September 21, 2007

New Jersey Department of Environmental Protection
Division of Remediation Management and Response
Bureau of Operations, Maintenance and Monitoring
401 East State Street
P.O. Box 432
Trenton, New Jersey 08625-0432

Attn: Mr. Mark Souders, Case Manager

Re: *Remedial Action Progress Report*
Former Lockheed Electronics Company Site
Watchung, New Jersey
ISRA Case No. E90038
TRC Job No. 2542TRC

Dear Mr. Souders:

Enclosed find one original and two copies of a Remedial Action Progress Report for the above referenced site. The report covers the remedial action activities conducted between June 2006 and August 2007.

If you have any questions or need additional information, please call.

Very truly yours,

TRC ENVIRONMENTAL CORPORATION

Danielle Doremus
Geologist

Stephen E. Tappert
Sr. Project Manager

cc: Mayor Janice Allen, Borough of North Plainfield
Stan Phillips, Lockheed Martin
Ron Bock, TRC

R\Sept 2007 Annual Report.doc

CASE NO. E90038

REMEDIAL ACTION PROGRESS REPORT
FORMER LOCKHEED ELECTRONICS COMPANY
WATCHUNG, NEW JERSEY

TRC JOB NO. 2542-116473.0000

prepared by:

TRC Environmental Corporation
57 East Willow Street
Millburn, New Jersey 07041

September, 2007

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

APPENDIX A

NJDEP Contour Map Reporting Forms

APPENDIX B

Plots of TCE Concentration Versus Time for Selected Monitoring Wells

APPENDIX C

Stream Sampling Field Measurements

APPENDIX D

Plots of TCE Concentration Versus Time for Stream Locations

APPENDIX E

Health and Safety Plan

CASE NO. E90038

REMEDIAL ACTION PROGRESS REPORT

FORMER LOCKHEED ELECTRONICS COMPANY
WATCHUNG, NEW JERSEY

1.0 INTRODUCTION

TRC Environmental Corporation (TRC) has prepared this Remedial Action Progress Report (RAPR) for the former Lockheed Electronics Company (LEC) site in Watchung, New Jersey (The site is now operating as the Watchung Square Mall). Figure 1 is a portion of the USGS Chatham, NJ 7.5 Minute Quadrangle depicting the site location, local topography, surface drainage, and cultural patterns.

This report discusses the sampling methods and results for the remedial program completed from June 2006 to May 2007. Background site information is summarized in section 2.0. Section 3.0 presents an overview of the field program completed. Section 4.0 presents the results of the remedial action and section 5.0 presents the conclusions and recommendations.

2.0 SITE INFORMATION

2.1 Site Description

The former LEC site was comprised of approximately 80 acres of land north of Route 22 in the boroughs of Watchung and North Plainfield in Somerset County, New Jersey (Figure 1).

2.2 Site History

The site was originally developed in 1953 by Stavid Engineering. Lockheed Corporation acquired Stavid Engineering in 1959 and created Lockheed Electronics Corporation, which was subsequently operated by Sanders, A Lockheed Martin Company (Sanders). Additional land acquisitions resulted in the current site boundaries. The site was used to manufacture, test, and assemble electronic components. Trichloroethene (TCE) was used in Building 7 as a solvent to clean circuit boards.

Site operations ceased in 1989, triggering a site investigation under the New Jersey Environmental Cleanup Responsibility Act (ECRA). Regulations promulgated under ECRA have been superseded by new regulations pursuant to the Industrial Site Recovery Act (ISRA). The initial investigations identified several areas of concern (AOCs) and included collection of soil, sediment, ground water, and surface water samples. Investigation and remedial action results have been documented in a series of reports submitted to the NJDEP since 1991. Soil impacted by volatile organic compounds (VOCs), primarily TCE, was identified in the vicinity of Building 7 and Building 3. Soil impacted by fuel oil contamination was identified under Building 2. Soil AOCs were addressed either through excavation and off-site disposal or soil vapor extraction, and site-wide soil remediation has been completed to the satisfaction of the NJDEP.

An extensive monitoring well network has delineated a ground water plume comprised primarily of TCE in the local bedrock aquifer and shallow unconsolidated sediments in certain locations. TCE has been reported at concentrations exceeding the Ground Water Quality Criteria (GWQC) of 1 microgram per liter (µg/L) (promulgated at N.J.A.C. 7-9.6) in ground water beneath the site, extending to the southwest approximately 7,000 feet. Contaminant migration is influenced by both bedrock structure and local ground water discharge areas, particularly Crab Brook. The axis of the plume extends to the southwest, approximating regional bedrock strike. Historically, the reach of Crab Brook between North Avenue (Norwood Avenue) and Watchung Avenue consistently yielded water samples exhibiting measurable TCE concentrations exceeding the Surface Water Quality Criteria of 1.09 µg/L. Location SW-2 consistently exhibits the highest concentrations, indicating a significant discharge of impacted ground water at or near this location. Vertical hydraulic gradients are generally downward except for the immediate vicinity of Crab Brook, and TCE concentrations decrease sharply south of Crab Brook. There are currently 43 active monitoring wells associated with this project in the Boroughs of Watchung and North Plainfield, all of which are installed as either well couplets or triplets to evaluate the vertical distribution of contaminants. Ground water and surface water of Crab Brook are the only AOCs remaining related to the former LEC site.

2.3 Surrounding Area and Land Use

The property is located in a mixed residential and commercial area. The Route 22 strip is predominately commercial with residential properties located on side streets. A condominium complex is located west of the site.

2.4 Topography and Surface Water

The former LEC site shows a range in elevation from 240 to 320 feet above mean sea level (Figure 1). The closest surface water body is Crab Brook. Crab Brook is a tributary of Stony Brook, which discharges to Green Brook and ultimately discharges to the Raritan River. Both Stony Brook and Green Brook are listed in N.J.A.C. 7:9B-1.15(f) and assigned stream classification FW2-NT, which becomes the classification for unlisted Crab Brook. Surface water quality criteria for streams classified as FW2-NT are provided at N.J.A.C. 7:9B-1.14(c). Designated uses for the FW2 classification (promulgated at N.J.A.C. 7:9B-1.12(c)) include 1) maintenance, migration and propagation of the natural and established biota; 2) primary and secondary contact recreation; 3) industrial and agricultural water supply; 4) public potable water supply after conventional filtration and disinfection; and 5) any other reasonable uses. The NT designation indicates non-trout, which provides for less stringent standards for parameters directly related to trout survival including dissolved oxygen, suspended solids, and temperature deviations.

North of Route 22, Crab Brook is an intermittent stream that carries much of the stormwater drainage from the former LEC site and adjacent parcels. South of Route 22, the brook flows westerly through a buffer zone between Route 22 and residential neighborhoods. The streambed is generally bedrock with a thin veneer of sandy sediment, and stream banks are steep and often undercut. Storm drains capturing runoff from Route 22 discharge to the brook at more or less regular intervals; drain pipes of unknown origin from residences are also present along the south bank of the brook. The Crab Brook corridor has historically been subject to overflow and frequent flooding, and the stream channel morphology reflects regular scouring with little or no aquatic vegetation present.

The primary source of water for this reach of the brook is from precipitation, originating from runoff from Route 22 and adjacent land parcels.

2.5 Geology

The overburden at the site is generally composed of construction fill associated with the remediation area of former Building #3, a sandy outwash deposit, and a thin layer of glacial till which overlies the bedrock.

The thickness of the overburden decreases towards the south-southwest but increases south of Crab Brook. The overburden was thinnest at well cluster MW-546 (three feet) and generally increases south of Route 22 with the greatest thickness of 47 feet observed at well cluster MW-542.

The reddish-brown shale and siltstone of the Passaic Formation reported in previous descriptions of the bedrock geology underlying the subject area is consistent with what was observed during the off-site investigation. The upper surface of the bedrock was generally weathered and soft, and became more competent with depth. It was difficult to discern small-scale changes in lithology since air rotary drilling method was used during drilling and a vacuum truck was used

to collect the cuttings. Bedrock surface topography generally slopes to the southeast parallel to the Watchung Mountains. The highest bedrock elevation is approximately 138 feet above sea level at well cluster MW-548 and the lowest is approximately 53 feet above sea level at wells P-524 and MW-542.

2.6 Hydrogeology

Ground water at the site is divided into three distinct zones, the water table (overburden/shallow bedrock) zone; the intermediate bedrock zone; and the deeper bedrock zone. The ground water in the bedrock enters the former LEC site from the easterly direction, moves across the site to the southwest, and then trends in a more southerly direction toward Crab Brook and beyond.

Ground water in the shallow water table zone flows across the former LEC site under an average horizontal gradient of 0.002 feet per foot (ft/ft). Ground water gradients in the shallow system steepen significantly (up to 0.018 ft/ft) southwest of the site.

The potentiometric surface contours in the deeper bedrock are slightly more uniform in gradient and direction than the shallow ground water system and suggest a more uniform flow system with depth in the bedrock. The direction of ground water flow is to the south at an average horizontal gradient of 0.004 ft/ft. With the exception of the area near Crab Brook east of North Drive, vertical gradients are generally downward under static conditions. Shallow ground water discharges to Crab Brook during periods of normal ground water levels.

2.7 Well Search

Water supply well searches were conducted by McLaren-Hart in 1992 and Dan Raviv Associates (Raviv) in 1993, and the results presented in the RIR/RAW submitted by SME in July 1995. The Raviv well search encompassed an area approximately 1.5 miles wide by 4 miles long, and included portions of Watchung, North Plainfield, and Green Brook. A total of 233 wells were identified, which included 136 domestic wells, 8 industrial supply wells, 78 monitoring or recovery wells, and 11 public water supply wells.

As a result of those investigations, 40 private wells (domestic, industrial, and commercial) were sampled and six domestic wells were taken out of service and replaced with public water. Five additional wells were identified for sampling in 1998, of which only two were in use for potable supply. Samples were collected from the two wells and analyzed for VOCs. No compounds associated with the former LEC site were identified.

The nearest active public water supply well is the Rock Avenue Well, located approximately 2.8 miles west of the former LEC site. According to Elizabethtown Water Company (EWC) officials, this well is 350 feet deep and produces 350 gallons per minute (gpm) of water. Approximately 2,000 feet further west the Green Brook wellfield is located north of Green Brook between Jefferson Avenue and Washington Avenue. There are 10 active wells in this wellfield, ranging in depth from 376 feet to 545 feet below grade and pumping at rates ranging from 60 gpm to 650 gpm. The wellfield is serviced by an air stripping tower to treat the influent water for VOCs. The air stripper also treats water from the Rock Avenue Well. According to EWC officials, only treated effluent from the strippers is sampled and analyzed on a regular basis.

An inactive public supply well, identified in the Raviv well survey as well P-4, is located approximately 400 feet southwest of well cluster MW-545. This well is 220 feet deep and has been inactive for many years due to VOC contamination not associated with the former LEC site. Another inactive well, well P-5, is located on Harrington Street 4,000 feet west-northwest of well P-4 and is drilled to a depth of 311 feet. Although EWC officials could not be specific about the contaminants reported in the inactive wells, they indicated that chlorinated solvents were the category of contaminants most often encountered.

Based upon this information no active public supply wells are likely to be impacted by the contaminant plume from the former LEC site, even under a no-action scenario. Although there are active domestic wells located within the Classification Exception Area, none of the sampling of domestic wells conducted to date has reported exceedences of drinking water standards for target compounds associated with the former LEC site.

2.8 Baseline Ecological Evaluation

A Baseline Ecological Evaluation (BEE) was conducted at the former LEC site during February 1999 by Environmental Management Group, Inc. and Sevee and Maher Engineers, Inc. The BEE concluded that there was no measurable acute effect on aquatic species in Crab Brook from the inflow of the former LEC site plume containing TCE. The NJDEP approved the BEE in the August 9, 1999 letter concluding that no further ecological evaluation with regard to Crab Brook was required.

2.9 Area of Concern Summary

Ground water and surface water of Crab Brook are the only AOCs remaining related to the former LEC site.

2.10 Contact Information

The following is a list of the applicable contact information. Note that TRC is the lead responsible party pursuant to a Remediation Agreement executed in 2001.

Site Owner/Operator Watchung Square Assoc., LLC	641 Shunpike Road Chatham, NJ 07928	Frank Cosentino 973.966.2800
Former Site Owner Lockheed Electronics Corp.	6801 Rockledge Drive Bethesda, MD 20817	Stan Phillips 817.763.7629
Consultant TRC Environmental Corporation	57 East Willow Street Millburn, NJ 07041	Stephen E. Tappert 973.564.6006 x 240 Danielle Doremus 973.564.6006 x 221

3.0 TECHNICAL OVERVIEW

The initial site investigation under the New Jersey Environmental Cleanup Responsibility Act (ECRA) commenced when operations at the site ceased in 1989. Regulations promulgated under ECRA have been superseded by new regulations pursuant to the Industrial Site Recovery Act (ISRA). The initial investigations identified several areas of concern (AOCs) and included collection of soil, sediment, ground water, and surface water samples. Soil AOCs were addressed either through excavation and off-site disposal or soil vapor extraction, and site-wide soil remediation has been completed to the satisfaction of the NJDEP.

An extensive monitoring well network delineated a ground water plume comprised primarily of TCE in the local bedrock aquifer. There are currently more than 40 active monitoring wells and piezometers associated with this project in the Boroughs of Watchung and North Plainfield, all of which are installed as either well couplets or triplets to evaluate the vertical distribution of contaminants.

The ground water extraction system (GWES) was activated on July 17, 2003. Ground water is pumped from extraction well RW-1, located on North Drive in North Plainfield, at an approximate rate of 130 gallons per minute (gpm). In addition, shallow ground water is extracted intermittently from an interceptor trench located on New Jersey Department of Transportation (NJDOT)-owned land on the northeast corner of Route 22 and North Drive. Extracted ground water is treated by granular activated carbon in a treatment plant located on the NJDOT-owned land adjacent to North Drive, and discharged to Crab Brook in accordance with NJPDES permit No. NJ0105899G. The GWES has worked almost continuously from start-up and has functioned as designed.

The last progress report, submitted in May 2006, presented data collected from September 2005 through March 2006. Two semi-annual sampling events have occurred since the last report submittal. Quarterly ground water sampling and monthly stream sampling were reduced to semi-annually as approved by the NJDEP in December 2005. The approved sampling schedule is provided in Table 1. Section 4.1.3 of this report presents the results of the semi-annual ground water sampling events conducted in September 2006 and March 2007. Results from the stream sampling events are presented in Section 4.2.2. Section 4.3 contains monthly system performance results and provides an overview of the GWES.

3.1 Remediation Objectives

The objectives of the activities conducted at this site are to remediate contaminants of concern to the applicable remediation standards to obtain No Further Action determination.

3.2 Applicable Remediation Standards

The applicable remediation standards for ground water are the NJDEP's Ground Water Quality Standards (GWQS). The applicable remediation standards for surface water are the New Jersey Fresh Water-2 Quality Criteria (FWQC).

3.3 Sampling Procedures

The remediation activities were performed in accordance with the NJDEP's *Technical Requirements for Site Remediation* (TRSR) and *Field Sampling Procedures Manual*. The

ground water samples were submitted to Severn Trent Laboratories, Inc. (STL) of Edison, New Jersey, a New Jersey-certified laboratory.

