep Date: <b>06/20/2011</b>	Run No: <b>199443</b>
SampleType: <b>MBLK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>147982</b>	Analysis Date: <b>06/20/2011</b>	Seq No: <b>4166335</b>

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Freon-113	BRL	10	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	10	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	48.51	0	50	0	97	56	137	0	0	0	
Surr: Dibromofluoromethane	46.11	0	50	0	92.2	73.7	137	0	0	0	
Surr: Toluene-d8	47.87	0	50	0	95.7	69.2	126	0	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



Client: Mactec Engineering and Consulting, Inc.  
 Project Name: Xerox  
 Workorder: 1106G32

**ANALYTICAL QC SUMMARY REPORT**

BatchID: 147982

Sample ID: <b>LCS-147982</b>	Client ID:	Units: <b>ug/Kg</b>	Prep Date: <b>06/20/2011</b>	Run No: <b>199443</b>							
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>147982</b>	Analysis Date: <b>06/20/2011</b>	Seq No: <b>4166351</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	46.29	5.0	50	0	92.6	60	140	0	0	0	
Benzene	45.98	5.0	50	0	92	70	130	0	0	0	
Chlorobenzene	51.57	5.0	50	0	103	70	130	0	0	0	
Toluene	49.91	5.0	50	0	99.8	70	130	0	0	0	
Trichloroethene	52.14	5.0	50	0	104	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	46.92	0	50	0	93.8	56	137	0	0	0	
Surr: Dibromofluoromethane	43.62	0	50	0	87.2	73.7	137	0	0	0	
Surr: Toluene-d8	47.60	0	50	0	95.2	69.2	126	0	0	0	

Sample ID: <b>1106C43-008AMS</b>	Client ID:	Units: <b>ug/Kg-dry</b>	Prep Date: <b>06/20/2011</b>	Run No: <b>199443</b>							
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>147982</b>	Analysis Date: <b>06/20/2011</b>	Seq No: <b>4166354</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	59.04	6.1	60.82	0	97.1	55.2	163	0	0	0	
Benzene	58.53	6.1	60.82	0	96.2	67.4	144	0	0	0	
Chlorobenzene	66.01	6.1	60.82	0	109	73.6	140	0	0	0	
Toluene	63.89	6.1	60.82	0	105	64.6	145	0	0	0	
Trichloroethene	65.11	6.1	60.82	0	107	70.1	149	0	0	0	
Surr: 4-Bromofluorobenzene	56.52	0	60.82	0	92.9	56	137	0	0	0	
Surr: Dibromofluoromethane	53.43	0	60.82	0	87.9	73.7	137	0	0	0	
Surr: Toluene-d8	58.52	0	60.82	0	96.2	69.2	126	0	0	0	

Sample ID: <b>1106C43-008AMSD</b>	Client ID:	Units: <b>ug/Kg-dry</b>	Prep Date: <b>06/20/2011</b>	Run No: <b>199443</b>							
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>147982</b>	Analysis Date: <b>06/20/2011</b>	Seq No: <b>4166357</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	59.20	6.1	60.82	0	97.3	55.2	163	59.04	0.267	34.9	
Benzene	58.94	6.1	60.82	0	96.9	67.4	144	58.53	0.704	27.2	

**Qualifiers:**

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** Mactec Engineering and Consulting, Inc.  
**Project Name:** Xerox  
**Workorder:** 1106G32

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 147982**

Sample ID: <b>1106C43-008AMSD</b>	Client ID:	Units: <b>ug/Kg-dry</b>	Prep Date: <b>06/20/2011</b>	Run No: <b>199443</b>
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>147982</b>	Analysis Date: <b>06/20/2011</b>	Seq No: <b>4166357</b>

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	66.44	6.1	60.82	0	109	73.6	140	66.01	0.643	33.4	
Toluene	65.50	6.1	60.82	0	108	64.6	145	63.89	2.48	26.8	
Trichloroethene	63.95	6.1	60.82	0	105	70.1	149	65.11	1.79	34	
Surr: 4-Bromofluorobenzene	57.52	0	60.82	0	94.6	56	137	56.52	0	0	
Surr: Dibromofluoromethane	51.60	0	60.82	0	84.8	73.7	137	53.43	0	0	
Surr: Toluene-d8	59.25	0	60.82	0	97.4	69.2	126	58.52	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Mactec Engineering and Consulting, Inc.  
 Project Name: Xerox  
 Workorder: 1106G32

**ANALYTICAL QC SUMMARY REPORT**

BatchID: 148072

Sample ID: <b>MB-148072</b>	Client ID:	Units: <b>ug/Kg</b>	Prep Date: <b>06/21/2011</b>	Run No: <b>199582</b>
SampleType: <b>MBLK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>148072</b>	Analysis Date: <b>06/21/2011</b>	Seq No: <b>4170970</b>

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	100	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	10	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Mactec Engineering and Consulting, Inc.  
 Project Name: Xerox  
 Workorder: 1106G32

**ANALYTICAL QC SUMMARY REPORT**

BatchID: 148072

Sample ID: <b>MB-148072</b>	Client ID:	Units: <b>ug/Kg</b>	Prep Date: <b>06/21/2011</b>	Run No: <b>199582</b>
SampleType: <b>MBLK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>148072</b>	Analysis Date: <b>06/21/2011</b>	Seq No: <b>4170970</b>

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Freon-113	BRL	10	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	10	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	45.03	0	50	0	90.1	56	137	0	0	0	
Surr: Dibromofluoromethane	45.74	0	50	0	91.5	73.7	137	0	0	0	
Surr: Toluene-d8	49.43	0	50	0	98.9	69.2	126	0	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** Mactec Engineering and Consulting, Inc.  
**Project Name:** Xerox  
**Workorder:** 1106G32

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 148072**

Sample ID: <b>LCS-148072</b>	Client ID:	Units: <b>ug/Kg</b>	Prep Date: <b>06/21/2011</b>	Run No: <b>199582</b>							
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>148072</b>	Analysis Date: <b>06/21/2011</b>	Seq No: <b>4170974</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	55.18	5.0	50	0	110	60	140	0	0	0	
Benzene	50.76	5.0	50	0	102	70	130	0	0	0	
Chlorobenzene	52.93	5.0	50	0	106	70	130	0	0	0	
Toluene	55.37	5.0	50	0	111	70	130	0	0	0	
Trichloroethene	54.69	5.0	50	0	109	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	44.60	0	50	0	89.2	56	137	0	0	0	
Surr: Dibromofluoromethane	45.86	0	50	0	91.7	73.7	137	0	0	0	
Surr: Toluene-d8	49.47	0	50	0	98.9	69.2	126	0	0	0	

Sample ID: <b>1106G32-010AMS</b>	Client ID: <b>DPT-3-2</b>	Units: <b>ug/Kg-dry</b>	Prep Date: <b>06/21/2011</b>	Run No: <b>199582</b>							
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>148072</b>	Analysis Date: <b>06/21/2011</b>	Seq No: <b>4170978</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	61.99	5.6	56.06	0	111	55.2	163	0	0	0	
Benzene	58.14	5.6	56.06	0	104	67.4	144	0	0	0	
Chlorobenzene	63.44	5.6	56.06	0	113	73.6	140	0	0	0	
Toluene	64.29	5.6	56.06	0	115	64.6	145	0	0	0	
Trichloroethene	62.20	5.6	56.06	0	111	70.1	149	0	0	0	
Surr: 4-Bromofluorobenzene	51.07	0	56.06	0	91.1	56	137	0	0	0	
Surr: Dibromofluoromethane	51.27	0	56.06	0	91.5	73.7	137	0	0	0	
Surr: Toluene-d8	54.14	0	56.06	0	96.6	69.2	126	0	0	0	

Sample ID: <b>1106G32-010AMSD</b>	Client ID: <b>DPT-3-2</b>	Units: <b>ug/Kg-dry</b>	Prep Date: <b>06/21/2011</b>	Run No: <b>199582</b>							
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>148072</b>	Analysis Date: <b>06/21/2011</b>	Seq No: <b>4170981</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	58.91	5.6	56.06	0	105	55.2	163	61.99	5.1	34.9	
Benzene	57.75	5.6	56.06	0	103	67.4	144	58.14	0.677	27.2	

**Qualifiers:**

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** Mactec Engineering and Consulting, Inc.  
**Project Name:** Xerox  
**Workorder:** 1106G32

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 148072**

Sample ID: **1106G32-010AMSD** Client ID: **DPT-3-2** Units: **ug/Kg-dry** Prep Date: **06/21/2011** Run No: **199582**  
 SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **148072** Analysis Date: **06/21/2011** Seq No: **4170981**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	61.43	5.6	56.06	0	110	73.6	140	63.44	3.21	33.4	
Toluene	61.40	5.6	56.06	0	110	64.6	145	64.29	4.6	26.8	
Trichloroethene	61.32	5.6	56.06	0	109	70.1	149	62.20	1.43	34	
Surr: 4-Bromofluorobenzene	49.19	0	56.06	0	87.7	56	137	51.07	0	0	
Surr: Dibromofluoromethane	51.19	0	56.06	0	91.3	73.7	137	51.27	0	0	
Surr: Toluene-d8	54.62	0	56.06	0	97.4	69.2	126	54.14	0	0	

**Qualifiers:** > Greater than Result value < Less than Result value B Analyte detected in the associated method blank  
 BRL Below reporting limit E Estimated (value above quantitation range) H Holding times for preparation or analysis exceeded  
 J Estimated value detected below Reporting Limit N Analyte not NELAC certified R RPD outside limits due to matrix  
 Rpt Lim Reporting Limit S Spike Recovery outside limits due to matrix

Client: Mactec Engineering and Consulting, Inc.  
 Project Name: Xerox  
 Workorder: 1106G32

**ANALYTICAL QC SUMMARY REPORT**

BatchID: 148074

Sample ID: <b>MB-148074</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>06/22/2011</b>	Run No: <b>199643</b>
SampleType: <b>MBLK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>148074</b>	Analysis Date: <b>06/22/2011</b>	Seq No: <b>4170710</b>

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	50	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** Mactec Engineering and Consulting, Inc.  
**Project Name:** Xerox  
**Workorder:** 1106G32

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 148074**

Sample ID: <b>MB-148074</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>06/22/2011</b>	Run No: <b>199643</b>							
SampleType: <b>MBLK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>148074</b>	Analysis Date: <b>06/22/2011</b>	Seq No: <b>4170710</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Freon-113	BRL	10	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	46.11	0	50	0	92.2	64.7	130	0	0	0	
Surr: Dibromofluoromethane	50.55	0	50	0	101	80.7	129	0	0	0	
Surr: Toluene-d8	51.88	0	50	0	104	71.1	120	0	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