3.4 Subcontractors

Severn Trent Laboratories, Inc. Edison, New Jersey NJ Certification # 12028	Ron Mazur (732) 329-0200

3.5 Reliability of the Laboratory Analytical Data

Based on a review of the laboratory reports, TRC did not further qualify or reject any data points. Therefore, these data are considered to be valid and useful for the intended purposes. All method specified calibrations and quality control performance criteria were met for this job, except as noted in the conformance/non-conformance summaries provided in the laboratory deliverable packages.

3.6 Factors Influencing Data

There were no significant events or seasonal variations that are known to have affected the sampling procedures or the results of the ground water or surface water sampling presented in this report.

4.0 REMEDIAL ACTION REPORT

Previous ground water and surface water investigations have delineated a ground water plume comprised primarily of TCE in the local bedrock aquifer and shallow unconsolidated sediments in certain locations. TCE has been reported at concentrations exceeding the GWQC of 1 microgram per liter (µg/L) (promulgated at N.J.A.C. 7-9.6) in ground water beneath the site, extending to the southwest approximately 7,000 feet. A ground water extraction system was activated on July 17, 2003. Ground water is pumped from extraction well RW-1, located on North Drive in North Plainfield, at an approximate rate of 130 gpm. Currently, quarterly effluent sampling and monthly performance sampling is conducted to monitor the effectiveness of the recovery system. Ground water and surface water sampling is conducted on a semi-annual basis to monitor contaminant migration.

4.1 Ground Water Monitoring and Sampling Activities

Ground water monitoring and sampling events were conducted in September 2006 and March 2007 in accordance with the sampling schedule presented in Table 1. One well (P-522A) could not be sampled during the September 2006 event due to an obstruction. Results for the sampling events are presented in the sections below.

4.1.1 Water-Level Measurements

Water level measurements were collected on September 19, 2006 and March 6, 2007 at selected monitoring wells associated with the Site. Table 2 provides depth to water (DTW) measurements and water level elevations for these sampling events.

The water level elevations were used to prepare ground water contour maps. Ground water flow directions for the water table (overburden/shallow bedrock) zone, the intermediate bedrock zone, and the deeper bedrock zone are depicted on Figures 3 through 8, using the hydrostratigraphic classification presented in Table 3. The ground water elevation for extraction well RW-1 was included on both the shallow and intermediate zone contour maps during the September 2006 event. During the March 2007 event, a water-level measurement could not be taken from extraction well RW-1. The contour figures from both the September 2006 event and the March 2007 event indicate that ground water in the bedrock enters the former LEC site from the east, flows across the site to the southwest, and then trends in a more southerly direction toward Crab Brook and beyond. Ground water flow in the shallow and intermediate zones has been altered significantly since the continuous pumping at extraction well RW-1 began in July 2003. A cone of depression is apparent around extraction well RW-1 in both of these zones. In the deeper zone, the effect of pumping is less pronounced and ground water flows south towards Crab Brook and beyond. Contour Map Reporting Forms are presented in Appendix A.

Ground water elevation measurements from both the September 2006 and March 2007 events are consistent with the last several years of ground water elevation data. Aside from elevation differences associated with precipitation patterns, the ground water flow regime is strongly influenced by the pumping well and has not changed over the last several years of system operation.

4.1.2 Ground Water Sample Collection

Analytical results for the ground water samples collected during both the September 2006 and March 2007 events are provided in Table 4, and a summary table of historical results for

contaminants of concern are provided in Table V. Concentrations that exceed NJDEP Ground Water Quality Criteria (New Jersey Administrative Code 7:9-6) are highlighted in Table IV. The complete ground water laboratory data packages and the electronic data deliverables are included under separate cover. Sampling results for the monitoring events are discussed below in Section 4.1.3.

At each sampled well location, TRC collected the samples from the passive diffusion bags (PDBs) at selected intervals in the wells and filled the appropriate bottleware for analysis of volatile organic compounds (VOC+10) using EPA Method 624+10. The samples were submitted to STL for analysis.

4.1.3 Summary of Ground Water Results

The highest TCE concentrations reported during the September 2006 event were from on-site wells MW-549A and MW-549B with concentrations of 940 µg/L and 1,100 µg/L, respectively. The highest TCE concentrations reported during the March 2007 event were from on-site wells MW-549A and MW-549B with concentrations of 870 µg/L and 710 µg/L, respectively. These two wells are located in the former source area and are hydraulically upgradient from the pumping wells. During the September 2006 event, off-site wells MW-502B, MW-506A and MW-550B all reported TCE concentrations in excess of 200 µg/L. During the March 2007 event, off-site wells MW-506A, MW-507A and MW-550B all contained TCE concentrations in excess of 200 µg/L. These wells are located closest to the pumping well RW-1, within the cone of depression. During both the September 2006 and March 2007 sampling events, downgradient well clusters, including the MW-544 and MW-545 wells, reported single digit or non-detectable concentrations of TCE, the contaminant of concern for the Lockheed site.

Historical TCE results for the sampled wells are presented in Table 5, and Figure 6 illustrates TCE and other detected VOC concentrations from the sampled wells since the GWES became operational. Historical TCE concentrations versus time plots are presented in Appendix D for selected wells. The plume and compliance wells were sampled during both the September 2006 and March 2007 events. The background wells were only sampled during the March 2007 event. The plume wells are located near the former source area or directly downgradient and influenced the most by the active pumping at extraction well RW-1. General decreasing trends since pumping began in July 2003 were observed in most plume wells with some concentration fluctuations. The wells designated as compliance wells have also exhibited a decreasing trend in TCE concentrations.

Particularly notable is well MW-502B, located south of the extraction well at the intersection of North Drive and Route 22. Concentrations of TCE have decreased in this well from greater than 1,000 µg/L before pumping to less than 100 µg/L. Well MW-506A, located on North Drive, north of the extraction well, has also demonstrated a pronounced decreasing trend. These wells are within the cone of depression formed by the extraction well and provide a good indication of water quality in the cross-section of the plume directly impacted by the pumping program.

Other contaminants, including chloroform, tetrachloroethene (PCE), 1,1- Dichloroethane, cis-1,2-dichloroethene (cis-1,2-DCE), were detected in some of the sampled wells at relatively low concentrations. PCE, ethanes, and aromatic hydrocarbons are not associated with the LEC plume. Most of the off-site monitoring wells are located near major roadways, on streets and

parking lots, and the data indicate that there are other VOC sources degrading ground water quality in the general vicinity of the LEC plume.

4.2 Surface Water Monitoring and Sampling Activities

During the September 2006 and March 2007 sampling events, surface water samples were collected from four locations: SW-1, SW-2, SW-3 and SW-4. The approved revised monitoring plan eliminates SW-12 as a sampling point due to the presence of other sources and the distance from the Lockheed site. The surface water sample locations are presented on Figure 2.

4.2.1 Surface Water Sample Collection

During the September 2006 and March 2007 sampling events, stream flow measurements were collected at the sample locations to estimate stream discharge volume. Field measurements and calculations for stream flow are presented in Appendix C.

The surface water samples were submitted to STL and analyzed for VOC+10 using EPA Method 624+10. The surface water analytical results are presented in Table 6 and on Figure 7. The complete surface water laboratory data packages and the electronic data deliverables are included under separate cover.

4.2.2 Summary of Surface Water Results

Historical TCE results for the five surface water locations are presented in Table 7 and on Figure 7. After the GWES was activated in July 2003, significant decreases in TCE concentrations at sampling locations SW-2, SW-3 and SW-4 were observed as shown on graphs of historical TCE concentrations versus time (Appendix D). The most significant decrease in TCE concentrations occurred at location SW-2, which illustrates that pumping at extraction RW-1 well is controlling discharge of ground water containing TCE to Crab Brook. TCE concentrations at surface water locations SW-1, SW-2, SW-3, and SW-4 were below the applicable criteria or non-detect during the September 2006 monitoring period. TCE concentrations at surface water locations SW-1, SW-2, SW-3, and SW-4 were non-detect during the March 2007 monitoring period. These stream locations are all directly downgradient of the pumping well, and within the cone of depression formed by the pumping well along bedrock strike.

4.3 System Performance Monitoring and Sampling

Ground water is pumped continuously from extraction well RW-1 at an average rate of approximately 130 gpm. The interceptor trench has a sump with a pump which is controlled by a level sensor. When the water level in the trench rises, the pump is started and remains on until the level declines. Normally, the cone of depression formed by the extraction well maintains a low water level and the pump in the interceptor trench is off; heavy precipitation is generally the trigger for this pump.

The discharge to Crab Brook is monitored pursuant to NJPDES permit No. NJ0105899G. The original permit was an individual permit which required monthly effluent samples, to be analyzed for VOC+10, lead, chemical oxygen demand (COD) and total suspended solids (TSS). In addition, the NJPDES permit also required quarterly sampling for whole effluent toxicity testing (conducted by Aquatic Laboratory Services, Inc.). In June 2005 the individual NJPDES permit was revoked and reissued as a General Remediation Permit; as a result, the effluent sampling requirements have been reduced from monthly to quarterly. The whole effluent toxicity testing has also been reduced from two species to one species. In addition to the

quarterly NJPDES sampling, TRC continues to collect monthly performance samples to evaluate system performance and ensure compliance with discharge requirements. No effluent sample has ever reported an exceedance for any permit requirement.

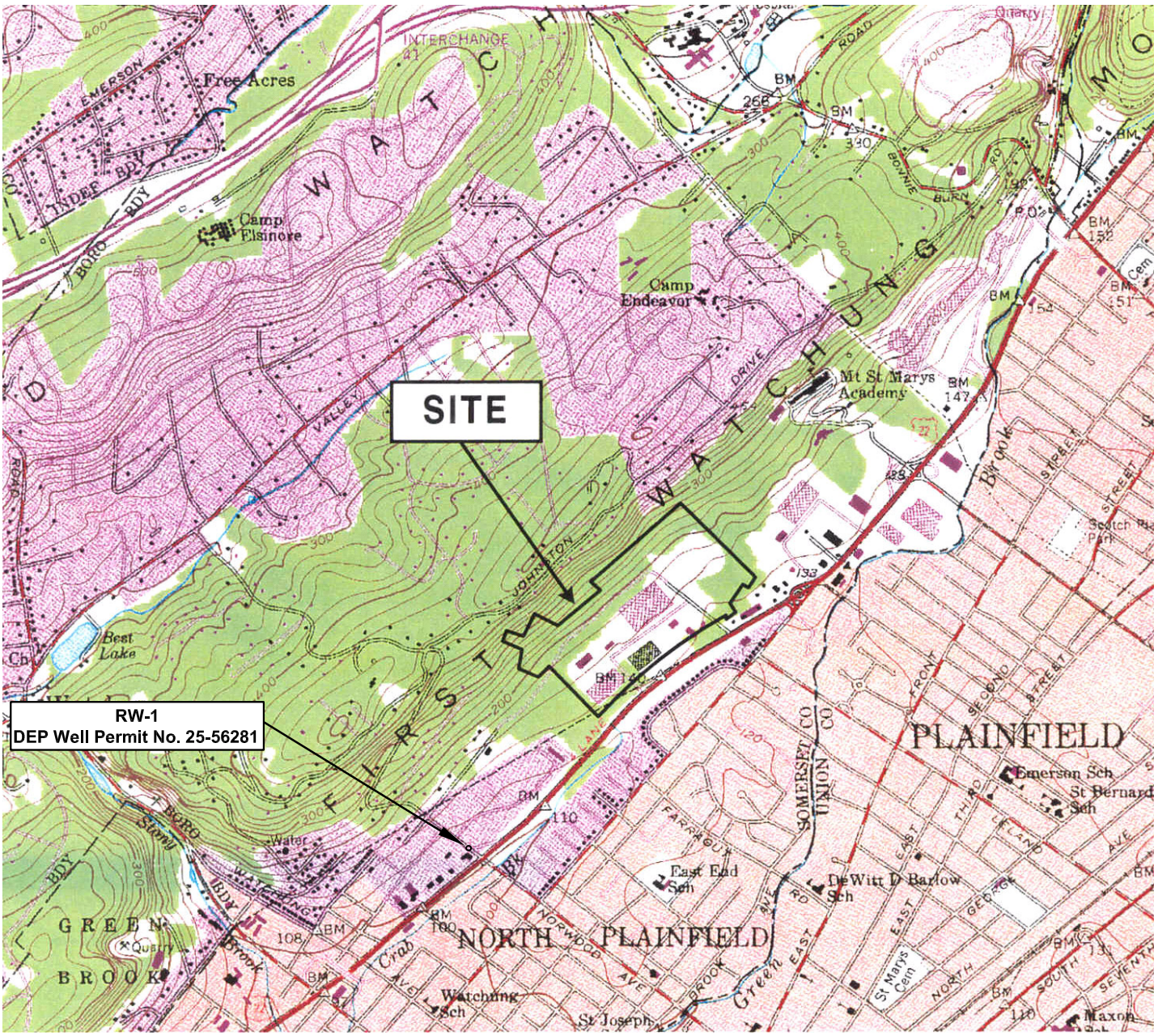
Performance sampling results are presented in Table 8. Influent TCE concentrations for this reporting period ranged from 60 µg/L in March 2007 to 260 µg/L in March 2006. Initial concentrations during the pumping test on the extraction well were nearly 1,000 µg/L. Effluent TCE concentrations have never exceeded 1.7 µg/L during the reporting period, which is well below the NJPDES permit limit for TCE of 5.4 µg/L.

5.0 CONCLUSIONS

Based upon the information provided in this progress report, the ground water extraction system at the former Lockheed site continues to function as designed. The discharge of contaminated ground water to Crab Brook is negligible, the ground water plume is being captured by the treatment system, and concentrations of contaminants are generally continuing to decline. The treatment plant is operating efficiently and no discharge permit limits have been exceeded.

The next annual report will be submitted in May 2008, and will cover monitoring and remedial activities through March 2008. An implementation schedule for the proposed activities is included as table 9. The Health and Safety Plan is included as Appendix E.