**Client:** Mactec Engineering and Consulting, Inc.  
**Project Name:** Xerox  
**Workorder:** 1106G32

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 148074**

Sample ID: <b>LCS-148074</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>06/22/2011</b>	Run No: <b>199643</b>							
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>148074</b>	Analysis Date: <b>06/22/2011</b>	Seq No: <b>4170709</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	57.16	5.0	50	0	114	60	140	0	0	0	
Benzene	53.98	5.0	50	0	108	70	130	0	0	0	
Chlorobenzene	51.88	5.0	50	0	104	70	130	0	0	0	
Toluene	55.54	5.0	50	0	111	70	130	0	0	0	
Trichloroethene	53.72	5.0	50	0	107	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	50.59	0	50	0	101	64.7	130	0	0	0	
Surr: Dibromofluoromethane	53.92	0	50	0	108	80.7	129	0	0	0	
Surr: Toluene-d8	52.07	0	50	0	104	71.1	120	0	0	0	

Sample ID: <b>1106G34-001AMS</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>06/22/2011</b>	Run No: <b>199643</b>							
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>148074</b>	Analysis Date: <b>06/22/2011</b>	Seq No: <b>4172330</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	62.54	5.0	50	0	125	46.2	183	0	0	0	
Benzene	59.60	5.0	50	0	119	62.2	143	0	0	0	
Chlorobenzene	55.28	5.0	50	0	111	72.2	137	0	0	0	
Toluene	61.19	5.0	50	0	122	57.8	149	0	0	0	
Trichloroethene	58.72	5.0	50	0	117	70.5	149	0	0	0	
Surr: 4-Bromofluorobenzene	51.02	0	50	0	102	64.7	130	0	0	0	
Surr: Dibromofluoromethane	54.86	0	50	0	110	80.7	129	0	0	0	
Surr: Toluene-d8	53.83	0	50	0	108	71.1	120	0	0	0	

Sample ID: <b>1106G34-001AMSD</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>06/22/2011</b>	Run No: <b>199643</b>							
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>148074</b>	Analysis Date: <b>06/22/2011</b>	Seq No: <b>4172331</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	60.45	5.0	50	0	121	46.2	183	62.54	3.4	20	
Benzene	54.87	5.0	50	0	110	62.2	143	59.60	8.26	20	

**Qualifiers:** > Greater than Result value < Less than Result value B Analyte detected in the associated method blank  
 BRL Below reporting limit E Estimated (value above quantitation range) H Holding times for preparation or analysis exceeded  
 J Estimated value detected below Reporting Limit N Analyte not NELAC certified R RPD outside limits due to matrix  
 Rpt Lim Reporting Limit S Spike Recovery outside limits due to matrix

**Client:** Mactec Engineering and Consulting, Inc.  
**Project Name:** Xerox  
**Workorder:** 1106G32

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 148074**

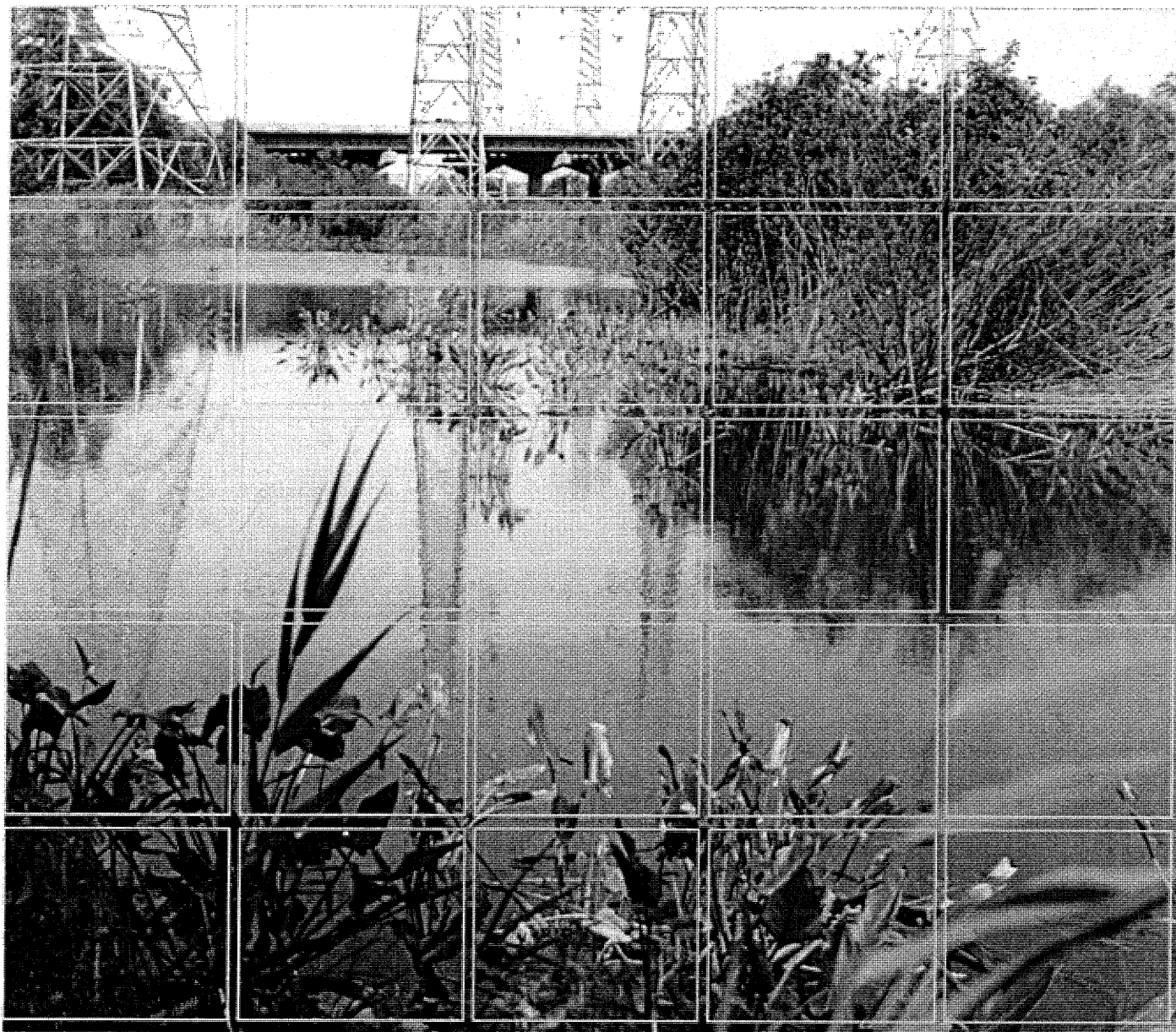
Sample ID: <b>1106G34-001AMSD</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>06/22/2011</b>	Run No: <b>199643</b>
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>148074</b>	Analysis Date: <b>06/22/2011</b>	Seq No: <b>4172331</b>

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	52.68	5.0	50	0	105	72.2	137	55.28	4.82	20	
Toluene	58.49	5.0	50	0	117	57.8	149	61.19	4.51	20	
Trichloroethene	55.67	5.0	50	0	111	70.5	149	58.72	5.33	20	
Surr: 4-Bromofluorobenzene	50.80	0	50	0	102	64.7	130	51.02	0	0	
Surr: Dibromofluoromethane	53.03	0	50	0	106	80.7	129	54.86	0	0	
Surr: Toluene-d8	53.39	0	50	0	107	71.1	120	53.83	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**APPENDIX E-10**

**INTERIM CORRECTIVE MEASURES WORK PLAN, NOVEMBER 4, 2011**



## Interim Corrective Measures Work Plan

Xerox Former CRC Facility  
Facility ID No. GAD010103232  
Atlanta, Georgia

November 4, 2011

[www.erm.com](http://www.erm.com)

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- 1 SITE LOCATION*
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## 1.0 INTRODUCTION

This Interim Corrective Measures Work Plan has been prepared by Environmental Resources Management (ERM) on behalf of Xerox Corporation (Xerox) for the former Xerox CRC Facility.

### 1.1. SITE LOCATION

The former Xerox CRC Facility (the Site) is located at 6077 Fulton Industrial Boulevard in Atlanta, Fulton County, Georgia. The Site and surrounding area are shown on **Figure 1**. The site is regulated under the Resource and Conservation Recovery Act (RCRA) and is assigned Facility ID No. GAD010103232, and is governed by the Georgia Department of Natural Resources, Environmental Protection Division (GA EPD).

### 1.2. BACKGROUND AND HISTORY

The Site has had extensive investigation and remediation activities since the mid 1980s. Chlorinated solvents including tetrachloroethene (PCE) and trichloroethylene (TCE) have been identified in groundwater at the Site.

Remediation has included source soil excavation, conventional groundwater pumping and the application of Xerox's patented 2-PHASE Extraction technology, as well as a more recent ISCO injection conducted in April 2009. During the April 2009 ISCO injection, sodium permanganate was delivered to B-11A, B-11B, and B-11D (point of compliance monitoring wells) to reduce PCE concentrations at these locations. The location of the POC monitoring wells are shown on **Figure 2**.

The most recent site investigation was conducted by AMEC on June 14 through June 16, 2011 and is summarized in the report entitled "*Preliminary Report of Supplemental Soil Investigation, AMEC July 2011*". Soil samples were collected from 12 locations including two adjacent to the excavation for the former solvent tanks, four locations were adjacent to the outside pad in the area of the (former) piping elbow leak, two locations were on (through) the exterior RCRA cap in the area of the elbow leak, and four locations were inside the building in areas where three solvent spray booths were formerly located. Three temporary ground water monitoring wells were installed during the June 2011 investigation; two were located inside the building in the area of the former solvent spray booths and one was located just outside of the building west of the former solvent spray booth area. All soil and groundwater samples were analyzed for volatile organic compounds (VOCs).

### 1.3. SITE CONDITIONS

In February of 1998, groundwater samples were collected at eleven hydropunch locations in Area B shown on **Figure 3**. PCE was detected at 9 of the 11 groundwater sampling locations at concentrations ranging from 4.8 µg/L to 4,200 µg/L.

During a site investigation conducted in 2000, elevated concentrations of PCE (1,700 µg/L to 4,200 µg/L) were detected in groundwater samples (B-4, B-26, B-37, and B-39).

Results presented in the July 2011 AMEC *Preliminary Report of Supplemental Soil Investigation* indicate that the maximum concentration of PCE remaining in groundwater in the former solvent spray booth area is 180 µg/L and the maximum concentration of chloroform remaining in groundwater is 8 µg/L, both identified in the temporary monitoring point GW-3. The concentrations of contaminants at the point of compliance wells (MW B-11 series) remain below the regulatory criterion (MCLs).

### 1.4. OBJECTIVES

The objective of the ISCO injection is to serve as a final groundwater polish to reduce the concentrations of PCE and chloroform identified in Area A and Area B (**Figure 3**). Post injection groundwater monitoring to be conducted at the point of compliance wells is intended to provide data for further evaluation of Site closure.



## 2.0 *IN SITU CHEMICAL OXIDATION (ISCO)*

### 2.1. *INTRODUCTION*

ISCO is a remediation technology utilized to reduce concentrations of ground water contaminants. ISCO involves the injection of an oxidizing chemical (oxidant) into the subsurface where it reacts with organic groundwater contaminants (as well as naturally occurring organic materials) by destroying chemical bonds. Oxidation of organic compounds may include oxygen addition, hydrogen abstraction (removal), and/or withdrawal of electrons with or without the withdrawal of protons. The main objective of chemical oxidation is to transform undesirable chemical species into species that are harmless or non-objectionable. Chemical oxidation can destroy many chemicals including fuels, solvents, and pesticides.

### 2.2. *CHEMICAL SELECTION*

There are several different forms of oxidants that can be used for ISCO; however, the most commonly used oxidants are permanganate ( $\text{MnO}_4^-$ ), hydrogen peroxide ( $\text{H}_2\text{O}_2$ ) and iron (Fe) (Fenton-driven, or  $\text{H}_2\text{O}_2$ - derived oxidation), persulfate ( $\text{S}_2\text{O}_8^{2-}$ ), and ozone ( $\text{O}_3$ ).

Sodium permanganate ( $\text{NaMnO}_4$ ) has been chosen as the oxidant for treatment at the Site. Sodium permanganate has been utilized during former ISCO injections (April 2009) at the Site with successful results. Sodium permanganate rapidly converts a wide range of chlorinated solvents to carbon dioxide, water, and chloride ions. Sodium permanganate persists for extended periods in the subsurface which allows diffusion into low-permeability materials and greater transport (advective) distances through porous media than with less persistent oxidants (e.g. ozone).

### 2.3. *PRE-INJECTION ACTIVITIES*

Prior to conducting ISCO activities, an Underground Injection Control (UIC) pilot test notification form will be submitted to the Georgia Environmental Protection Division's (EPDs) UIC Program for approval.

Prior to mobilization, ERM will prepare a site specific Health and Safety Plan (HASP) for site activities. ERM will use the services of a professional utility locator to determine the location of on-Site utilities in the proposed drilling areas. This will help to prevent damage to underground utilities, and supplement the Georgia "one call" public locating service.

## 2.4. INJECTION LOCATIONS

Xerox has elected to expand the scope of the proposed sodium permanganate injections to include exterior injections (locations 1, 3 and 4) near sections of the transfer piping adjacent to hydropunch sampling locations HP-8, HP-2, and HP-5. Xerox is also proposing exterior injections (locations 9 and 2) near former well locations B-37 and B-39. Interior permanganate injections are proposed for the area near former well B-4 (locations 6, 7, and 8) and B-26 (location 5), see Figure 3 for injection locations. Samples collected from GW-2 and GW-3 in 2010 will be addressed through injections around B-4 and downgradient of GW-2.

In summary, sodium permanganate will be delivered to the subsurface within the footprint of the former solvent spray booth (Area A) via five injection points. These five injection points are positioned in Area A as shown on **Figure 3** to address detections of PCE during the 2000 and 2011 Site investigations. Sodium permanganate will also be delivered to the subsurface within Area B via five injection points. These five injection points are positioned in Area B as shown in **Figure 3** to address detections of PCE during the 1998 and 2000 Site investigations.

Based on historical monitoring results from the B-4 well series, the vertical extent of the VOC plume does not appear to have entered the partially weathered rock (encountered approximately 30 feet bgs in Areas A and B). Therefore, all injection points will target the top of the partially weathered rock zone to a depth of approximately 30 bgs.

The injection points will be installed using a Geoprobe® (or similar drilling equipment). Based on experience at sites in similar geologic settings, the average radius of influence at injection wells installed using direct push equipment is 7.5 feet. Therefore, a 7.5 foot radius of influence was assumed for the injection program at the former Xerox CRC facility located in Atlanta, GA. The top four feet of each boring will be hand augered to ensure clearance of subsurface utilities. The work area is depicted on **Figure 2**. The injection points will be located as shown on **Figure 3**.

## 2.5. CHEMICAL DOSING

Approximately 1,500 gallons of 1% sodium permanganate oxidant will be delivered at each injection point, resulting in a total of approximately 15,000 gallons of oxidant solution delivered to the subsurface. A treatment interval of 10 to 30 feet below ground surface was selected based on the vertical extent of the VOC plume. Injections will occur over five (four-foot) intervals to cover the 20 foot vertical treatment zone. Approximately 300 gallons of oxidant will be

injected into each four-foot interval at each injection point. Chemical dosing calculations, presented in **Appendix A**. The chemical dosing requirements are based on both the soil oxidant demand and the contaminant oxidant demand. Conservative estimates of the soil oxidant demand were used, based on local Piedmont geology in-situ chemical oxidation experience. The contaminant oxidant demand was based on theoretical stoichiometric computations.

The design basis shows that the planned chemical oxidation will be sufficient to overcome the oxidant demand from both soil and contaminants, with a reasonable factor of safety. In addition, the pore volume calculation presented in **Appendix A** show that the planned injections will not exceed 25% of the pore volume and that the water table rise should not cause day-lighting at the project site.

### 3.0 GROUNDWATER MONITORING

Post injection monitoring will be conducted at the point of compliance (POC) well cluster (B-11A, B-11B, and B-11D). These wells are located north of the main building on-Site as shown on Figure 2.

#### 3.1 ANALYTES AND FREQUENCY

Groundwater samples will be submitted to a NELAC certified laboratory for analysis of volatile organic compounds via EPA Method 8260. One round of groundwater monitoring will be conducted 3 months following the ISCO injection.

#### 3.2 QA/QC

One duplicate and one trip blank will be collected during the groundwater monitoring event and analyzed for VOCs; no other QA/QC samples are proposed.

#### 3.3 REPORTING

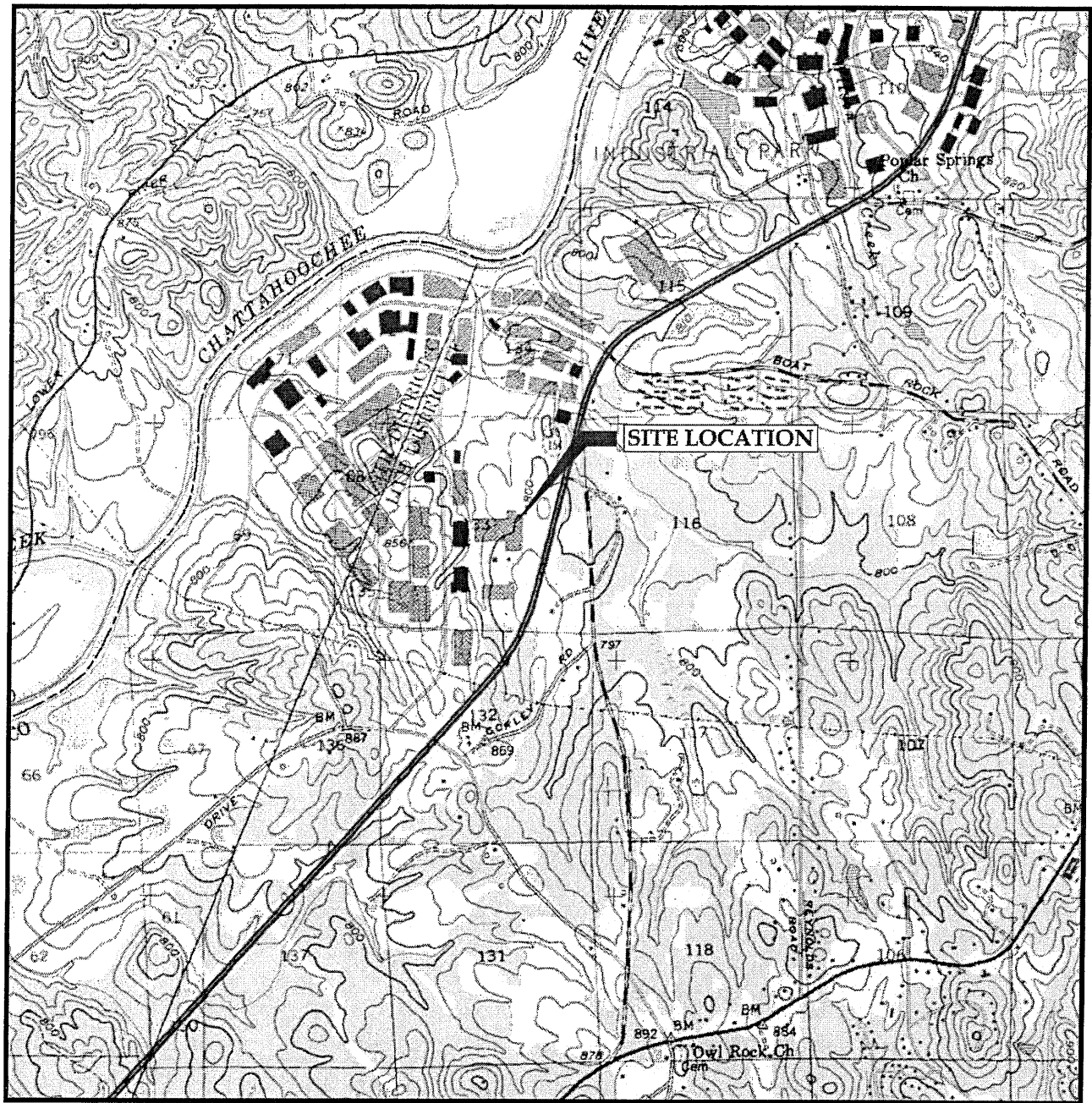
ERM will prepare a letter report summarizing the ISCO injection activities for submittal to EPD following completion of injection activities. The letter report will include a summary of the volume of oxidant delivered to the subsurface and a map depicting the location of oxidant injection points. Locations of the injection points will be measured in the field to document injection locations relative to features at the Site.