FIGURES



SOURCE: U.S.G.S. CHATHAM, NJ
7.5 MINUTE QUADRANGLE

0 1000 2000
SCALE IN FEET

N

TRC ENVIRONMENTAL CORP.
57 East Willow Street
Millburn, New Jersey 07041

SITE LOCATION MAP

FORMER LOCKHEED ELECTRONICS COMPANY, INC.
WATCHUNG, NEW JERSEY

PREPARED BY: DD/LB	DATE: APRIL 2007
JOB NO.: 2542	FIGURE: 1

2542SLM –04/18/07

LEGEND

- ACTIVE MONITORING WELL OR PIEZOMETER
- ▲ SW-1 SURFACE WATER MONITORING LOCATION
- WELL ABANDONED OR DESTROYED

0 1000 ft.
APPROXIMATE SCALE

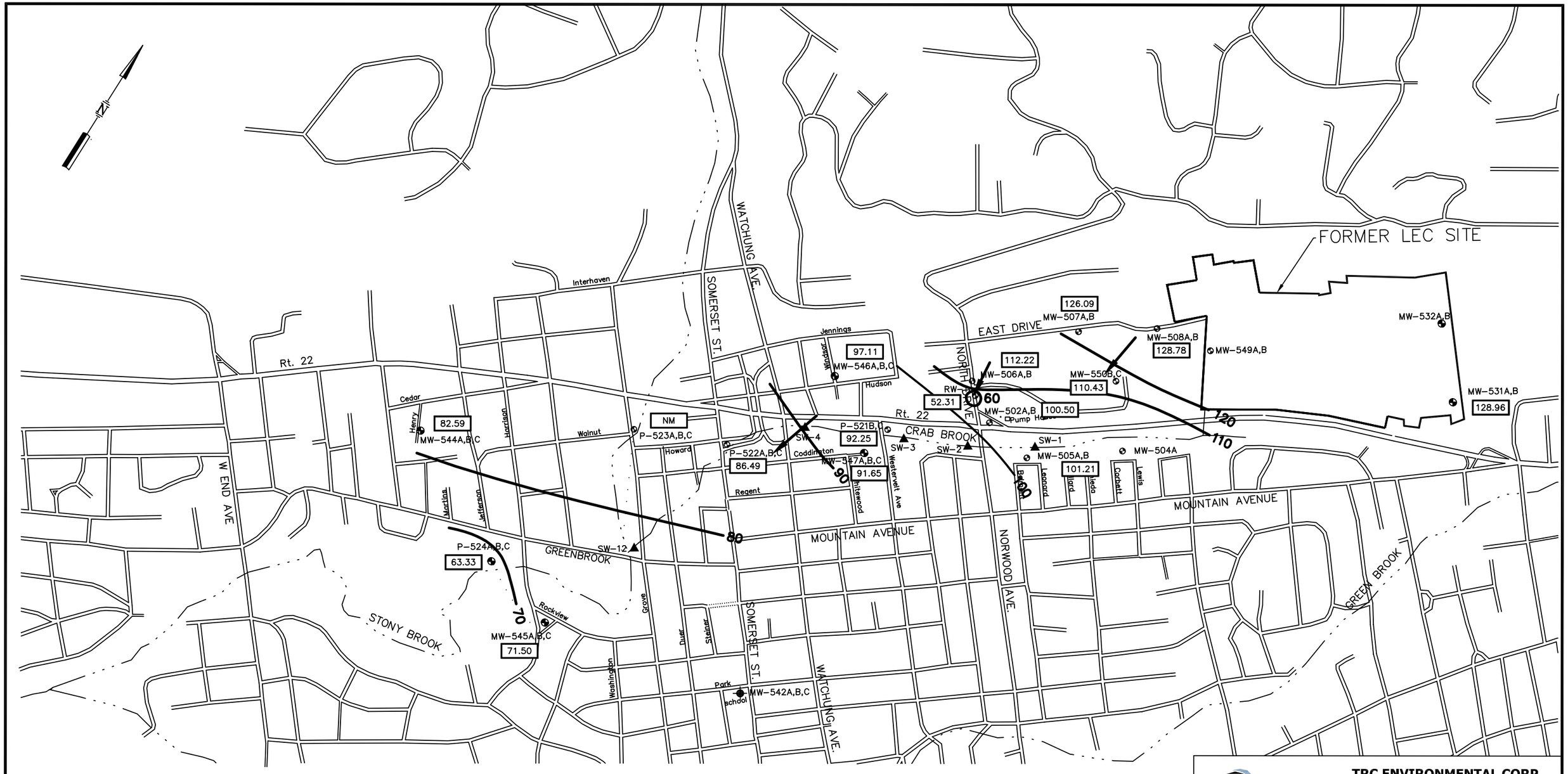
TRC ENVIRONMENTAL CORP.
57 East Willow Street
Millburn, New Jersey 07041

SITE PLAN

FORMER LOCKHEED ELECTRONICS COMPANY, INC.
WATCHUNG, NEW JERSEY

PREPARED BY: DD/LB	DATE: APRIL 2007
JOB NO.: 2542	FIGURE: 2

2542-1 -04/26/07



LEGEND

- ● ACTIVE MONITORING WELL OR PIEZOMETER
- ▲ SW-1 SURFACE WATER MONITORING LOCATION
- 71.50 GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (FT MSL)
- 86 GROUND WATER CONTOUR IN FT MSL
- GROUND WATER FLOW DIRECTION
- WELL ABANDONED OR DESTROYED

0 1000 ft.
APPROXIMATE SCALE

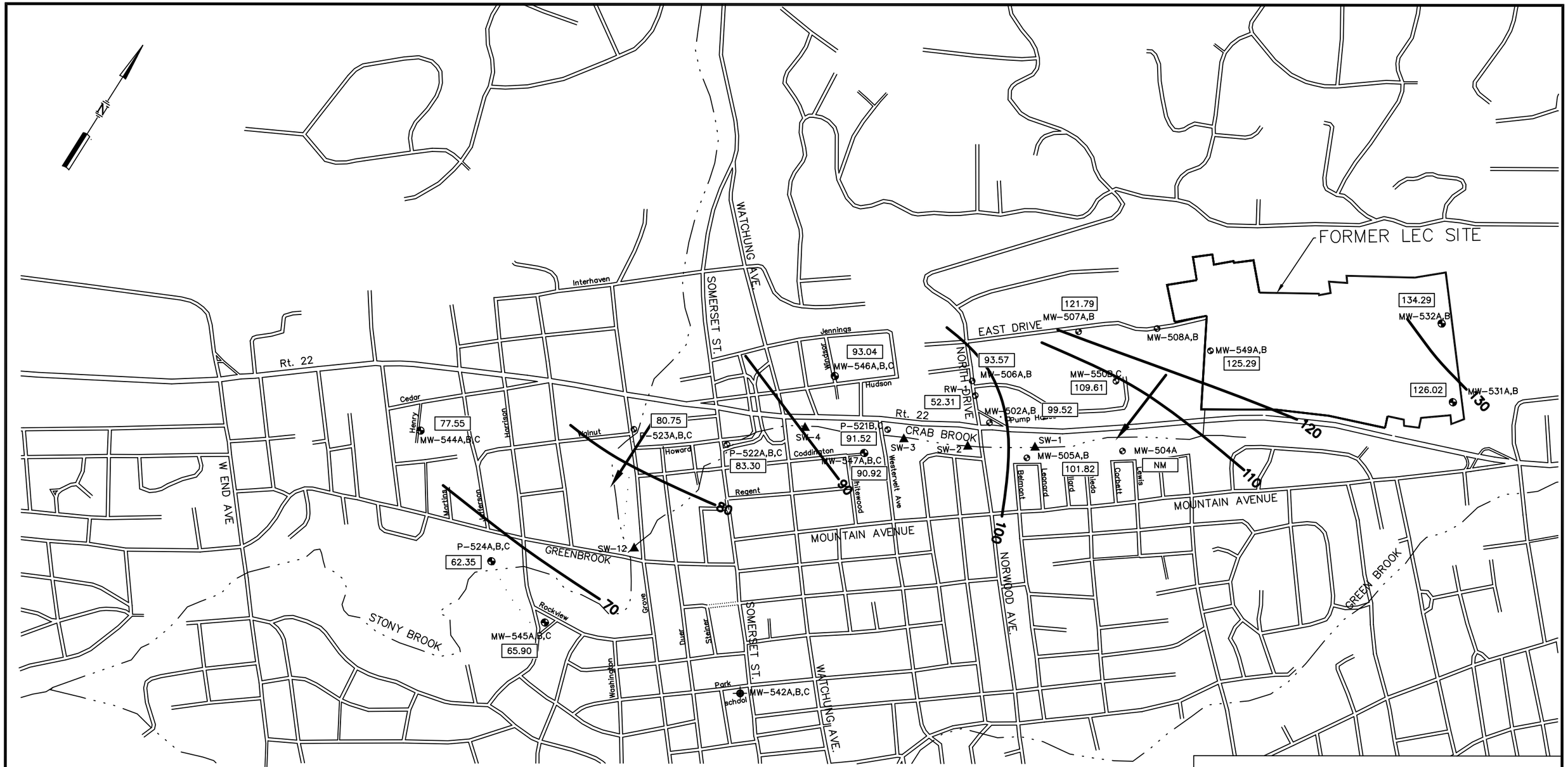
TRC ENVIRONMENTAL CORP.
57 East Willow Street
Millburn, New Jersey 07041

SHALLOW ZONE GROUND WATER CONTOUR MAP
SEPTEMBER 19, 2006

FORMER LOCKHEED ELECTRONICS COMPANY, INC.
WATCHUNG, NEW JERSEY

PREPARED BY: DD/LB	DATE: APRIL 2007
JOB NO.: 2542	FIGURE: 3

2542-12 -04/20/07



LEGEND

- ● ACTIVE MONITORING WELL OR PIEZOMETER
- ▲ SW-1 SURFACE WATER MONITORING LOCATION
- 65.90 GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (FT MSL)
- 80 GROUND WATER CONTOUR IN FT MSL
- GROUND WATER FLOW DIRECTION
- WELL ABANDONED OR DESTROYED

0 1000 ft.
APPROXIMATE SCALE

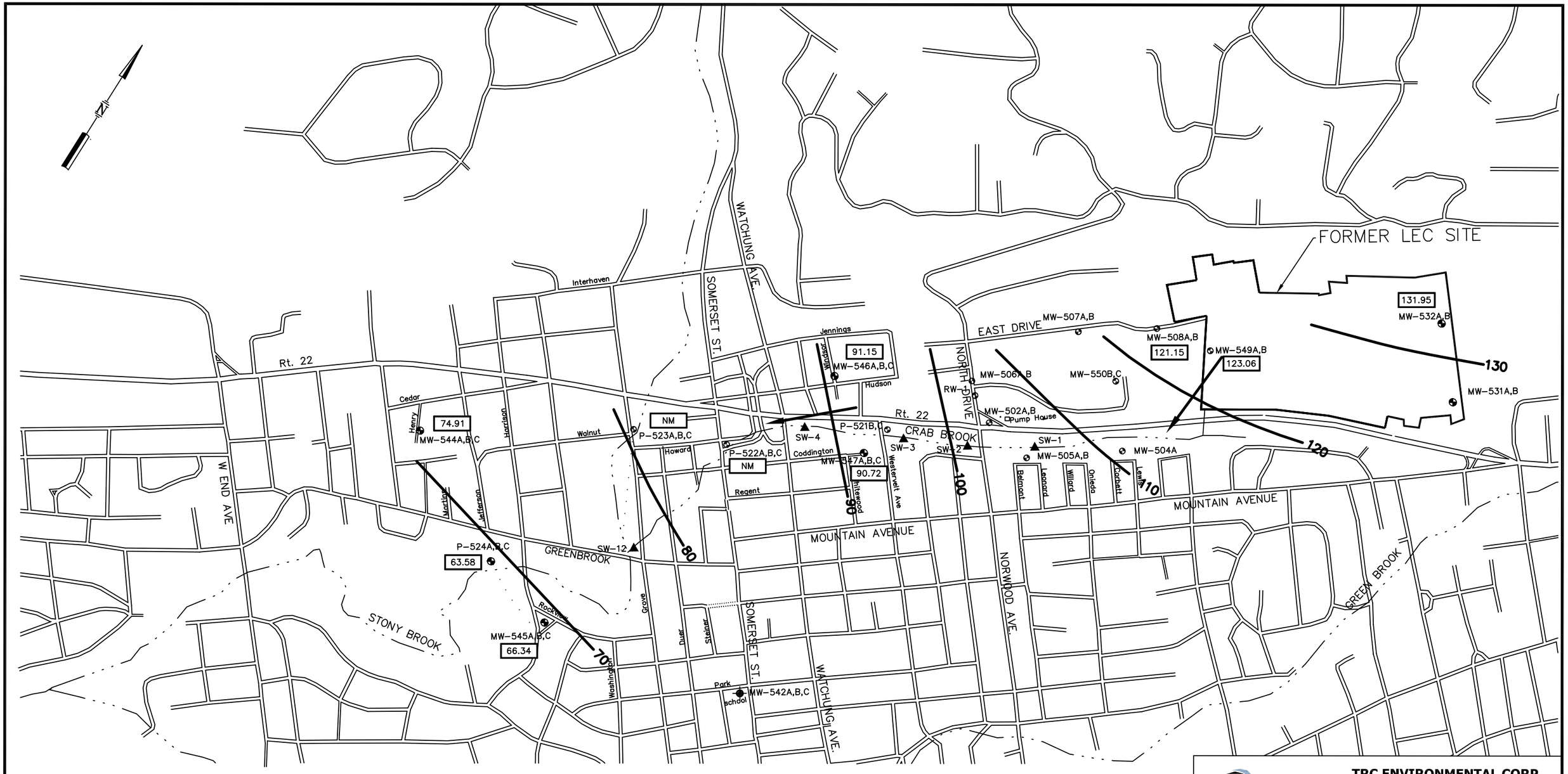
TRC ENVIRONMENTAL CORP.
57 East Willow Street
Millburn, New Jersey 07041

INTERMEDIATE ZONE GROUND WATER CONTOUR MAP
SEPTEMBER 19, 2006

FORMER LOCKHEED ELECTRONICS COMPANY, INC.
WATCHUNG, NEW JERSEY

PREPARED BY: DD/LB	DATE: APRIL 2007
JOB NO.: 2542	FIGURE: 4

2542-13A -04/24/07



LEGEND

- ● ACTIVE MONITORING WELL OR PIEZOMETER
- ▲ SW-1 SURFACE WATER MONITORING LOCATION
- 66.34 GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (FT MSL)
- 80 GROUND WATER CONTOUR IN FT MSL
- GROUND WATER FLOW DIRECTION
- WELL ABANDONED OR DESTROYED