ERM will submit a second letter report following the ground water sampling event. This letter report will summarize the sampling activities and include the laboratory report containing the sample results.

#### 4.0 SCHEDULE

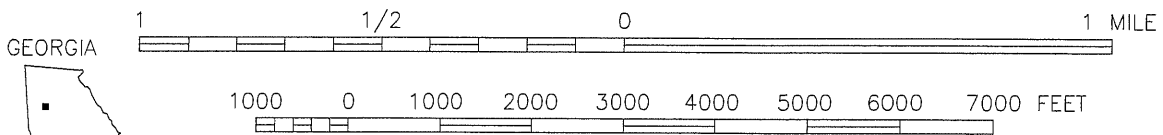
Preliminary activities can be scheduled to begin immediately upon EPD approval of this work plan. The estimated time to complete the installation of the injection wells and injection of sodium permanganate to the 10 wells is 4 days. Groundwater monitoring will be conducted 3 months following injection activities.

*Figures*



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE: BEN HILL, GEORGIA 1982

SCALE 1:24000



QUADRANGLE LOCATION

CONTOUR INTERVAL 10 FEET  
 DOTTED LINES REPRESENT 5-FOOT CONTOURS  
 NATIONAL GEODETIC VERTICAL DATUM OF 1929

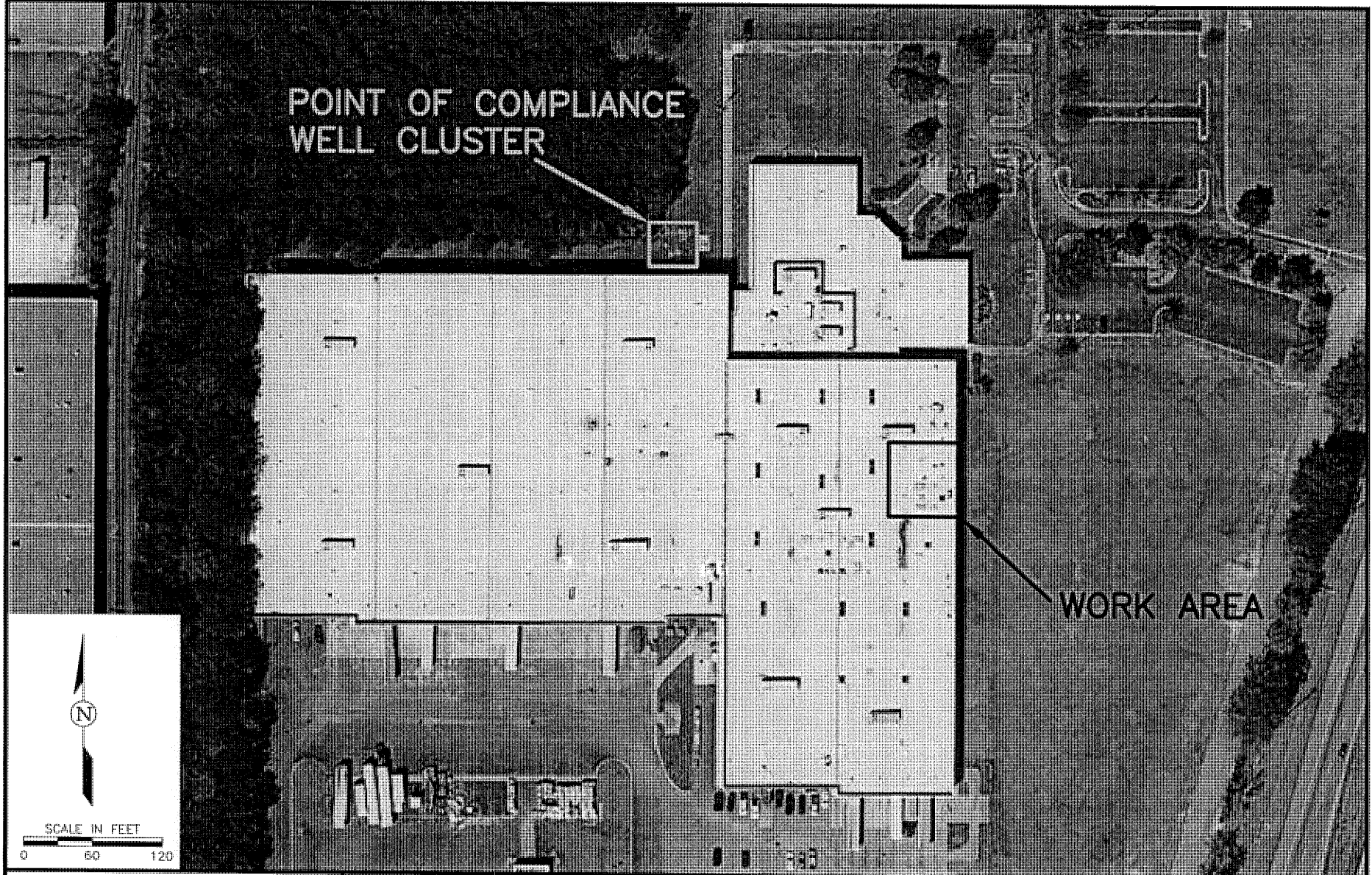
10/17/11 SPV REV  
 145xxxSite.DWG



**Environmental  
 Resources  
 Management**

**SITE LOCATION MAP**  
 ISCO WORK PLAN  
 XEROX FORMER CRC FACILITY  
 6077 FULTON INDUSTRIAL BOULEVARD  
 ATLANTA, GEORGIA

FIGURE  
**1**





**APPENDIX E-11**

**RESIDUAL GROUNDWATER POLISH – INTERIM MEASURE REPORT, JANUARY 27, 2012**

January 26, 2012

Mr. John Fonk  
Unit Coordinator  
Remedial Sites Unit  
Georgia Department of Natural Resources  
2 Martin Luther King Jr. Drive – Suite 1154 East  
Atlanta, Georgia 30334-9000

Re: Residual Groundwater Polish - Interim Remedial Measure Report  
Atlanta, Fulton County, GA  
Permit No. HW-070(D)

Dear Mr. Fonk:

During the period from November 29, 2011 through December 7, 2011, ERM consultants and their subcontractors, on behalf of Xerox Corporation, implemented the approved interim remedial work plan to treat residual groundwater concentrations at the former Xerox CRC facility in Atlanta. This interim remedial measure consisted of multiple permanganate injections from the top of the groundwater table through the top of the partially weathered bedrock (approximately 10 – 25 ft bgs) at locations in and around the former source areas that upon confirmation sampling had shown residual levels of PCE and TCE. This recent polishing activity constituted the fourth different remedial measure to be applied in these source areas. (Previously excavation, groundwater recovery, and 2-Phase Extraction had been utilized).

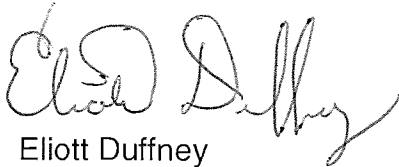
At GA EPD's urging, prior to initiating this permanganate injection polishing program, two additional temporary monitoring wells were installed and sampled to ensure that the targeted injection areas were appropriate for this planned interim remedial measure. Analytical results from the sampling of these temporary wells were consistent with previous assessment findings indicating that the planned remedial measure was targeting appropriate areas. The scope of the permanganate injection interim remedial measure work plan had previously been substantially expanded prior to receiving approval from GA EPD. The report of the field activities for this interim remedial measure has been included for your review.

The implementation of this final source area groundwater interim remedial measure will be used to support Xerox's development of a corrective actions plan (CAP) for the site. This CAP should be completed and submitted to GA EPD during the first quarter of 2012. Per our understanding, the CAP needs to address three specific areas: residual soils, short term groundwater polishing, and long term groundwater corrective actions (monitoring). It is Xerox's intent to use the development of this CAP as a measure to pursue a formal closure for this site. Xerox also understands that while we will be pursuing the termination of our current post closure care permit, a regulatory vehicle - likely a consent order, will be required for the residual groundwater monitoring program.

Xerox Corporation  
800 Phillips Road  
Building 0205-99F  
Webster, New York 14580  
Telephone 585-422-5825  
Facsimile 585-265-7088

Xerox appreciates GA EPD's continued support of our remedial efforts and our pursuit of a formal closure of this site. If GA EPD has any questions or concerns relative to this report or our closure strategy, please call me at (585) 422 – 5825.

Very truly yours,



Elliott Duffney  
Program Manager, Environmental Engineering

c: Dave Alcott, AMEC  
Jim Brown, GA EPD  
Lane Dorman, ERM  
Becky Ferguson, GA EPD  
Fred Rowe, GA EPD

**Environmental  
Resources  
Management**

3200 Windy Hill Road SE  
Suite 1500W  
Atlanta, GA 30339  
(678) 486-2700  
(404) 745-0103 (fax)

January 27, 2012

Mr. John Fonk  
Unit Coordinator  
Remedial Sites unit  
Georgia Department of Natural Resources  
2 Martin Luther King Jr. Dr., Ste 1154 East  
Atlanta, Georgia 30334



Subject: Interim Corrective Measures Report  
Former Xerox CRC Facility  
Atlanta, Fulton County, GA  
Permit No. HW-070(D)

Dear Mr. Fonk:

This Interim Corrective Measures Report has been prepared by Environmental Resources Management (ERM) on behalf of Xerox Corporation (Xerox) for the former Xerox Atlanta CRC Facility (the Site). This report provides details of the remediation and groundwater sampling activities performed from November 29, 2011 through December 7, 2011. In-situ chemical oxidation (ISCO) was performed as part of a Site remediation strategy described in the *Interim Corrective Measures Work Plan* dated November 4, 2011 and approved by the Georgia Environmental Protection Division (GA EPD) in a letter dated November 9, 2011.

The former Xerox Atlanta CRC Facility is located at 6077 Fulton Industrial Boulevard in Atlanta, Fulton County, Georgia. The Site and surrounding area are shown on Figure 1. The Site is regulated under the Resource and Conservation Recovery Act (RCRA), assigned Facility ID No. GAD010103232, and is governed by the GA EPD.