0 1000 ft.
APPROXIMATE SCALE

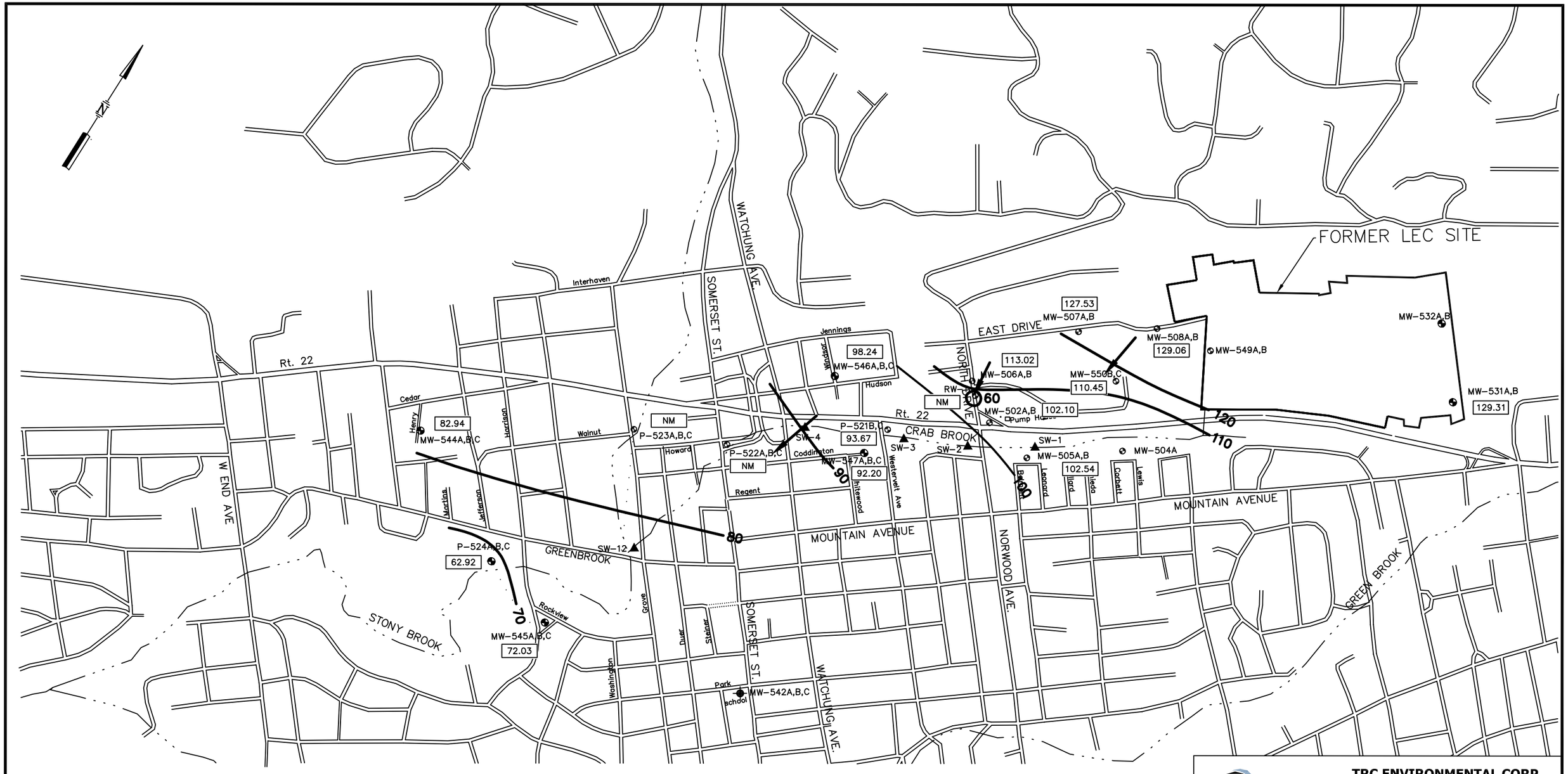
TRC ENVIRONMENTAL CORP.
57 East Willow Street
Millburn, New Jersey 07041

DEEP ZONE GROUND WATER CONTOUR MAP
SEPTEMBER 19, 2006

FORMER LOCKHEED ELECTRONICS COMPANY, INC.
WATCHUNG, NEW JERSEY

PREPARED BY: DD/LB	DATE: APRIL 2007
JOB NO.: 2542	FIGURE: 5

2542-14 -04/20/07



LEGEND

- ● ACTIVE MONITORING WELL OR PIEZOMETER
- ▲ SW-1 SURFACE WATER MONITORING LOCATION
- 72.03 GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (FT MSL)
- 86 GROUND WATER CONTOUR IN FT MSL
- GROUND WATER FLOW DIRECTION
- WELL ABANDONED OR DESTROYED

0 1000 ft.
APPROXIMATE SCALE

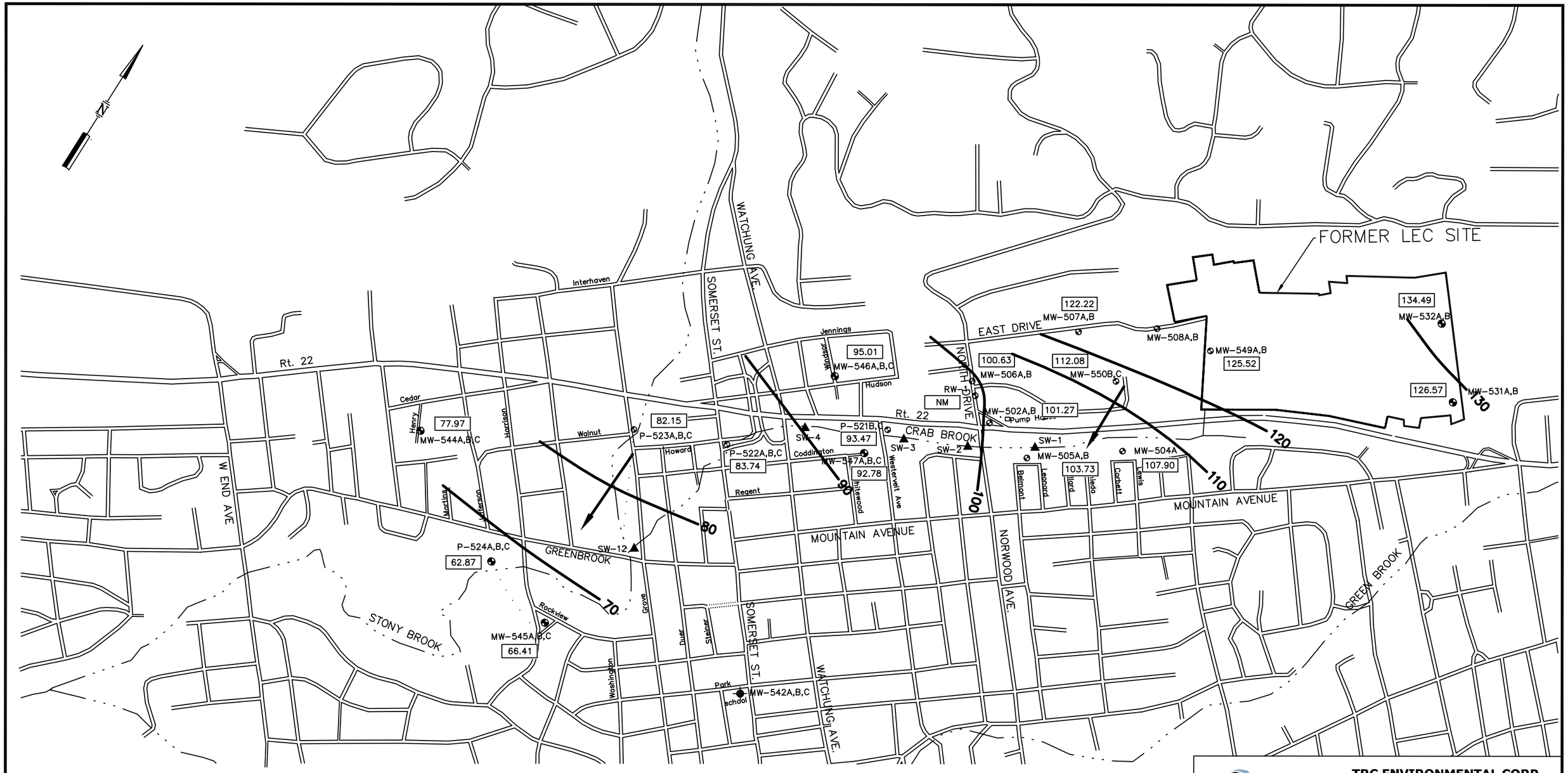
TRC ENVIRONMENTAL CORP.
57 East Willow Street
Millburn, New Jersey 07041

SHALLOW ZONE GROUND WATER CONTOUR MAP
MARCH 6, 2007

FORMER LOCKHEED ELECTRONICS COMPANY, INC.
WATCHUNG, NEW JERSEY

PREPARED BY: DD/LB	DATE: APRIL 2007
JOB NO.: 2542	FIGURE: 6

2542-12A -04/24/07



LEGEND

- ● ACTIVE MONITORING WELL OR PIEZOMETER
- ▲ SW-1 SURFACE WATER MONITORING LOCATION
- 66.41 GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (FT MSL)
- 80 GROUND WATER CONTOUR IN FT MSL
- GROUND WATER FLOW DIRECTION
- WELL ABANDONED OR DESTROYED

0 1000 ft.
APPROXIMATE SCALE

TRC ENVIRONMENTAL CORP.
57 East Willow Street
Millburn, New Jersey 07041

INTERMEDIATE ZONE GROUND WATER CONTOUR MAP
MARCH 6, 2007

FORMER LOCKHEED ELECTRONICS COMPANY, INC.
WATCHUNG, NEW JERSEY

PREPARED BY: DD/LB	DATE: APRIL 2007
JOB NO.: 2542	FIGURE: 7

2542-13 -04/20/07

LEGEND

- ● ACTIVE MONITORING WELL OR PIEZOMETER
- ▲ SW-1 SURFACE WATER MONITORING LOCATION
- 66.79 GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (FT MSL)
- 86 GROUND WATER CONTOUR IN FT MSL
- GROUND WATER FLOW DIRECTION
- WELL ABANDONED OR DESTROYED

0 1000 ft.
APPROXIMATE SCALE

TRC ENVIRONMENTAL CORP.
57 East Willow Street
Millburn, New Jersey 07041

DEEP ZONE GROUND WATER CONTOUR MAP
MARCH 6, 2007

FORMER LOCKHEED ELECTRONICS COMPANY, INC.
WATCHUNG, NEW JERSEY

PREPARED BY: DD/LB	DATE: APRIL 2007
JOB NO.: 2542	FIGURE: 8

2542-14A -04/20/07

MW-506A

DATE	9/23/2003	12/10/2003	3/9/2004	6/4/2004	9/23/2004	12/9/2004	3/3/2005	6/3/2005	9/8/2005	3/17/2006	9/20/2006	3/8/2007
TCE	960	830	940	710	1300	710	650	730	620	700	860	420
PCE	3.1 U	3.1 U	3.1 U	1.6 U	3.6 U	2.0	1.8 U	2.2 U	4.5U	2.2U	2.6	2.1U
TTVOC	971	836	940	717	1313	722	657	738	626	705	869	424
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-506B

DATE	9/23/2003	12/10/2003	3/9/2004	6/4/2004	9/23/2004	12/9/2004	3/3/2005	6/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
TCE	14	15	16	13	12	15	16	14	36	12	13	7.6
TTVOC	14	15	16	13	13	16	17	14	36	12.7	13	8
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-550B

DATE	9/23/2003	12/10/2003	3/9/2004	6/4/2004	9/23/2004	12/9/2004	3/3/2005	6/3/2005	9/8/2005	3/7/2006	9/20/2006	3/22/2007
TCE	800	780	750	650	1400	720	620	760	740	730	860	600
PCE	3.1 U	4.5	3.1 U	3.1	6.1	4.9	3.6 U	5.0	2.9	4.5U	5.5	3.5
TTVOC	800	793	750	660	1417	733	630	774	748.3	730	872	608
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-550C

DATE	9/23/2003	12/10/2003	3/9/2004	6/4/2004	9/23/2004	12/9/2004	3/3/2005	6/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
TCE	140	150	170	140	140	130	120	140	160	140	110	100
TTVOC	142	152	173	142	142	133	122	142	161.8	141.4	111	101
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-507A

DATE	9/23/2003	12/11/2003	3/9/2004	6/4/2004	9/23/2004	12/9/2004	3/4/2005	6/3/2005	9/8/2005	3/7/2006	9/20/2006	3/22/2007
TCE	860	740	690	450	1100	610	540	570	600	600	0.4U	300
TTVOC	860	748	698	460	1109	617	546	578	605.5	606.8	ND	306
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-507B

DATE	3/25/2004	3/4/2005	3/7/2006	3/8/2007
TCE	16	20	19	7.9
TTVOC	16	21	19.6	8.2
TNTVOC	ND	ND	ND	ND

MW-508A

DATE	3/25/2004	3/4/2005	3/7/2006	3/8/2007
TCE	35	1.2	0.5	2.3
TTVOC	37	22	20.5	14.3
TNTVOC	ND	ND	ND	ND

MW-508B

DATE	9/23/2003	12/11/2003	3/9/2004	6/4/2004	9/23/2004	12/9/2004	3/4/2005	6/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
TCE	69	40	41	32	30	31	26	40	40	31	34	27
TTVOC	70	41	41	33	31	32	27	41	40.9	31.9	35.2	28.2
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-532A

DATE	3/25/2004	3/3/2005	3/7/2006	3/8/2007
TCE	33	37	40	29
PCE	0.5	1.0	1.1	1.2
TTVOC	34	38	41.1	30.2
TNTVOC	ND	ND	ND	ND

MW-546A

DATE	9/24/2003	12/11/2003	3/9/2004	6/4/2004	9/24/2004	12/9/2004	3/4/2005	6/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
TCE	91	88	90	82	110	110	110	120	130	150	120	110
TTVOC	94	91	93	85	114	115	114	124	134.1	155.2	124	114
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-544A

DATE	9/23/2003	3/9/2004	9/24/2004	3/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
TTVOC	0.8	ND	ND	ND	ND	ND	0.4	0.4U
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND

MW-544B

DATE	9/23/2003	3/9/2004	9/24/2004	3/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
TTVOC	0.6	0.8	0.6	ND	0.6	0.7	0.8	0.7
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND

MW-544C

DATE	9/23/2003	3/9/2004	9/24/2004	3/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
TCE	1.3	1.8	1.3	1.8	1.2	1.5	1.1	0.7
PCE	4.0	4.6	3.1	3.0	2.2	1.9	2.7	1.9
TTVOC	5.3	7.3	5.4	4.8	4.1	4.4	4.3	3.0
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND

P-522A

DATE	9/23/2003	3/9/2004	9/24/2004	3/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
TCE	3.8	3.0	3.6	3.3	3	3	NS	2.2
TTVOC	7.9	5.4	6.4	6.1	5.3	5.7	NS	4.5
TNTVOC	ND	ND	ND	ND	ND	ND	NS	ND

P-522B

DATE	9/23/2003	3/9/2004	9/24/2004	3/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
CF	6.7	4.9	4	4.7	3.6	4.3	3.6	3.6
TCE	220	220	200	190	210	210	190	34
PCE	1.8	1.9	1.7	2.0	1.4	1.4	2.0	1.9
TTVOC	263	259	243	239	260.3	260.8	241	72
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND

P-522C

DATE	9/23/2003	3/9/2004	9/24/2004	3/3/2005	9/8/2005	3/7/2006	9/20/2006	3/22/2007
1,2-DCA	0.3 U	0.3 U	0.4 U	2.9	0.3U	0.3U	0.3U	0.3U
TCE	16	0.2 U	0.4 U	25	0.4U	0.4U	0.5	0.4U
PCE	1.6	0.3 U	0.4 U	3.1	0.4U	0.4U	0.4U	0.4U
TTVOC	24	ND	0.4	79	ND	ND	0.5	ND
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND

MW-549A

DATE	9/24/2003	12/10/2003	3/9/2004	6/4/2004	9/23/2004	12/9/2004	3/3/2005	6/3/2005	10/14/2005	3/7/2006	9/20/2006	3/8/2007
TCE	1100	900	1000	880	820	850	820	98	1100	990	940	870
PCE	3.1U	3.1U	3.1U	1.6U	3.6U	3.6U	3.6U	0.4U	4.5U	4.5U	4.5U	4.9
TTVOC	1100	900	1000	883	824	850	825	98	1105.6	990	940	882
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-549B