### ***BACKGROUND AND HISTORY***

The Site has had extensive investigation and remediation activities since the mid 1980s. Chlorinated solvents including tetrachloroethene (PCE) and trichloroethylene (TCE) have been identified in groundwater at the Site. In February of 1998, groundwater samples were collected at eleven hydropunch locations in Area B. PCE was detected at 9 of the 11 groundwater sampling locations at concentrations ranging from 4.8 µg/L to 4,200 µg/L. During a site investigation conducted in 2000, concentrations of PCE (1,700 µg/L to 4,200 µg/L) were detected in groundwater samples (B-4, B-26, B-37, and B-39). Results presented in the July 2011 AMEC Preliminary Report of Supplemental

Soil Investigation indicate that the maximum concentration of PCE detected in groundwater in the former solvent spray booth area is 180 µg/L and the maximum concentration of chloroform detected in groundwater is 8 µg/L, both identified in the temporary monitoring point GW-3. A set of wells (identified as B-11 series wells) down-gradient of the release location have been identified as point of compliance (POC) wells in the RCRA permit.

Historical remediation at the site has included source soil excavation, conventional groundwater pumping and the application of Xerox's patented 2-PHASE Extraction technology, as well as a more recent ISCO injection conducted in April 2009. During the April 2009 ISCO injection, sodium permanganate was delivered to point of compliance monitoring wells (POC monitoring wells) B-11A, B-11B, and B-11D to reduce PCE concentrations at these locations. The location of the POC monitoring wells are shown on Figure 2.

#### ***IN SITU CHEMICAL OXIDATION (ISCO) INJECTION***

The following paragraphs describe the recently conducted remediation activities at the project site.

##### Pre-Injection Activities

Prior to conducting ISCO activities, an Underground Injection Control (UIC) pilot test notification form was prepared and submitted to GA EPD's UIC Program on October 24, 2011. After discussions with GA EPD, a revised UIC pilot test notification was sent to Mr. Bijan Rahbar of GA EPD via email on November 7, 2011. Prior to mobilization, ERM prepared a Site specific Health and Safety Plan (HASP). ERM contracted a professional utility locator, UpSpec Services, to determine the location of on-Site utilities in the proposed drilling areas. UPSpec Services' was used to supplement the Georgia "one call" public locating service, which was also notified prior to boring installation.

##### Determination of Injection Points

Injection locations at the Site were chosen to expand the scope of previous sodium permanganate injections. The current treatment area included exterior and interior injection points. Figure 3 depicts the location of the current injection points.

Sodium permanganate was delivered to the subsurface within the footprint of the former solvent spray booth (Area A) via seven injection points. These seven injection points were positioned in Area A to address detections of PCE during

the 2000 and 2011 Site investigations. Sodium permanganate was also delivered to the subsurface within Area B via six injection points. These six injection points were positioned in Area B to address detections of PCE during the 1998 and 2000 Site investigations.

Exterior injection locations I-1, I-3, and I-4 were chosen due their proximity to sections of the transfer piping adjacent to hydropunch sampling locations HP-8, HP-2, and HP-5. Other exterior injection points included locations I-9, I-10, and I-2 near former well locations B-37 and B-39. Interior permanganate injections were completed near the former 2-PHASE Extraction well B-4 to address PCE concentrations in samples collected from GW-2 and GW-3 in 2010. The interior injection locations included I-6, I-7, I-8, and I-11.

The average radius of influence at injection wells installed using direct push equipment was assumed to be 7.5 feet. This estimate is based on experience at sites in similar geologic settings. Therefore, a 7.5 foot radius of influence was assumed for the injection program at the former Xerox CRC facility located in Atlanta, GA.

Based on historical monitoring results from the B-4 well series, the vertical extent of the VOC plume does not appear to have entered the partially weathered rock (encountered approximately 30 feet below grade surface (bgs) in Areas A and B). Therefore, all injection points targeted the top of the partially weathered rock zone to a depth between 10 and 30 feet bgs. To reach this treatment interval, injections were targeted at three (ten-foot) intervals to cover a twenty (20) foot vertical treatment zone.

#### Injection Method and Quantity

The ISCO injection occurred at the Site on November 29, 2011 through December 5, 2011. Approximately 1,100 gallons (combined) of 1% sodium permanganate oxidant was delivered at injection points I-5, I-6, I-7, and I-8 at depths between 25 and 30 feet bgs. Approximately 3,100 gallons (combined) of 4.5% sodium permanganate oxidant was delivered at injection points I-1, I-2(a), I-3(a), I-4, I-5, I-6, I-7, I-8, I-9, I-10, and I-11 at depths between 10 and 30 feet bgs. Individual well injection volumes, including interval volumes, are presented in Table 1.

The injection points were installed using a Geoprobe® direct push rig. The top four feet of each boring was installed using a hand auger to ensure clearance of subsurface utilities. The work areas are depicted on Figure 2, and the injection points are shown on Figure 3.

During injection, Site personnel encountered soils with extremely low permeability creating issues of injectant day-lighting. Injection points which would not accept treatment were abandoned using hydrated bentonite chips. These injection points at exterior locations were subsequently off-set one to two feet from the original injection boring and treatment was reattempted. In response to day-lighting at injection points in Area A (Figure 3), injection point I-11 was established by on-Site personnel. Injection point I-11 was placed in proximity to the interior injection points I-8, I-6, and I-7 and to a depth of 25 feet. I-11 received the remaining chemical dosing which could not be administered to the originally planned Area A injection points.

Due to the variation in the permeability of the underlying soils, injection points with greater permeability received selectively higher amounts of sodium permanganate solution. In two cases, I-2 and I-3, soil conditions required numerous off-set attempts with the final locations being 8 and 10 feet due east, respectively. Injection resumed at these locations (renamed I-2a and I-3a). In some cases day-lighting persisted after injection of roughly 100 gallons (combined) of 4.5% permanganate solution (Table 1). These locations were abandoned in favor of injection points with sufficient permeability. On Friday December 2nd, injection at location I-1 was attempted with little success. The location was off-set three times in the field, with daylighting occurring at each attempt. This location was abandoned in favor of injection points with sufficient permeability.

Table 1 presents the final volume of solution injected into each injection point location.

## ***GROUNDWATER SAMPLING***

### **Temporary Monitoring Well Installation**

Prior to injection, two temporary groundwater monitoring wells (TMW-1 and TMW-2) were installed (Figure 3) to establish baseline groundwater conditions in the area. The temporary wells were installed by Atlas Geo Sampling, LLC. on November 29, 2011 under the supervision of ERM. A Geoprobe® direct push rig advanced 2.25 inch diameter push rods to a depth of 20 feet bgs. The rods were then removed and the two boreholes were cased with five (5) feet of 1 inch 0.010-inch slot PVC well screen (located 15-20 feet bgs) and 15 feet of 1 inch PVC riser. The temporary monitoring well was equipped with a pre-packed filter and sampled immediately following installation. After groundwater sampling was completed, the temporary monitoring wells were abandoned. Figure 3 depicts the locations of the two temporary monitoring wells.

### Sampling Procedure and Analysis

The two temporary monitoring wells were purged and sampled using low-flow/low-volume techniques on November 29, 2011. Both wells went dry during purging. Therefore, the wells were sampled immediately following recharge (i.e. within 10-15 minutes of going dry). Purge logs are included as Attachment A. Groundwater samples collected from the two temporary wells were sent to Analytical Services, Inc. (ASI), a NELAC certified laboratory for analysis of TCL VOCs via EPA Method 8260. The laboratory analytical report from ASI is included as Appendix B.

### Evaluation of VOC Concentrations in Groundwater

Analysis of the groundwater samples collected at the two temporary wells show results consistent with historical concentrations found in former wells B-21 and RW-9. The concentration of PCE at TMW-1 is reported to be 19 ug/L. The concentration of PCE at TMW-2 is reported to be 21 ug/L. No other VOCs were detected in these temporary wells.

### Post Injection Groundwater Monitoring

Post injection monitoring will be conducted at the point of compliance (POC) well cluster (B-11A, B-11B, and B-11D). Post injection monitoring is tentatively scheduled to commence in February 2012. These wells are located north of the main building on-Site (Figure 2).

Please contact us at 770-590-8383 if you would like to discuss the content of this report.