DATE	9/24/2003	12/10/2003	3/9/2004	6/4/2004	9/23/2004	12/9/2004	3/3/2005	6/3/2005	10/14/2005	3/7/2006	9/20/2006	3/8/2007
TCE	2300	1800	1200	1400	1500	1200	1200	650	1300	1400	1100	710
PCE	7.8 U	8.5	13	6.7	9.0 U	8.1	7.2 U	3.9	6.6	4.5U	6.7	4.2U
TTVOC	2319	1825	1213	1416	1510	1219	1215	659	1318.6	1408.9	1114	710
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-505A

DATE	3/25/2004	3/3/2005	3/7/2006	3/22/2007
TTVOC	0.5	ND	0.5	0.5
TNTVOC	ND	ND	ND	ND

MW-505B

DATE	3/25/2004	3/3/2005	3/3/2005	3/8/2007
TTVOC	1.2	1.8	1.8	1.1
TNTVOC	ND	ND	ND	ND

MW-502A

DATE	9/24/2003	12/11/2003	3/9/2004	6/4/2004	9/23/2004	12/9/2004	3/3/2005	6/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
TCE	1.4	1.0	0.8	0.6	0.6	0.9	1.2	0.8	0.6	0.6	0.9	0.4
TTVOC	2.1	1.4	1.5	1.0	1.0	1.6	1.8	0.8	0.6	1.3	1.6	1.1
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-502B

DATE	9/24/2003	12/11/2003	3/9/2004	6/4/2004	9/23/2004	12/9/2004	3/3/2005	6/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
TCE	1100	670	730	390	350	290	330	340	280	300	320	23
PCE	3.1 U	3.1 U	3.1 U	1.0	1.8 U	1.2	0.7 U	0.9	0.9U	0.9U	1.1	0.7
TTVOC	1114	688	771	412	368	308	375	381	296	332	348	40.4
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-545A

DATE	9/23/2003	3/9/2004	9/24/2004	3/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
PCE	4.6	4.4	3.6	3.8	3.3	3.1	3.7	3.6
TTVOC	5.2	4.4	4.0	3.8	3.3	3.1	4.2	3.9
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND

MW-545B

DATE	9/23/2003	3/9/2004	9/24/2004	3/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
TTVOC	0.5	ND	ND	ND	ND	ND	ND	0.3
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND

MW-545C

DATE	9/23/2003	3/9/2004	9/24/2004	3/3/2005	9/8/2005	3/7/2006	9/20/2006	3/8/2007
TTVOC	1.3	1.8	0.5	ND	ND	1.1	ND	0.6
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND

VOLATILE ORGANIC COMPOUND (VOC) EXCEEDANCE PARAMETER LIST

		GWQS
1,1-DCA	= 1,1-DICHLOROETHANE	50
1,2-DCA	= 1,2-DICHLOROETHANE	2
t-1,2-DCE	= TRANS-1,2-DICHLOROETHENE	100
c-1,2-DCE	= CIS-1,2-DICHLOROETHENE	70
CF	= CHLOROFORM	6
TCE	= TRICHLOROETHENE	*1*
PCE	= TETRACHLOROETHENE	*1*
TNTVOC	= TOTAL NON-TARGETED VOLATILE ORGANIC COMPOUNDS	*500*
TTVOC	= TOTAL TARGETED VOLATILE ORGANIC COMPOUNDS	

U = COMPOUND WAS NOT DETECTED AT THE INDICATED CONCENTRATION
GWQS = NJ GROUND WATER QUALITY STANDARDS
ND = NOT DETECTED

LEGEND

- ACTIVE MONITORING WELL OR PIEZOMETER
- SW-1 SURFACE WATER MONITORING LOCATION
- WELL DESTROYED

0 500 FT.
APPROXIMATE SCALE

TRC ENVIRONMENTAL CORP.
57 East Willow Street
Millburn, New Jersey 07041

QUARTERLY GROUND WATER SAMPLING RESULTS
SEPTEMBER 2003 TO MARCH 2007

FORMER LOCKHEED ELECTRONICS COMPANY, INC.
WATCHUNG, NEW JERSEY

PREPARED BY: DD/LB | DATE: APRIL 2007
JOB NO.: 2542 | FIGURE: 9

2542-9A -05/01/07

SW-4

DATE	7/22/2003	8/19/2003	9/22/2003	10/17/2003	11/14/2003	12/10/2003	1/9/2004	2/11/2004	3/8/2004	4/7/2004	5/10/2004	6/3/2004	7/1/2004	8/10/2004	9/23/2004	10/13/2004	11/9/2004	12/8/2004	1/13/2005	2/3/2005	3/2/2005	4/7/2005	5/9/2005	6/2/2005	7/15/2005	8/12/2005	9/8/2005	10/14/2005	11/22/2005	3/6/2006	9/19/2006	3/6/2007
TCE	1.7	ND	ND	ND	ND	ND	0.6	0.6	ND	ND	0.7	ND	ND	ND	ND	0.4	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BZ	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCE	ND	ND	ND	0.3	ND	1.0	ND	ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TTVOC	ND	ND	ND	0.3	ND	1.6	0.6	1.8	0.7	ND	0.7	ND	ND	ND	ND	0.4	ND	4.5	0.5	ND	1.1	2.5	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

SW-3

DATE	7/22/2003	8/19/2003	9/22/2003	10/17/2003	11/14/2003	12/10/2003	1/9/2004	2/11/2004	3/8/2004	4/7/2004	5/10/2004	6/3/2004	7/1/2004	8/10/2004	9/23/2004	10/13/2004	11/9/2004	12/8/2004	1/13/2005	2/3/2005	3/2/2005	4/7/2005	5/9/2005	6/2/2005	7/15/2005	8/12/2005	9/8/2005	10/14/2005	11/22/2005	3/6/2006	9/19/2006	3/6/2007
TCE	2.6	1.2	ND	ND	ND	ND	1.1	0.8	ND	0.8	1.2	ND	ND	ND	ND	0.7	ND	ND	ND	0.4	1.6	ND	ND	ND	ND	ND	ND	ND	ND	0.6	ND	ND
PCE	ND	ND	ND	ND	ND	ND	ND	ND	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TTVOC	2.6	1.2	ND	ND	ND	ND	1.1	2	0.4	0.3	1.2	ND	ND	ND	ND	0.7	ND	1.1	ND	0.8	1.6	ND	ND	1.7	ND	ND	ND	ND	ND	0.6	0.7	ND
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

SW-2

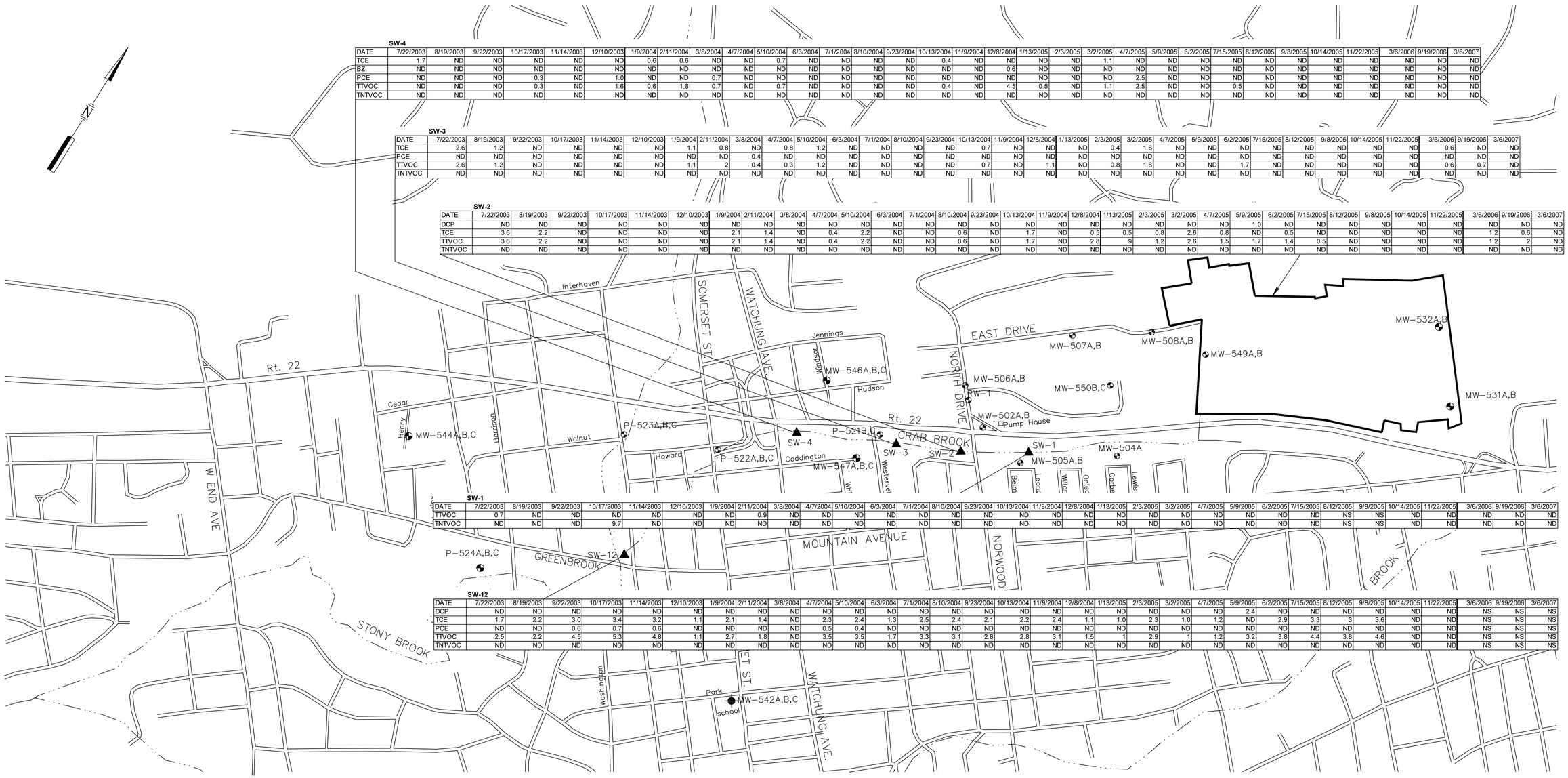
DATE	7/22/2003	8/19/2003	9/22/2003	10/17/2003	11/14/2003	12/10/2003	1/9/2004	2/11/2004	3/8/2004	4/7/2004	5/10/2004	6/3/2004	7/1/2004	8/10/2004	9/23/2004	10/13/2004	11/9/2004	12/8/2004	1/13/2005	2/3/2005	3/2/2005	4/7/2005	5/9/2005	6/2/2005	7/15/2005	8/12/2005	9/8/2005	10/14/2005	11/22/2005	3/6/2006	9/19/2006	3/6/2007
DCP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
TCE	3.6	2.2	ND	ND	ND	ND	2.1	1.4	ND	0.4	2.2	ND	ND	0.6	ND	1.7	ND	0.5	0.5	0.8	2.6	0.8	ND	0.5	ND	ND	ND	ND	ND	1.2	0.6	ND
TTVOC	3.6	2.2	ND	ND	ND	ND	2.1	1.4	ND	0.4	2.2	ND	ND	0.6	ND	1.7	ND	2.8	9	1.2	2.6	1.5	1.7	1.4	0.5	ND	ND	ND	ND	1.2	2	ND
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

SW-1

DATE	7/22/2003	8/19/2003	9/22/2003	10/17/2003	11/14/2003	12/10/2003	1/9/2004	2/11/2004	3/8/2004	4/7/2004	5/10/2004	6/3/2004	7/1/2004	8/10/2004	9/23/2004	10/13/2004	11/9/2004	12/8/2004	1/13/2005	2/3/2005	3/2/2005	4/7/2005	5/9/2005	6/2/2005	7/15/2005	8/12/2005	9/8/2005	10/14/2005	11/22/2005	3/6/2006	9/19/2006	3/6/2007
TTVOC	0.7	ND	ND	ND	ND	ND	ND	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND
TNTVOC	ND	ND	ND	9.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND

SW-12

DATE	7/22/2003	8/19/2003	9/22/2003	10/17/2003	11/14/2003	12/10/2003	1/9/2004	2/11/2004	3/8/2004	4/7/2004	5/10/2004	6/3/2004	7/1/2004	8/10/2004	9/23/2004	10/13/2004	11/9/2004	12/8/2004	1/13/2005	2/3/2005	3/2/2005	4/7/2005	5/9/2005	6/2/2005	7/15/2005	8/12/2005	9/8/2005	10/14/2005	11/22/2005	3/6/2006	9/19/2006	3/6/2007
DCP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4	ND	ND	ND	ND	ND	ND	NS	NS	NS
TCE	1.7	2.2	3.0	3.4	3.2	1.1	2.1	1.4	ND	2.3	2.4	1.3	2.5	2.4	2.1	2.2	2.4	1.1	1.0	2.3	1.0	1.2	ND	2.9	3.3	3	3.6	ND	ND	NS	NS	NS
PCE	ND	ND	0.6	0.7	0.6	ND	ND	ND	ND	0.5	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS
TTVOC	2.5	2.2	4.5	5.3	4.8	1.1	2.7	1.8	ND	3.5	3.5	1.7	3.3	3.1	2.8	2.8	3.1	1.5	1	2.9	1	1.2	3.2	3.8	4.4	3.8	4.6	ND	ND	NS	NS	NS
TNTVOC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS



VOLATILE ORGANIC COMPOUND (VOC) EXCEEDANCE PARAMETER LIST	FW-2 QC
DCP = cis-1,3-DICHLOROPROPENE	0.193
BZ = BENZENE	0.15
PCE = TETRACHLOROETHENE	*0.388*
TCE = TRICHLOROETHENE	*1.09*
TNTVOC = TOTAL NON-TARGETED VOLATILE ORGANIC COMPOUNDS	*500*
TTVOC = TOTAL TARGETED VOLATILE ORGANIC COMPOUNDS	

LEGEND

- ACTIVE MONITORING WELL OR PIEZOMETER
- SW-1 SURFACE WATER MONITORING LOCATION
- WELL DESTROYED
- NS NOT SAMPLED

0 500 FT.
APPROXIMATE SCALE

TRC ENVIRONMENTAL CORP.
57 East Willow Street
Millburn, New Jersey 07041

SURFACE WATER
SAMPLING RESULTS
JULY 2003 TO MARCH 2007

FORMER LOCKHEED ELECTRONICS COMPANY, INC.
WATCHUNG, NEW JERSEY

PREPARED BY: DD/LB	DATE: APRIL 2007
JOB NO.: 2542	FIGURE: 10

2542-10-1 -05/01/07

TABLES

TABLE 1
REVISED WATER MONITORING & SAMPLING SCHEDULE
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Revised Sample Locations		Sampling Month	Analytical Parameters
Surface Water:	SW-1, SW-2, SW-3, SW-4	March, September	VOC+10
Background Wells: Plume Wells: Compliance Wells:	505A,B; 507B; 508A; 532A 502A,B; 506A,B; 507A; 508B; 546A; 549A,B; 550B,C P522A,B,C; 544A,B,C; 545A,B,C	March	VOC+10
Plume Wells: Compliance Wells:	502A,B; 506A,B; 507A; 508B; 546A; 549A,B, 550B,C P522A,B,C; 544A,B,C; 545A,B,C	September	VOC+10