Sincerely,



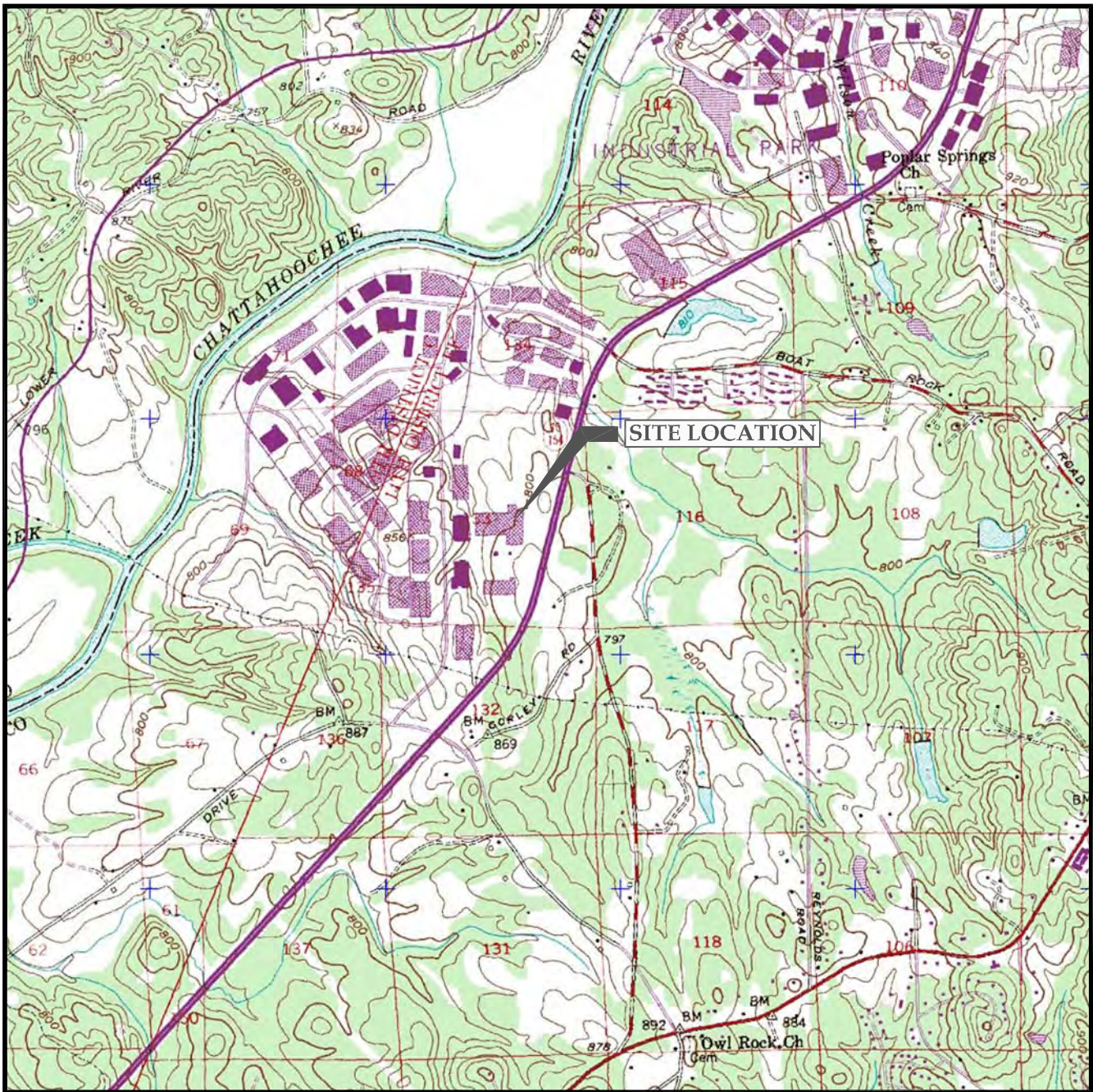
Lane Dorman, P.G.  
*Project Manager*



Hunter Sartain, P.E.  
*Principal*

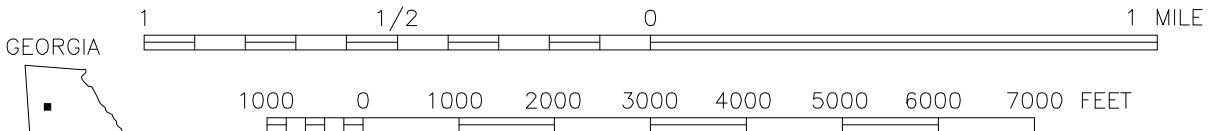
Attachments: Figure 1 - Site Location Map  
Figure 2 - Work Area  
Figure 3 - Injection Points and Monitoring Wells  
Table 1 - Injection Volumes  
Attachment A - Groundwater Purge Logs  
Attachment B - Laboratory Analytical Report





SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE: BEN HILL, GEORGIA 1982

SCALE 1:24000



QUADRANGLE LOCATION

CONTOUR INTERVAL 10 FEET

DOTTED LINES REPRESENT 5-FOOT CONTOURS  
 NATIONAL GEODETIC VERTICAL DATUM OF 1929



12/15/11 SPV REV 147212Site.DWG



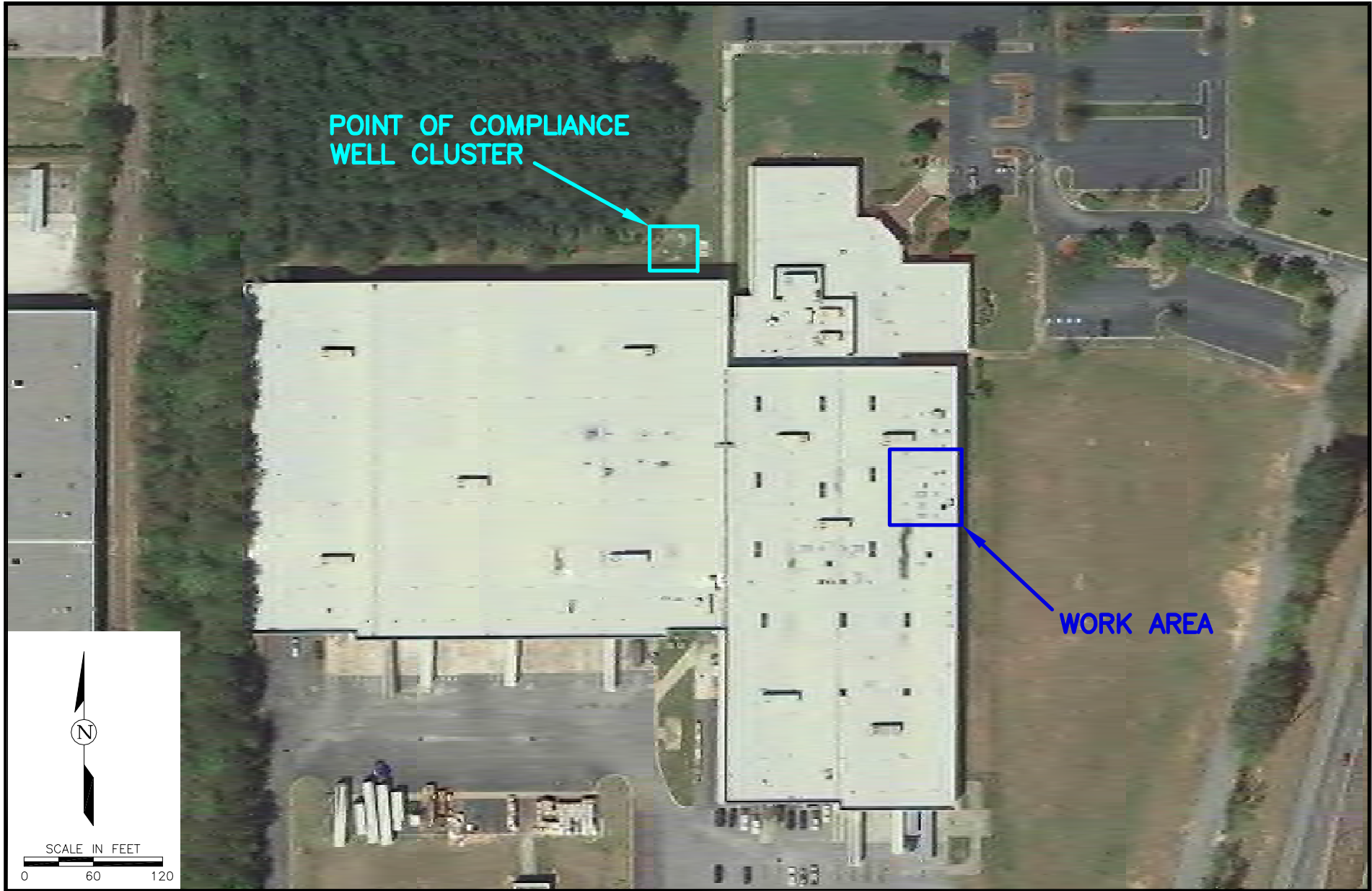
**Environmental  
 Resources  
 Management**

**SITE LOCATION MAP**  
 INTERIM CORRECTIVE MEASURES REPORT  
 FORMER XEROX CRC FACILITY  
 6077 FULTON INDUSTRIAL BOULEVARD  
 ATLANTA, GEORGIA

FIGURE

**1**













**Environmental  
Resources  
Management**

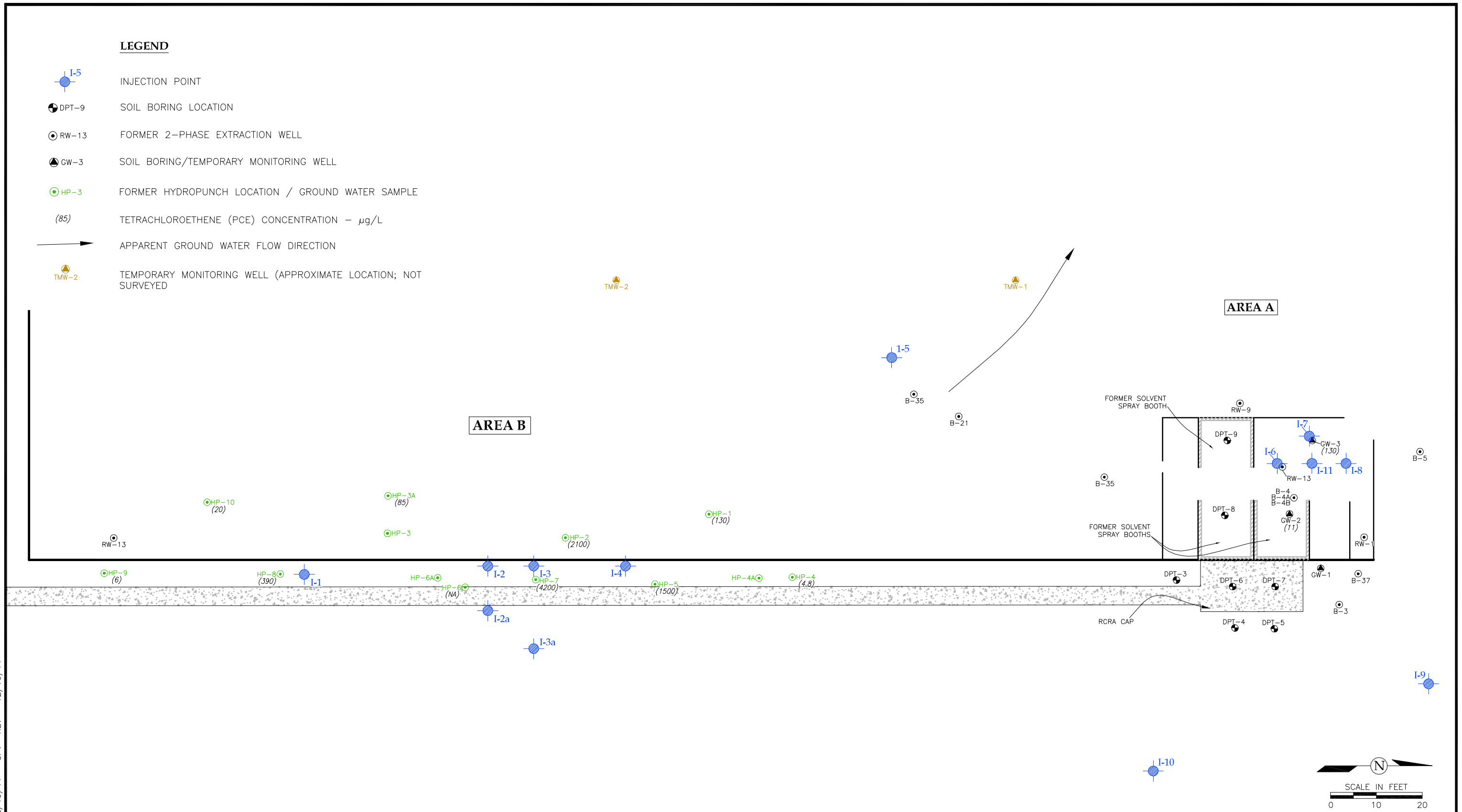
**WORK AREA**  
INTERIM CORRECTIVE MEASURES REPORT  
FORMER XEROX CRC FACILITY  
6077 FULTON INDUSTRIAL BOULEVARD  
ATLANTA, GEORGIA