TABLE 2
GROUND WATER ELEVATION DATA
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Monitoring Well	Well Depths ft. (bgs)	TOC Elevation ft. (MSL)	September 19, 2006		March 6, 2007	
			Depth to Water	GW Elevation ft. (MSL)	Depth to Water	GW Elevation ft. (MSL)
MW-501A	75.5	120.90	MISSING	NM	MISSING	NM
MW-501B	19	121.07	MISSING	NM	MISSING	NM
MW-502A	75.5	103.89	4.37	99.52	2.62	101.27
MW-502B	19	103.85	3.35	100.50	1.75	102.10
MW-503A	73	110.26	MISSING	NM	MISSING	NM
MW-503B	24.4	110.58	MISSING	NM	MISSING	NM
MW-504A	76.5	112.10	NM	NM	4.20	107.90
MW-504B	19.8	112.09	MISSING	NM	MISSING	NM
MW-505A	75	103.85/108.27	6.45	101.82	4.54	103.73
MW-505B	20	103.73/107.73	7.06	101.21	5.19	102.54
MW-506A	96.3	122.22	28.65	93.57	21.59	100.63
MW-506B	25	121.28	9.06	112.22	8.26	113.02
MW-507A	151	176.39	54.60	121.79	54.17	122.22
MW-507B	60	176.39	50.30	126.09	48.86	127.53
MW-508A	263	186.85	65.70	121.15	65.58	121.27
MW-508B	68	187.13	58.35	128.78	58.07	129.06
MW-509A	423	231.30	MISSING	NM	MISSING	NM
MW-509B	84	230.77	MISSING	NM	MISSING	NM
MW-510A	201	182.22	MISSING	NM	MISSING	NM
MW-510B	70	182.17	MISSING	NM	MISSING	NM
PZ-521B	100.26	99.84	8.32	91.52	6.37	93.47
PZ-521C	15.5	100.07	7.82	92.25	6.4	93.67
PZ-522A	197	93.85	NM	NM	11.55	82.30
PZ-522B	100	93.78	10.48	83.30	10.04	83.74
PZ-522C	17.5	93.78	7.29	86.49	NM	NM
PZ-523A	199	94.13	NM	NM	NM	NM
PZ-523B	103	94.05	13.30	80.75	11.9	82.15
PZ-523C	14	93.91	NM	NM	NM	NM
PZ-524A	199	68.12/68.33	4.75	63.58	4.26	64.07
PZ-524B	99	67.86/68.39	5.98	62.35	5.52	62.87
PZ-524C	15	67.78/67.29	5.00	63.33	4.37	62.92
MW-531A	142.2	138.43	12.41	126.02	11.86	126.57
MW-531B	47.9	138.46	9.50	128.96	9.15	129.31
MW-532A	250	186.55	54.60	131.95	54.28	132.27
MW-532B	102.7	185.35	51.06	134.29	50.86	134.49

TABLE 2
GROUND WATER ELEVATION DATA
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Monitoring Well	Well Depths ft. (bgs)	TOC Elevation ft. (MSL)	September 19, 2006		March 6, 2007	
			Depth to Water	GW Elevation ft. (MSL)	Depth to Water	GW Elevation ft. (MSL)
MW-542A	200	99.65	MISSING	NM	MISSING	NM
MW-542B	100	99.71	MISSING	NM	MISSING	NM
MW-542C	33	99.57	MISSING	NM	MISSING	NM
MW-544A	197	85.81	10.90	74.91	10.66	75.15
MW-544B	100	86.00	8.45	77.55	8.03	77.97
MW-544C	23	86.04	3.45	82.59	3.1	82.94
MW-545A	197	85.69	19.35	66.34	18.9	66.79
MW-545B	92	85.80	19.90	65.90	19.39	66.41
MW-545C	35	85.75	14.25	71.50	13.72	72.03
MW-546A	200	106.55	15.40	91.15	17.88	88.67
MW-546B	100	107.06	14.02	93.04	12.05	95.01
MW-546C	31	108.16	11.05	97.11	9.92	98.24
MW-547A	200	98.33/98.17	7.45	90.72	4.88	93.29
MW-547B	100	98.46/98.25	7.25	90.92	5.47	92.78
MW-547C	22	98.32	6.52	91.65	6.12	92.20
MW-549A	215	179.31	56.25	123.06	55.84	123.47
MW-549B	115	179.77	54.48	125.29	54.25	125.52
MW-549C	73.5	179.41	NM	NM	NM	NM
MW-550B	101	132.56	22.95	109.61	20.48	112.08
MW-550C	50	132.13	21.70	110.43	21.68	110.45
RW-1	150	110.91	58.60	52.31	NM	NM

PZ = Piezometer
bgs = Below Ground Surface
TOC = Top of Casing
RW = Extraction Well
MISSING = Well has been destroyed and unable to be located
NM = Not Measured

Note: Wells MW-505A and B, PZ-524A, B, and C, and MW-547A and B were resurveyed on September 7, 2004 after they were repaired. Top of casing casing elevations have changed for these wells and were used in elevation calculations from September 2004 to June 2005.

TABLE 3
HYDROSTRATIGRAPHIC WELL CLASSIFICATION
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Shallow Wells	Intermediate Wells	Deep Wells
~~501 B~~	~~501 A~~	508 A
502 B	502 A	P 522 A
503 B	~~503 A~~	P 523 A
504 B	504 A	P 524 A
505 B	505 A	532 A
506 B	506 A	~~542 A~~
507 B	507 A	544 A
508 B	~~510 A~~	545 A
509 B	P 521 B	546 A
510 B	P 522 B	547 A
P 521 C	P 523 B	~~548 A*~~
P 522 C	P 524 B	549 A
P 523 C	531 A	
P 524 C	532 B	
531 B	~~542 B~~	
542 C	544 B	
544 C	545 B	
545 C	546 B	
546 C	547 B	
547 C	~~548 B*~~	
548 C*	549 B	
549 C	549 B	
550 C	550 B	

Notes:
~~510 A~~ strike-through indicates well is missing or abandoned.
***** Monitoring well cluster 548 was abandoned in September 1999

TABLE 4
GROUND WATER ANALYTICAL RESULTS
SEPTEMBER 2006 THROUGH MARCH 2007
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Sample ID		MW-502A	MW-502B	MW506A	MW-506B	MW-507A	MW-508B	PZ-522B	PZ-522C	MW-544A	MW-544B
Lab Sample Number	**New Jersey**	771254	771255	771257	771256	771258	771259	771261	771262	771266	771267
Sampling Date	**Ground Water**	9/20/2006	9/20/2006	9/20/2006	9/20/2006	9/20/2006	9/20/2006	9/20/2006	9/20/2006	9/20/2006	9/20/2006
Matrix	**Quality**	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor	**Criteria (GWQC)**	1.0	2.0	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units	**ug/L**	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
VOLATILE COMPOUNDS (GC/MS)											
Chloromethane	*30*	0.3 U	0.6 U	1.4 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Bromomethane	*10*	0.3 U	0.6 U	1.6 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Vinyl Chloride	*5*	0.3 U	0.6 U	1.4 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chloroethane	*100*	0.2 U	0.5 U	1.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Methylene Chloride	*3*	0.5 U	1.0 U	2.6 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane		0.2 U	0.5 U	1.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	*2*	0.4 U	0.7 U	1.8 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethane	*50*	0.3 U	0.6 U	1.6 U	0.3 U	0.3 U	0.3 U	2.3	0.3 U	0.3 U	0.3 U
trans-1,2-Dichloroethene	*100*	0.4 U	0.9 U	2.2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
cis-1,2-Dichloroethene	*70*	0.4 U	27	6.7	0.4 U	0.4 U	0.4 U	43	0.4 U	0.4 U	0.4 U
Chloroform	*6*	0.7	1.0 U	2.6 U	0.5 U	0.5 U	1.2	3.6	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	*2*	0.3 U	0.6 U	1.4 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-Trichloroethane	*30*	0.3 U	0.7 U	1.7 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Carbon Tetrachloride	*2*	0.3 U	0.6 U	1.6 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Bromodichloromethane	*1*	0.3 U	0.6 U	1.6 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloropropane	*1*	0.3 U	0.6 U	1.4 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
cis-1,3-Dichloropropene		0.2 U	0.5 U	1.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	*1*	0.9	**320**	**860**	**13**	0.4 U	**34**	**190**	0.5	0.4	0.8
Dibromochloromethane	*10*	0.3 U	0.5 U	1.4 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-Trichloroethane	*3*	0.3 U	0.7 U	1.6 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	*1*	0.3 U	0.7 U	1.6 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
trans-1,3-Dichloropropene		0.2 U	0.5 U	1.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl Vinyl Ether	*100*	0.4 U	0.8 U	2.1 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Bromoform	*4*	0.2 U	0.4 U	1.1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	*1*	0.4 U	**1.1**	**2.6**	0.4 U	0.4 U	0.4 U	**2**	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	*1*	0.3 U	0.7 U	1.7 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Toluene	*1000*	0.4 U	0.8 U	2.0 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Chlorobenzene	*50*	0.4 U	0.9 U	2.2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Ethylbenzene	*700*	0.5 U	0.9 U	2.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	*1000*	0.4 U	0.8 U	1.9 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Total Confident Conc. VOAs (s)		1.6	348.1	869.3	13	ND	35.2	240.9	0.5	0.4	0.8
Total Estimated Conc. VOA TICs (s)	*500*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
ug/L - micrograms/Liter
U - compound not detected at indicated concentration
NA - No applicable criteria
VOCs - Volatile Organic Compounds
TICs - Tenetatively Identified Compounds
Bold - indicates exceedence of New Jersey GWQC
Numbers in italics are NJ Fresh Water Quality Criteria.

TABLE 4
GROUND WATER ANALYTICAL RESULTS
SEPTEMBER 2006 THROUGH MARCH 2007
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Sample ID		MW-544C	MW-545A	MW-545B	MW-545C	MW-546A	MW549A	MW549B	MW-550B	MW-550C
Lab Sample Number	**New Jersey**	771268	771263	771264	771265	771260	771250	771251	771252	771253
Sampling Date	**Ground Water**	9/20/2006	9/20/2006	9/20/2006	9/20/2006	9/20/2006	9/20/2006	9/20/2006	9/20/2006	9/20/2006
Matrix	**Quality**	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor	**Criteria (GWQC)**	1.0	1.0	1.0	1.0	1.0	10.0	10.0	5.0	1.0
Units	**ug/L**	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
VOLATILE COMPOUNDS (GC/MS)										
Chloromethane	*30*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2.9 U	2.9 U	1.4 U	0.3 U
Bromomethane	*10*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3.2 U	3.2 U	1.6 U	0.3 U
Vinyl Chloride	*5*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2.8 U	2.8 U	1.4 U	0.3 U
Chloroethane	*100*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2.4 U	2.4 U	1.2 U	0.2 U
Methylene Chloride	*3*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.1 U	5.1 U	2.6 U	0.5 U
Trichlorofluoromethane		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2.5 U	2.5 U	1.2 U	0.2 U
1,1-Dichloroethene	*2*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	3.5 U	3.5 U	1.8 U	0.4 U
1,1-Dichloroethane	*50*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3.2 U	3.2 U	1.6 U	0.3 U
trans-1,2-Dichloroethene	*100*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	4.3 U	4.3 U	2.2 U	0.4 U
cis-1,2-Dichloroethene	*70*	0.5	0.4 U	0.4 U	0.4 U	0.8	4.3 U	7.7	6.7	1.3
Chloroform	*6*	0.5 U	0.5 U	0.5 U	0.5 U	3.3	5.2 U	5.2 U	2.6 U	0.5 U
1,2-Dichloroethane	*2*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2.9 U	2.9 U	1.4 U	0.3 U
1,1,1-Trichloroethane	*30*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3.4 U	3.4 U	1.7 U	0.3 U
Carbon Tetrachloride	*2*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3.1 U	3.1 U	1.6 U	0.3 U
Bromodichloromethane	*1*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3.2 U	3.2 U	1.6 U	0.3 U
1,2-Dichloropropane	*1*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2.9 U	2.9 U	1.4 U	0.3 U
cis-1,3-Dichloropropene		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2.4 U	2.4 U	1.2 U	0.2 U
Trichloroethene	*1*	**1.1**	0.5	0.4 U	0.4 U	**120**	**940**	**1100**	**860**	**110**
Dibromochloromethane	*10*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2.7 U	2.7 U	1.4 U	0.3 U
1,1,2-Trichloroethane	*3*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3.3 U	3.3 U	1.6 U	0.3 U
Benzene	*1*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3.3 U	3.3 U	1.6 U	0.3 U
trans-1,3-Dichloropropene		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2.4 U	2.4 U	1.2 U	0.2 U
2-Chloroethyl Vinyl Ether	*100*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	4.2 U	4.2 U	2.1 U	0.4 U
Bromoform	*4*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2.2 U	2.2 U	1.1 U	0.2 U
Tetrachloroethene	*1*	**2.7**	**3.7**	0.4 U	0.4 U	0.4 U	4.5 U	**6.7**	**5.5**	0.4 U
1,1,2,2-Tetrachloroethane	*1*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3.4 U	3.4 U	1.7 U	0.3 U
Toluene	*1000*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	4 U	4 U	2.0 U	0.4 U
Chlorobenzene	*50*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	4.5 U	4.5 U	2.2 U	0.4 U
Ethylbenzene	*700*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.6 U	4.6 U	2.3 U	0.5 U
Xylene (Total)	*1000*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	3.8 U	3.8 U	1.9 U	0.4 U
Total Confident Conc. VOAs (s)		4.3	4.2	ND	ND	124.1	940	1114.4	872.2	111.3
Total Estimated Conc. VOA TICs (s)	*500*	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
ug/L - micrograms/Liter
U - compound not detected at indicated concentration
NA - No applicable criteria
VOCs - Volatile Organic Compounds
TICs - Tenetatively Identified Compounds
Bold - indicates exceedence of New Jersey GWQC
Numbers in italics are NJ Fresh Water Quality Criteria.