FIGURE


**2**

**LEGEND**

-  I-5 INJECTION POINT
-  DPT-9 SOIL BORING LOCATION
-  RW-13 FORMER 2-PHASE EXTRACTION WELL
-  GW-3 SOIL BORING/TEMPORARY MONITORING WELL
-  HP-3 FORMER HYDROPUNCH LOCATION / GROUND WATER SAMPLE
-  (85) TETRACHLOROETHENE (PCE) CONCENTRATION -  $\mu\text{g/L}$
-  APPARENT GROUND WATER FLOW DIRECTION
-  TMW-2 TEMPORARY MONITORING WELL (APPROXIMATE LOCATION; NOT SURVEYED)



147212Site.DWG 12/15/11 SPV REV 12/16/11

 <p><b>Environmental Resources Management</b></p>	<p>INJECTION LOCATIONS INTERIM CORRECTIVE MEASURES REPORT FORMER XEROX CRC FACILITY 6077 FULTON INDUSTRIAL BOULEVARD ATLANTA, GEORGIA</p>	<p>FIGURE <b>3</b></p>
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**Table 1**  
**Injection Volumes**  
**Xerox CRC Facility**  
**Atlanta, Georgia**

<b>Injection Location</b>	<b>Interval Depth (ft bgs)</b>	<b>Concentration</b>	<b>Volume Injected (Gallons)</b>	<b>Volume Injected (Gallons)</b>
I-1	30	4.5%	26	26
I-2a	19	4.5%	49	118
I-2	15	4.5%	6	
I-2	19	4.5%	63	
I-3a	18	4.5%	50	115
I-3	15	4.5%	10	
I-3	18	4.5%	55	
I-4	10	4.5%	368	562
I-4	20	4.5%	180	
I-4	30	1.0%	14	
I-5	20	4.5%	664	911.4
I-5	25	1.0%	247.4	
I-6	20	4.5%	115	369
I-6	26	1.0%	254	
I-7	10	4.5%	105	727.4
I-7	20	4.5%	115	
I-7	25	1.0%	507.4	
I-8	20	4.5%	110	256.6
I-8	26	1.0%	146.6	
I-9	28	4.5%	612	612
I-10	28	4.5%	159	159
I-11	25	4.5%	491	491
	<b>Total Injected</b>	<b>1%</b>	<b>1169</b>	<b>1169</b>
	<b>Total Injected</b>	<b>4.50%</b>	<b>3178</b>	<b>3178</b>

Notes:

ft bgs = feet below grade surface

*Attachment A*  
*Purge Logs*





*Attachment B*  
*Analytical Laboratory Data*





# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis  
110 Technology Parkway, Norcross, GA 30092  
(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Prepared For:

ERM - Kennesaw

300 Chastain Center Blvd., Suite 375

Kennesaw, GA 30144

Attention: Mr. Lane Dorman

Report Number: AUK0764

November 30, 2011

Project: Xerox Atlanta

Project #:0147212

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

Project Manager

This report may not be reproduced, except in full, without written approval from Analytical Services, Inc. Analytical Services, Inc. certifies that the following analytical results meet all requirements of the National Environmental Laboratory Accreditation Conference(NELAC).  
All test results relate only to the samples analyzed.



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ERM - Kennesaw  
300 Chastain Center Blvd., Suite 375  
Kennesaw GA, 30144  
Attention: Mr. Lane Dorman

November 30, 2011

## ANALYTICAL REPORT FOR SAMPLES

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
TMW-1-20111128-01	AUK0764-01	Ground Water	11/28/11 16:00	11/29/11 09:40
TMW-2-20111128-01	AUK0764-02	Ground Water	11/28/11 17:00	11/29/11 09:40
TB-001-20111128-01	AUK0764-03	Water	11/18/11 00:00	11/29/11 09:40



## ANALYTICAL SERVICES, INC.

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Kennesaw GA, 30144  
Attention: Mr. Lane Dorman

November 30, 2011

### Case Narrative

Volatile Organic Compound Analysis by Method EPA 8260:

An unpreserved vial was not received for analysis; therefore, Styrene and Vinyl Chloride were analyzed using a vial preserved with HCl.



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300 Chastain Center Blvd., Suite 375  
Kennesaw GA, 30144  
Attention: Mr. Lane Dorman

November 30, 2011

Report No.: AUK0764

Project: Xerox Atlanta

Client ID: TMW-1-20111128-01

Lab Number ID: AUK0764-01

Date/Time Sampled: 11/28/2011 4:00:00PM

Date/Time Received: 11/29/2011 9:40:00AM

Matrix: Ground Water

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>Volatile Organic Compounds by EPA 8260</b>										
Acetone	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Benzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Bromochloromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Bromodichloromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Bromoform	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Bromomethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Carbon Disulfide	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Carbon Tetrachloride	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Chlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Chloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Chloroform	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Chloromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Dibromochloromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,2-Dibromo-3-chloropropane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,2-Dibromoethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,2-Dichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,3-Dichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,4-Dichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Dichlorodifluoromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,1-Dichloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,2-Dichloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,1-Dichloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
cis-1,2-Dichloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
trans-1,2-Dichloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,2-Dichloropropane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
cis-1,3-Dichloropropene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
trans-1,3-Dichloropropene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Ethylbenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Isopropylbenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Methyl Butyl Ketone (2-Hexanone)	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Methylene Chloride	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Methyl Ethyl Ketone (2-Butanone)	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Methyl-tert-Butyl Ether	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Styrene	ND	10	ug/L	EPA 8260B	CN	1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,1,2,2-Tetrachloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH



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ERM - Kennesaw  
300 Chastain Center Blvd., Suite 375  
Kennesaw GA, 30144  
Attention: Mr. Lane Dorman

November 30, 2011

Report No.: AUK0764

Project: Xerox Atlanta

Client ID: TMW-1-20111128-01

Lab Number ID: AUK0764-01

Date/Time Sampled: 11/28/2011 4:00:00PM

Date/Time Received: 11/29/2011 9:40:00AM

Matrix: Ground Water

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>Volatile Organic Compounds by EPA 8260</b>										
Tetrachloroethene	19	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Toluene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,2,3-Trichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,2,4-Trichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,1,1-Trichloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
1,1,2-Trichloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Trichloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Trichlorofluoromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Vinyl Chloride	ND	10	ug/L	EPA 8260B	CN	1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
Xylenes, total	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 13:40	1110713	CJH
<i>Surrogate: Dibromofluoromethane</i>	<i>83 %</i>	<i>75-123</i>		<i>EPA 8260B</i>			<i>11/29/11 11:30</i>	<i>11/29/11 13:40</i>	<i>1110713</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>96 %</i>	<i>72-118</i>		<i>EPA 8260B</i>			<i>11/29/11 11:30</i>	<i>11/29/11 13:40</i>	<i>1110713</i>	
<i>Surrogate: Toluene-d8</i>	<i>94 %</i>	<i>75-112</i>		<i>EPA 8260B</i>			<i>11/29/11 11:30</i>	<i>11/29/11 13:40</i>	<i>1110713</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>89 %</i>	<i>80-120</i>		<i>EPA 8260B</i>			<i>11/29/11 11:30</i>	<i>11/29/11 13:40</i>	<i>1110713</i>	



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ERM - Kennesaw  
300 Chastain Center Blvd., Suite 375  
Kennesaw GA, 30144  
Attention: Mr. Lane Dorman

November 30, 2011

Report No.: AUK0764

Project: Xerox Atlanta

Client ID: TMW-2-20111128-01

Lab Number ID: AUK0764-02

Date/Time Sampled: 11/28/2011 5:00:00PM

Date/Time Received: 11/29/2011 9:40:00AM

Matrix: Ground Water

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>Volatile Organic Compounds by EPA 8260</b>										
Acetone	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
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Bromochloromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
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Bromoform	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Bromomethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
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Chlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Chloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Chloroform	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Chloromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Dibromochloromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,2-Dibromo-3-chloropropane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,2-Dibromoethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,2-Dichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,3-Dichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,4-Dichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Dichlorodifluoromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,1-Dichloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,2-Dichloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,1-Dichloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
cis-1,2-Dichloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
trans-1,2-Dichloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,2-Dichloropropane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
cis-1,3-Dichloropropene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
trans-1,3-Dichloropropene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Ethylbenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Isopropylbenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Methyl Butyl Ketone (2-Hexanone)	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Methylene Chloride	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Methyl Ethyl Ketone (2-Butanone)	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Methyl-tert-Butyl Ether	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Styrene	ND	10	ug/L	EPA 8260B	CN	1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,1,2,2-Tetrachloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis  
110 Technology Parkway, Norcross, GA 30092  
(770) 734-4200 FAX (770) 734-4201

ERM - Kennesaw  
300 Chastain Center Blvd., Suite 375  
Kennesaw GA, 30144  
Attention: Mr. Lane Dorman

November 30, 2011

Report No.: AUK0764

Project: Xerox Atlanta

Client ID: TMW-2-20111128-01

Lab Number ID: AUK0764-02

Date/Time Sampled: 11/28/2011 5:00:00PM

Date/Time Received: 11/29/2011 9:40:00AM

Matrix: Ground Water

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>Volatile Organic Compounds by EPA 8260</b>										
Tetrachloroethene	21	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Toluene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,2,3-Trichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,2,4-Trichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,1,1-Trichloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
1,1,2-Trichloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Trichloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Trichlorofluoromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Vinyl Chloride	ND	10	ug/L	EPA 8260B	CN	1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
Xylenes, total	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 14:12	1110713	CJH
<i>Surrogate: Dibromofluoromethane</i>	<i>84 %</i>	<i>75-123</i>		<i>EPA 8260B</i>			<i>11/29/11 11:30</i>	<i>11/29/11 14:12</i>	<i>1110713</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>96 %</i>	<i>72-118</i>		<i>EPA 8260B</i>			<i>11/29/11 11:30</i>	<i>11/29/11 14:12</i>	<i>1110713</i>	
<i>Surrogate: Toluene-d8</i>	<i>94 %</i>	<i>75-112</i>		<i>EPA 8260B</i>			<i>11/29/11 11:30</i>	<i>11/29/11 14:12</i>	<i>1110713</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>87 %</i>	<i>80-120</i>		<i>EPA 8260B</i>			<i>11/29/11 11:30</i>	<i>11/29/11 14:12</i>	<i>1110713</i>	