TABLE 4
GROUND WATER ANALYTICAL RESULTS
SEPTEMBER 2006 THROUGH MARCH 2007
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Sample ID		TB030807	MW-502A	MW-502B	MW-505A	MW-505B	MW-506A	MW-506B	MW-507A	MW-507B
Lab Sample Number	**New Jersey**	812813	812801	812802	815560	812798	812804	812805	815561	812806
Sampling Date	**Ground Water**	3/8/2007	3/8/2007	3/8/2007	3/22/2007	3/8/2007	3/8/2007	3/8/2007	3/22/2007	3/8/2007
Matrix	**Quality**	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor	**Criteria (GWQC)**	1.0	1.0	1.0	1	1.0	5.0	1.0	2	1.0
Units	**ug/L**	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
VOLATILE COMPOUNDS (GC/MS)										
Chloromethane	*30*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	2.2 U	0.4 U	0.9 U	0.4 U
Bromomethane	*10*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	2.2 U	0.4 U	0.9 U	0.4 U
Vinyl Chloride	*5*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.2 U	0.2 U	0.5 U	0.2 U
Chloroethane	*100*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	2.2 U	0.4 U	0.9 U	0.4 U
Methylene Chloride	*3*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	2 U	0.4 U	0.8 U	0.4 U
Trichlorofluoromethane		0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	1.8 U	0.4 U	0.7 U	0.4 U
1,1-Dichloroethene	*2*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.3 U	0.5 U	0.9 U	0.5 U
1,1-Dichloroethane	*50*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.3 U	0.3 U	0.5 U	0.3 U
trans-1,2-Dichloroethene	*100*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	2 U	0.4 U	0.8 U	0.4 U
cis-1,2-Dichloroethene	*70*	0.3 U	0.3 U	16	0.3 U	0.3 U	3.9	0.3 U	5.3	0.3 U
Chloroform	*6*	0.2 U	0.7	0.7	0.6	1.1	1 U	0.4	0.4	0.3
1,2-Dichloroethane	*2*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.4 U	0.3 U	0.5 U	0.3 U
1,1,1-Trichloroethane	*30*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	1.9 U	0.4 U	0.8 U	0.4 U
Carbon Tetrachloride	*2*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	0.3 U	0.7 U	0.3 U
Bromodichloromethane	*1*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.2 U	0.2 U	0.5 U	0.2 U
1,2-Dichloropropane	*1*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.4 U	0.5 U	1 U	0.5 U
cis-1,3-Dichloropropene		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.6 U	0.1 U	0.3 U	0.1 U
Trichloroethene	*1*	0.4 U	0.4	**23**	0.4 U	0.4 U	**420**	**7.6**	**300**	**7.9**
Dibromochloromethane	*10*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.4 U	0.3 U	0.5 U	0.3 U
1,1,2-Trichloroethane	*3*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.1 U	0.2 U	0.4 U	0.2 U
Benzene	*1*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.2 U	0.2 U	0.5 U	0.2 U
trans-1,3-Dichloropropene		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.8 U	0.2 U	0.3 U	0.2 U
2-Chloroethyl Vinyl Ether	*100*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.2 U	0.2 U	0.5 U	0.2 U
Bromoform	*4*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1 U	0.2 U	0.4 U	0.2 U
Tetrachloroethene	*1*	0.4 U	0.4 U	0.7	0.4 U	0.4 U	2.1 U	0.4 U	0.8 U	0.4 U
1,1,2,2-Tetrachloroethane	*1*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	1.8 U	0.4 U	0.7 U	0.4 U
Toluene	*1000*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.5 U	0.3 U	0.6 U	0.3 U
Chlorobenzene	*50*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.2 U	0.2 U	0.5 U	0.2 U
Ethylbenzene	*700*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	2 U	0.4 U	0.8 U	0.4 U
Xylene (Total)	*1000*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	2 U	0.4 U	0.8 U	0.4 U
Total Confident Conc. VOAs (s)		ND	1.1	40.4	0.6	1.1	423.9	8	305.7	8.2
Total Estimated Conc. VOA TICs (s)	*500*	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
ug/L - micrograms/Liter
U - compound not detected at indicated concentration
NA - No applicable criteria
VOCs - Volatile Organic Compounds
TICs - Tenetatively Identified Compounds
Bold - indicates exceedence of New Jersey GWQC
Numbers in italics are NJ Fresh Water Quality Criteria.

TABLE 4
GROUND WATER ANALYTICAL RESULTS
SEPTEMBER 2006 THROUGH MARCH 2007
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Sample ID		MW-508A	MW-508B	PZ-522A	PZ-522B	PZ-522C	MW-532A	MW-544A	MW-544B	MW-544C
Lab Sample Number	**New Jersey**	812808	812807	812793	812794	815559	812809	812810	812811	812812
Sampling Date	**Ground Water**	3/8/2007	3/8/2007	3/8/2007	3/8/2007	3/22/2007	3/8/2007	3/8/2007	3/8/2007	3/8/2007
Matrix	**Quality**	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor	**Criteria (GWQC)**	1.0	1.0	1.0	1.0	1	1.0	1.0	1.0	1.0
Units	**ug/L**	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
VOLATILE COMPOUNDS (GC/MS)										
Chloromethane	*30*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Bromomethane	*10*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Vinyl Chloride	*5*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	*100*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Methylene Chloride	*3*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane		0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	*2*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	*50*	0.3 U	0.3 U	0.3 U	2.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
trans-1,2-Dichloroethene	*100*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
cis-1,2-Dichloroethene	*70*	12	0.3 U	0.3 U	30	0.3 U	0.3 U	0.3 U	0.3 U	0.4
Chloroform	*6*	0.2 U	1.2	2.3	3.6	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	*2*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-Trichloroethane	*30*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Carbon Tetrachloride	*2*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Bromodichloromethane	*1*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	*1*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Trichloroethene	*1*	**2.3**	**27**	**2.2**	**34**	0.4 U	**29**	0.4 U	0.7	0.7
Dibromochloromethane	*10*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-Trichloroethane	*3*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzene	*1*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl Vinyl Ether	*100*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	*4*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	*1*	0.4 U	0.4 U	0.4 U	**1.9**	0.4 U	**1.2**	0.4 U	0.4 U	1.9
1,1,2,2-Tetrachloroethane	*1*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	*1000*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chlorobenzene	*50*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	*700*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Xylene (Total)	*1000*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Total Confident Conc. VOAs (s)		14.3	28.2	4.5	71.8	ND	30.2	ND	0.7	3
Total Estimated Conc. VOA TICs (s)	*500*	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
ug/L - micrograms/Liter
U - compound not detected at indicated concentration
NA - No applicable criteria
VOCs - Volatile Organic Compounds
TICs - Tenetatively Identified Compounds
Bold - indicates exceedence of New Jersey GWQC
Numbers in italics are NJ Fresh Water Quality Criteria.

TABLE 4
GROUND WATER ANALYTICAL RESULTS
SEPTEMBER 2006 THROUGH MARCH 2007
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Sample ID		MW-545A	MW-545B	MW-545C	MW-546A	MW-549A	MW-549B	MW-550B	MW-550C
Lab Sample Number	**New Jersey**	812795	812796	812797	812792	812799	812800	815562	812803
Sampling Date	**Ground Water**	3/8/2007	3/8/2007	3/8/2007	3/8/2007	3/8/2007	3/8/2007	3/22/2007	3/8/2007
Matrix	**Quality**	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor	**Criteria (GWQC)**	1.0	1.0	1.0	1.0	5.0	10.0	5	1.0
Units	**ug/L**	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
VOLATILE COMPOUNDS (GC/MS)									
Chloromethane	*30*	0.4 U	0.4 U	0.4 U	0.4 U	2.2 U	4.4 U	2.2 U	0.4 U
Bromomethane	*10*	0.4 U	0.4 U	0.4 U	0.4 U	2.2 U	4.4 U	2.2 U	0.4 U
Vinyl Chloride	*5*	0.2 U	0.2 U	0.2 U	0.2 U	1.2 U	2.4 U	1.2 U	0.2 U
Chloroethane	*100*	0.4 U	0.4 U	0.4 U	0.4 U	2.2 U	4.3 U	2.2 U	0.4 U
Methylene Chloride	*3*	0.4 U	0.4 U	0.4 U	0.4 U	2 U	4 U	2 U	0.4 U
Trichlorofluoromethane		0.4 U	0.4 U	0.4 U	0.4 U	1.8 U	3.7 U	1.8 U	0.4 U
1,1-Dichloroethene	*2*	0.5 U	0.5 U	0.5 U	0.5 U	2.3 U	4.6 U	2.3 U	0.5 U
1,1-Dichloroethane	*50*	0.3 U	0.3 U	0.3 U	0.3 U	1.3 U	2.6 U	1.3 U	0.3 U
trans-1,2-Dichloroethene	*100*	0.4 U	0.4 U	0.4 U	0.4 U	2 U	3.9 U	2 U	0.4 U
cis-1,2-Dichloroethene	*70*	0.3 U	0.3 U	0.3 U	0.7	6.1	2.8 U	4.5	1.1
Chloroform	*6*	0.3	0.3	0.6	3.6	1.1	2 U	1 U	0.3
1,2-Dichloroethane	*2*	0.3 U	0.3 U	0.3 U	0.3 U	1.4 U	2.7 U	1.4 U	0.3 U
1,1,1-Trichloroethane	*30*	0.4 U	0.4 U	0.4 U	0.4 U	1.9 U	3.8 U	1.9 U	0.4 U
Carbon Tetrachloride	*2*	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	3.4 U	1.7 U	0.3 U
Bromodichloromethane	*1*	0.2 U	0.2 U	0.2 U	0.2 U	1.2 U	2.5 U	1.2 U	0.2 U
1,2-Dichloropropane	*1*	0.5 U	0.5 U	0.5 U	0.5 U	2.4 U	4.9 U	2.4 U	0.5 U
cis-1,3-Dichloropropene		0.1 U	0.1 U	0.1 U	0.1 U	0.6 U	1.3 U	0.6 U	0.1 U
Trichloroethene	*1*	0.4 U	0.4 U	0.4 U	**110**	**870**	**710**	**600**	**100**
Dibromochloromethane	*10*	0.3 U	0.3 U	0.3 U	0.3 U	1.4 U	2.7 U	1.4 U	0.3 U
1,1,2-Trichloroethane	*3*	0.2 U	0.2 U	0.2 U	0.2 U	1.1 U	2.2 U	1.1 U	0.2 U
Benzene	*1*	0.2 U	0.2 U	0.2 U	0.2 U	1.2 U	2.4 U	1.2 U	0.2 U
trans-1,3-Dichloropropene		0.2 U	0.2 U	0.2 U	0.2 U	0.8 U	1.6 U	0.8 U	0.2 U
2-Chloroethyl Vinyl Ether	*100*	0.2 U	0.2 U	0.2 U	0.2 U	1.2 U	2.5 U	1.2 U	0.2 U
Bromoform	*4*	0.2 U	0.2 U	0.2 U	0.2 U	1 U	2.1 U	1 U	0.2 U
Tetrachloroethene	*1*	**3.6**	0.4 U	0.4 U	0.4 U	**4.9**	4.2 U	**3.5**	0.4 U
1,1,2,2-Tetrachloroethane	*1*	0.4 U	0.4 U	0.4 U	0.4 U	1.8 U	3.5 U	1.8 U	0.4 U
Toluene	*1000*	0.3 U	0.3 U	0.3 U	0.3 U	1.5 U	3 U	1.5 U	0.3 U
Chlorobenzene	*50*	0.2 U	0.2 U	0.2 U	0.2 U	1.2 U	2.5 U	1.2 U	0.2 U
Ethylbenzene	*700*	0.4 U	0.4 U	0.4 U	0.4 U	2 U	4.1 U	2 U	0.4 U
Xylene (Total)	*1000*	0.4 U	0.4 U	0.4 U	0.4 U	2 U	4 U	2 U	0.4 U
Total Confident Conc. VOAs (s)		3.9	0.3	0.6	114.3	882.1	710	608	101.4
Total Estimated Conc. VOA TICs (s)	*500*	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
ug/L - micrograms/Liter
U - compound not detected at indicated concentration
NA - No applicable criteria
VOCs - Volatile Organic Compounds
TICs - Tenetatively Identified Compounds
Bold - indicates exceedence of New Jersey GWQC
Numbers in italics are NJ Fresh Water Quality Criteria.

TABLE 5
HISTORICAL TCE CONCENTRATIONS IN GROUND WATER
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Sample Date	Well #	TCE Concentration	Units	Q
08/13/93	MW-502A	**3**	ug/L	
10/22/93	MW-502A	**5**	ug/L	
04/27/94	MW-502A	**1.6**	ug/L	
11/09/94	MW-502A	**2.02**	ug/L	
06/01/95	MW-502A	**2.3**	ug/L	
03/30/96	MW-502A	**2.5**	ug/L	
03/30/96	MW-502A	**2.9**	ug/L	
09/27/97	MW-502A	**7.8**	ug/L	
05/02/98	MW-502A	**5.2**	ug/L	
09/25/98	MW-502A	**7.9**	ug/L	
11/12/99	MW-502A	**5.9**	ug/L	
11/21/02	MW-502A	**3.1**	ug/L	
03/25/03	MW-502A	**2.5**	ug/L	
06/25/03	MW-502A	**2.7**	ug/L	
09/24/03	MW-502A	**1.4**	ug/L	
12/11/03	MW-502A	1.0	ug/L	
03/09/04	MW-502A	0.8	ug/L	
06/04/04	MW-502A	0.6	ug/L	
09/23/04	MW-502A	0.6	ug/L	
12/09/04	MW-502A	0.9	ug/L	
03/03/05	MW-502A	**1.2**	ug/L	
06/03/05	MW-502A	0.8	ug/L	
09/08/05	MW-502A	0.6	ug/L	
03/07/06	MW-502A	0.6	ug/L	
09/20/06	MW-502A	0.9	ug/L	
03/08/07	MW-502A	0.4	ug/L	
08/13/93	MW-502B	**1200**	ug/L	
08/13/93	MW-502B	**930**	ug/L	
10/22/93	MW-502B	**1300**	ug/L	
10/22/93	MW-502B	**1300**	ug/L	
04/27/94	MW-502B	**1200**	ug/L	
11/09/94	MW-502B	**1700**	ug/L	
06/01/95	MW-502B	**1510**	ug/L	
04/02/96	MW-502B	**1300**	ug/L	DJ
09/28/97	MW-502B	**1400**	ug/L	
05/02/98	MW-502B	**1300**	ug/L	
09/25/98	MW-502B	**1300**	ug/L	
09/25/98	MW-502B	**1300**	ug/L	
11/12/99	MW-502B	**1500**	ug/L	
11/21/02	MW-502B	**1000**	ug/L	
03/25/03	MW-502B	**920**	ug/L	
06/25/03	MW-502B	**1100**	ug/L	
09/24/03	MW-502B	**1100**	ug/L	
12/11/03	MW-502B	**670**	ug/L	
03/09/04	MW-502B	**730**	ug/L	
06/04/04	MW-502B	**390**	ug/L	
09/23/04	MW-502B	**350**	ug/L	
12/09/04	MW-502B	**290**	ug/L	
03/03/05	MW-502B	**330**	ug/L	
06/03/05	MW-502B	**340**	ug/L	
09/08/05	MW-502B	**280**	ug/L	
03/07/06	MW-502B	**300**	ug/L	
09/20/06	MW-502B	**320**	ug/L	
03/08/07	MW-502B	**23**	ug/L	
08/11/93	MW-505A	<GWQS	ug/L	U
10/19/93	MW-505A	<GWQS	ug/L	U
04/26/94	MW-505A	<GWQS	ug/L	U
11/08/94	MW-505A	<GWQS	ug/L	U
05/31/95	MW-505A	<GWQS	ug/L	U
04/02/96	MW-505A	<GWQS	ug/L	J
09/23/97	MW-505A	<GWQS	ug/L	U
09/24/98	MW-505A	<GWQS	ug/L	U
11/09/99	MW-505A	<GWQS	ug/L	U
11/20/02	MW-505A	<GWQS	ug/L	U
03/25/03	MW-505A	<GWQS	ug/L	U
03/25/04	MW-505A	<GWQS	ug/L	U
03/03/05	MW-505A	<GWQS	ug/L	U
03/07/06	MW-505A	<GWQS	ug/L	U
03/22/07	MW-505A	<GWQS	ug/L	U