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ERM - Kennesaw  
300 Chastain Center Blvd., Suite 375  
Kennesaw GA, 30144  
Attention: Mr. Lane Dorman

November 30, 2011

Report No.: AUK0764

Project: Xerox Atlanta

Client ID: TB-001-20111128-01

Lab Number ID: AUK0764-03

Date/Time Sampled: 11/18/2011 12:00:00AM

Date/Time Received: 11/29/2011 9:40:00AM

Matrix: Water

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>Volatile Organic Compounds by EPA 8260</b>										
Acetone	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Benzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Bromochloromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Bromodichloromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Bromoform	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Bromomethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Carbon Disulfide	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Carbon Tetrachloride	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Chlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Chloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Chloroform	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Chloromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Dibromochloromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,2-Dibromo-3-chloropropane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,2-Dibromoethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,2-Dichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,3-Dichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,4-Dichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Dichlorodifluoromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,1-Dichloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,2-Dichloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,1-Dichloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
cis-1,2-Dichloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
trans-1,2-Dichloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,2-Dichloropropane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
cis-1,3-Dichloropropene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
trans-1,3-Dichloropropene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Ethylbenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Isopropylbenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Methyl Butyl Ketone (2-Hexanone)	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Methylene Chloride	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Methyl Ethyl Ketone (2-Butanone)	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Methyl-tert-Butyl Ether	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Styrene	ND	10	ug/L	EPA 8260B	CN	1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,1,2,2-Tetrachloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH





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ERM - Kennesaw  
300 Chastain Center Blvd., Suite 375  
Kennesaw GA, 30144  
Attention: Mr. Lane Dorman

November 30, 2011

Report No.: AUK0764

Project: Xerox Atlanta

Client ID: TB-001-20111128-01

Lab Number ID: AUK0764-03

Date/Time Sampled: 11/18/2011 12:00:00AM

Date/Time Received: 11/29/2011 9:40:00AM

Matrix: Water

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>Volatile Organic Compounds by EPA 8260</b>										
Tetrachloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Toluene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,2,3-Trichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,2,4-Trichlorobenzene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,1,1-Trichloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
1,1,2-Trichloroethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Trichloroethene	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Trichlorofluoromethane	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Vinyl Chloride	ND	10	ug/L	EPA 8260B	CN	1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
Xylenes, total	ND	10	ug/L	EPA 8260B		1	11/29/11 11:30	11/29/11 12:03	1110713	CJH
<i>Surrogate: Dibromofluoromethane</i>	85 %	75-123		<i>EPA 8260B</i>			<i>11/29/11 11:30</i>	<i>11/29/11 12:03</i>	<i>1110713</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	96 %	72-118		<i>EPA 8260B</i>			<i>11/29/11 11:30</i>	<i>11/29/11 12:03</i>	<i>1110713</i>	
<i>Surrogate: Toluene-d8</i>	96 %	75-112		<i>EPA 8260B</i>			<i>11/29/11 11:30</i>	<i>11/29/11 12:03</i>	<i>1110713</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	89 %	80-120		<i>EPA 8260B</i>			<i>11/29/11 11:30</i>	<i>11/29/11 12:03</i>	<i>1110713</i>	



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ERM - Kennesaw  
300 Chastain Center Blvd., Suite 375  
Kennesaw GA, 30144  
Attention: Mr. Lane Dorman

November 30, 2011

Report No.: AUK0764

## Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
<b>Batch 1110713 - EPA 5030B</b>										
<b>Blank (1110713-BLK1)</b>										
Prepared & Analyzed: 11/29/11										
Acetone	ND	10	ug/L							
Benzene	ND	10	ug/L							
Bromochloromethane	ND	10	ug/L							
Bromodichloromethane	ND	10	ug/L							
Bromoform	ND	10	ug/L							
Bromomethane	ND	10	ug/L							
Carbon Disulfide	ND	10	ug/L							
Carbon Tetrachloride	ND	10	ug/L							
Chlorobenzene	ND	10	ug/L							
Chloroethane	ND	10	ug/L							
Chloroform	ND	10	ug/L							
Chloromethane	ND	10	ug/L							
Dibromochloromethane	ND	10	ug/L							
1,2-Dibromo-3-chloropropane	ND	10	ug/L							
1,2-Dibromoethane	ND	10	ug/L							
1,2-Dichlorobenzene	ND	10	ug/L							
1,3-Dichlorobenzene	ND	10	ug/L							
1,4-Dichlorobenzene	ND	10	ug/L							
Dichlorodifluoromethane	ND	10	ug/L							
1,1-Dichloroethane	ND	10	ug/L							
1,2-Dichloroethane	ND	10	ug/L							
1,1-Dichloroethene	ND	10	ug/L							
cis-1,2-Dichloroethene	ND	10	ug/L							
trans-1,2-Dichloroethene	ND	10	ug/L							
1,2-Dichloropropane	ND	10	ug/L							
cis-1,3-Dichloropropene	ND	10	ug/L							
trans-1,3-Dichloropropene	ND	10	ug/L							
Ethylbenzene	ND	10	ug/L							
Isopropylbenzene	ND	10	ug/L							
Methyl Butyl Ketone (2-Hexanone)	ND	10	ug/L							
Methylene Chloride	ND	10	ug/L							
Methyl Ethyl Ketone (2-Butanone)	ND	10	ug/L							
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L							
Methyl-tert-Butyl Ether	ND	10	ug/L							
Styrene	ND	10	ug/L							
1,1,2,2-Tetrachloroethane	ND	10	ug/L							
Tetrachloroethene	ND	10	ug/L							
Toluene	ND	10	ug/L							
1,2,3-Trichlorobenzene	ND	10	ug/L							
1,2,4-Trichlorobenzene	ND	10	ug/L							
1,1,1-Trichloroethane	ND	10	ug/L							



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ERM - Kennesaw  
300 Chastain Center Blvd., Suite 375  
Kennesaw GA, 30144  
Attention: Mr. Lane Dorman

November 30, 2011

Report No.: AUK0764

## Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
<b>Batch 1110713 - EPA 5030B</b>										
<b>Blank (1110713-BLK1)</b>										
Prepared & Analyzed: 11/29/11										
1,1,2-Trichloroethane	ND	10	ug/L							
Trichloroethene	ND	10	ug/L							
Trichlorofluoromethane	ND	10	ug/L							
Vinyl Chloride	ND	10	ug/L							
Xylenes, total	ND	10	ug/L							
<i>Surrogate: Dibromofluoromethane</i>	41		ug/L	50.000		82	75-123			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	47		ug/L	50.000		95	72-118			
<i>Surrogate: Toluene-d8</i>	48		ug/L	50.000		97	75-112			
<i>Surrogate: 4-Bromofluorobenzene</i>	46		ug/L	50.000		91	80-120			
<b>LCS (1110713-BS1)</b>										
Prepared & Analyzed: 11/29/11										
Benzene	49		ug/L	50.000		98	80-120			
Chlorobenzene	47		ug/L	50.000		94	80-120			
1,1-Dichloroethene	49		ug/L	50.000		97	77-121			
Toluene	47		ug/L	50.000		95	78-120			
Trichloroethene	48		ug/L	50.000		96	80-122			
<i>Surrogate: Dibromofluoromethane</i>	41		ug/L	50.000		83	75-123			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	46		ug/L	50.000		92	72-118			
<i>Surrogate: Toluene-d8</i>	49		ug/L	50.000		97	75-112			
<i>Surrogate: 4-Bromofluorobenzene</i>	45		ug/L	50.000		89	80-120			
<b>Matrix Spike (1110713-MS1)</b>										
Source: AUK0764-01										
Prepared & Analyzed: 11/29/11										
Benzene	54		ug/L	50.000	ND	107	80-123			
Chlorobenzene	50		ug/L	50.000	ND	100	75-120			
1,1-Dichloroethene	59		ug/L	50.000	ND	117	80-120			
Toluene	48		ug/L	50.000	0.2	95	80-120			
Trichloroethene	52		ug/L	50.000	0.5	103	80-125			
<i>Surrogate: Dibromofluoromethane</i>	41		ug/L	50.000		82	75-123			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	47		ug/L	50.000		94	72-118			
<i>Surrogate: Toluene-d8</i>	46		ug/L	50.000		93	75-112			
<i>Surrogate: 4-Bromofluorobenzene</i>	44		ug/L	50.000		89	80-120			



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300 Chastain Center Blvd., Suite 375  
Kennesaw GA, 30144  
Attention: Mr. Lane Dorman

November 30, 2011

**Report No.: AUK0764**

## Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
<b>Batch 1110713 - EPA 5030B</b>										
<b>Matrix Spike Dup (1110713-MSD1)</b>			<b>Source: AUK0764-01</b>			<b>Prepared &amp; Analyzed: 11/29/11</b>				
Benzene	52		ug/L	50.000	ND	104	80-123	3	9	
Chlorobenzene	48		ug/L	50.000	ND	97	75-120	3	13	
1,1-Dichloroethene	56		ug/L	50.000	ND	112	80-120	4	9	
Toluene	45		ug/L	50.000	0.2	90	80-120	6	9	
Trichloroethene	50		ug/L	50.000	0.5	99	80-125	4	11	
<i>Surrogate: Dibromofluoromethane</i>	43		ug/L	50.000		85	75-123			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	48		ug/L	50.000		96	72-118			
<i>Surrogate: Toluene-d8</i>	46		ug/L	50.000		93	75-112			
<i>Surrogate: 4-Bromofluorobenzene</i>	44		ug/L	50.000		88	80-120			



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November 30, 2011

## Laboratory Certifications

Code	Description	Number	Expires
LA	Louisiana	02069	06/30/2012
NC	North Carolina	381	12/31/2011
NELAC	NELAC (Non-Potable Water, Solids)	E87315	06/30/2012
SC	South Carolina	98011001	06/30/2012
TX	Texas	T104704397-08-TX	03/31/2012