Sample Date	Well #	TCE Concentration	Units	Q
08/11/93	MW-505B	<GWQS	ug/L	U
10/19/93	MW-505B	<GWQS	ug/L	U
04/26/94	MW-505B	<GWQS	ug/L	U
11/08/94	MW-505B	<GWQS	ug/L	U
05/31/95	MW-505B	<GWQS	ug/L	U
04/02/96	MW-505B	**1.1**	ug/L	
09/23/97	MW-505B	<GWQS	ug/L	U
09/24/98	MW-505B	<GWQS	ug/L	U
11/09/99	MW-505B	<GWQS	ug/L	U
11/20/02	MW-505B	<GWQS	ug/L	U
03/25/03	MW-505B	<GWQS	ug/L	U
03/25/04	MW-505B	<GWQS	ug/L	U
03/03/05	MW-505B	<GWQS	ug/L	U
03/07/06	MW-505B	<GWQS	ug/L	U
03/08/07	MW-505B	<GWQS	ug/L	U
08/11/93	MW-506A	**1700**	ug/L	
10/19/93	MW-506A	**1800**	ug/L	
04/26/94	MW-506A	**1200**	ug/L	
04/26/94	MW-506A	**1300**	ug/L	
11/11/94	MW-506A	**1990**	ug/L	
11/11/94	MW-506A	**2020**	ug/L	
06/01/95	MW-506A	**1650**	ug/L	
06/01/95	MW-506A	**1690**	ug/L	
04/01/96	MW-506A	**1800**	ug/L	DJ
09/25/97	MW-506A	**1600**	ug/L	
09/25/97	MW-506A	**1700**	ug/L	
04/30/98	MW-506A	**1400**	ug/L	
09/24/98	MW-506A	**1400**	ug/L	
11/08/99	MW-506A	**1700**	ug/L	
11/19/02	MW-506A	**1000**	ug/L	
03/24/03	MW-506A	**850**	ug/L	
06/25/03	MW-506A	**1000**	ug/L	
09/23/03	MW-506A	**960**	ug/L	
12/10/03	MW-506A	**830**	ug/L	
03/09/04	MW-506A	**940**	ug/L	
06/04/04	MW-506A	**710**	ug/L	
09/23/04	MW-506A	**1300**	ug/L	
12/09/04	MW-506A	**710**	ug/L	
03/03/05	MW-506A	**650**	ug/L	
06/03/05	MW-506A	**730**	ug/L	
09/08/05	MW-506A	**620**	ug/L	
03/17/06	MW-506A	**700**	ug/L	
09/20/06	MW-506A	**860**	ug/L	
03/08/07	MW-506A	**420**	ug/L	
08/11/93	MW-506B	**18**	ug/L	
10/20/93	MW-506B	**48**	ug/L	J
04/26/94	MW-506B	**18**	ug/L	
11/11/94	MW-506B	**19**	ug/L	
06/01/95	MW-506B	**40.4**	ug/L	
04/01/96	MW-506B	**25**	ug/L	J
09/25/97	MW-506B	**34**	ug/L	
04/30/98	MW-506B	**26**	ug/L	
04/30/98	MW-506B	**27**	ug/L	
09/24/98	MW-506B	**32**	ug/L	
11/08/99	MW-506B	**50**	ug/L	
11/19/02	MW-506B	**74**	ug/L	
03/24/03	MW-506B	**24**	ug/L	
06/25/03	MW-506B	**12**	ug/L	
09/23/03	MW-506B	**14**	ug/L	
12/10/03	MW-506B	**15**	ug/L	
03/09/04	MW-506B	**16**	ug/L	
06/04/04	MW-506B	**13**	ug/L	
09/23/04	MW-506B	**12**	ug/L	
12/09/04	MW-506B	**15**	ug/L	
03/03/05	MW-506B	**16**	ug/L	
06/03/05	MW-506B	**14**	ug/L	
10/01/05	MW-506B	**36**	ug/L	
03/07/06	MW-506B	**12**	ug/L	
09/20/06	MW-506B	**13**	ug/L	
03/08/07	MW-506B	**7.6**	ug/L	

Sample Date	Well #	TCE Concentration	Units	Q
10/21/93	MW-507A	**730**	ug/L	
04/27/94	MW-507A	**1200**	ug/L	
11/11/94	MW-507A	**1210**	ug/L	
06/01/95	MW-507A	**1100**	ug/L	
04/01/96	MW-507A	**930**	ug/L	DJ
09/26/97	MW-507A	**1200**	ug/L	
05/02/98	MW-507A	**1100**	ug/L	
05/02/98	MW-507A	**1100**	ug/L	
09/26/98	MW-507A	**1200**	ug/L	
11/11/99	MW-507A	**970**	ug/L	
11/21/02	MW-507A	**140**	ug/L	
03/26/03	MW-507A	**630**	ug/L	
06/25/03	MW-507A	**770**	ug/L	
09/23/03	MW-507A	**860**	ug/L	
12/11/03	MW-507A	**740**	ug/L	
03/09/04	MW-507A	**690**	ug/L	
06/04/04	MW-507A	**450**	ug/L	
09/23/04	MW-507A	**1100**	ug/L	
12/09/04	MW-507A	**610**	ug/L	
03/04/05	MW-507A	**540**	ug/L	
06/03/05	MW-507A	**570**	ug/L	
09/08/05	MW-507A	**600**	ug/L	
03/07/06	MW-507A	**600**	ug/L	
03/22/07	MW-507A	**300**	ug/L	
08/13/93	MW-507B	**130**	ug/L	
10/21/93	MW-507B	**100**	ug/L	
05/02/94	MW-507B	**79**	ug/L	
11/11/94	MW-507B	**145**	ug/L	
06/02/95	MW-507B	**115**	ug/L	
04/01/96	MW-507B	**70**	ug/L	DJ
09/26/97	MW-507B	**80**	ug/L	
05/02/98	MW-507B	**64**	ug/L	
09/26/98	MW-507B	**43**	ug/L	
11/11/99	MW-507B	**93**	ug/L	
11/21/02	MW-507B	**45**	ug/L	
03/26/03	MW-507B	**20**	ug/L	
03/25/04	MW-507B	**16**	ug/L	
03/04/05	MW-507B	**20**	ug/L	
03/07/06	MW-507B	**19**	ug/L	
03/08/07	MW-507B	**7.9**	ug/L	
10/25/93	MW-508A	**30**	ug/L	
05/02/94	MW-508A	**35**	ug/L	
11/12/94	MW-508A	**36.8**	ug/L	
06/03/95	MW-508A	**38.4**	ug/L	
04/02/96	MW-508A	**32**	ug/L	J
04/02/96	MW-508A	**38**	ug/L	J
09/26/97	MW-508A	**35**	ug/L	
05/02/98	MW-508A	**34**	ug/L	
09/25/98	MW-508A	**33**	ug/L	
11/11/99	MW-508A	**34**	ug/L	
11/21/02	MW-508A	**13**	ug/L	
03/26/03	MW-508A	**30**	ug/L	
03/25/04	MW-508A	**35**	ug/L	
03/04/05	MW-508A	**1.2**	ug/L	
03/07/06	MW-508A	0.5	ug/L	
03/08/07	MW-508A	**2.3**	ug/L	

Sample Date	Well #	TCE Concentration	Units	Q
08/13/93	MW-508B	**960**	ug/L	
10/25/93	MW-508B	**860**	ug/L	
04/29/94	MW-508B	**630**	ug/L	J
04/29/94	MW-508B	**640**	ug/L	J
11/11/94	MW-508B	**1120**	ug/L	
06/02/95	MW-508B	**943**	ug/L	
04/02/96	MW-508B	**1600**	ug/L	J
09/26/97	MW-508B	**320**	ug/L	
05/02/98	MW-508B	**360**	ug/L	
09/25/98	MW-508B	**210**	ug/L	
11/11/99	MW-508B	**670**	ug/L	
11/21/02	MW-508B	**120**	ug/L	
03/26/03	MW-508B	**73**	ug/L	
06/25/03	MW-508B	**58**	ug/L	
09/23/03	MW-508B	**69**	ug/L	
12/11/03	MW-508B	**40**	ug/L	
03/09/04	MW-508B	**41**	ug/L	
06/04/04	MW-508B	**32**	ug/L	
09/23/04	MW-508B	**30**	ug/L	
12/09/04	MW-508B	**31**	ug/L	
03/04/05	MW-508B	**26**	ug/L	
06/03/05	MW-508B	**40**	ug/L	
09/08/05	MW-508B	**40**	ug/L	
03/07/06	MW-508B	**31**	ug/L	
09/20/06	MW-508B	**34**	ug/L	
03/08/07	MW-508B	**27**	ug/L	
11/28/95	MW-532A	**30**	ug/L	
01/16/96	MW-532A	**31**	ug/L	
03/28/96	MW-532A	**18**	ug/L	
09/23/97	MW-532A	**39**	ug/L	
04/28/98	MW-532A	**34**	ug/L	
09/22/98	MW-532A	**30**	ug/L	
11/10/99	MW-532A	**32**	ug/L	
11/20/02	MW-532A	**37**	ug/L	
03/27/03	MW-532A	**26**	ug/L	
03/25/04	MW-532A	**33**	ug/L	
03/03/05	MW-532A	**37**	ug/L	
03/07/06	MW-532A	**40**	ug/L	
03/08/07	MW-532A	**29**	ug/L	
11/09/99	MW-544A	<GWQS	ug/L	U
11/18/02	MW-544A	<GWQS	ug/L	U
03/24/03	MW-544A	0.5	ug/L	
09/23/03	MW-544A	0.8 *	ug/L	
03/09/04	MW-544A	<GWQS	ug/L	U
09/24/04	MW-544A	<GWQS	ug/L	U
03/03/05	MW-544A	0.4	ug/L	U
09/08/05	MW-544A	0.4	ug/L	U
03/07/06	MW-544A	0.4	ug/L	U
09/20/06	MW-544A	0.4	ug/L	
03/08/07	MW-544A	0.4	ug/L	U
11/09/99	MW-544B	0.4	ug/L	
11/18/02	MW-544B	0.5	ug/L	
03/24/03	MW-544B	0.8	ug/L	
09/23/03	MW-544B	0.6	ug/L	
03/09/04	MW-544B	0.8	ug/L	
09/24/04	MW-544B	0.6	ug/L	
03/03/05	MW-544B	0.4	ug/L	U
09/08/05	MW-544B	0.4	ug/L	U
03/07/06	MW-544B	0.6	ug/L	
09/20/06	MW-544B	0.8	ug/L	
03/08/07	MW-544B	0.7	ug/L	
11/09/99	MW-544C	**4.9**	ug/L	
11/18/02	MW-544C	**1.7**	ug/L	
03/24/03	MW-544C	0.4	ug/L	
09/23/03	MW-544C	**1.3**	ug/L	
03/09/04	MW-544C	**1.8**	ug/L	
09/24/04	MW-544C	**1.3**	ug/L	
03/03/05	MW-544C	**1.8**	ug/L	
09/08/05	MW-544C	**1.2**	ug/L	
03/07/06	MW-544C	**1.5**	ug/L	
09/20/06	MW-544C	**1.1**	ug/L	
03/08/07	MW-544C	0.7	ug/L	
11/09/99	MW-545A	0	ug/L	U
11/18/02	MW-545A	0.2	ug/L	
03/25/03	MW-545A	0.4	ug/L	
09/23/03	MW-545A	0	ug/L	U
03/09/04	MW-545A	0	ug/L	U
09/24/04	MW-545A	0.4	ug/L	U
03/03/05	MW-545A	0.4	ug/L	U
09/08/05	MW-545A	0.4	ug/L	U
03/07/06	MW-545A	0.4	ug/L	U
09/20/06	MW-545A	0.5	ug/L	
03/08/07	MW-545A	0.4	ug/L	U

Sample Date	Well #	TCE Concentration	Units	Q
11/09/99	MW-545B	<GWQS	ug/L	U
11/18/02	MW-545B	<GWQS	ug/L	U
03/25/03	MW-545B	<GWQS	ug/L	U
09/23/03	MW-545B	<GWQS	ug/L	U
03/09/04	MW-545B	<GWQS	ug/L	U
09/24/04	MW-545B	0.4	ug/L	U
03/03/05	MW-545B	0.4	ug/L	U
09/08/05	MW-545B	0.4	ug/L	U
09/20/06	MW-545B	0.4	ug/L	U
03/08/07	MW-545B	0.4	ug/L	U
11/09/99	MW-545C	<GWQS	ug/L	U
11/18/02	MW-545C	<GWQS	ug/L	U
03/25/03	MW-545C	<GWQS	ug/L	U
09/23/03	MW-545C	<GWQS	ug/L	U
03/09/04	MW-545C	<GWQS	ug/L	U
09/24/04	MW-545C	0.4	ug/L	U
03/03/05	MW-545C	0.4	ug/L	U
09/08/05	MW-545C	0.4	ug/L	U
09/20/06	MW-545C	0.2	ug/L	U
03/08/07	MW-545C	0.3	ug/L	U
11/09/99	MW-546A	**130**	ug/L	
11/19/02	MW-546A	**120**	ug/L	
03/25/03	MW-546A	**120**	ug/L	
06/25/03	MW-546A	**150**	ug/L	
09/24/03	MW-546A	**91**	ug/L	
12/11/03	MW-546A	**88**	ug/L	
03/09/04	MW-546A	**90**	ug/L	
06/04/04	MW-546A	**82**	ug/L	
09/24/04	MW-546A	**110**	ug/L	
12/09/04	MW-546A	**110**	ug/L	
03/04/05	MW-546A	**110**	ug/L	
06/03/05	MW-546A	**120**	ug/L	
09/08/05	MW-546A	**130**	ug/L	
09/20/06	MW-546A	**120**	ug/L	
03/08/07	MW-546A	**110**	ug/L	
11/21/02	MW-549A	**760**	ug/L	
03/26/03	MW-549A	**760**	ug/L	
06/25/03	MW-549A	**1200**	ug/L	
09/24/03	MW-549A	**1100**	ug/L	
12/10/03	MW-549A	**900**	ug/L	
03/09/04	MW-549A	**1000**	ug/L	
06/04/04	MW-549A	**880**	ug/L	
09/23/04	MW-549A	**820**	ug/L	
12/09/04	MW-549A	**850**	ug/L	
03/03/05	MW-549A	**820**	ug/L	
06/03/05	MW-549A	**98**	ug/L	
10/14/05	MW-549A	**1100**	ug/L	
09/20/06	MW-549A	**940**	ug/L	
03/08/07	MW-549A	**870**	ug/L	
11/21/02	MW-549B	**1400**	ug/L	
03/26/03	MW-549B	**1900**	ug/L	
06/25/03	MW-549B	**2800**	ug/L	
09/24/03	MW-549B	**2300**	ug/L	
12/10/03	MW-549B	**1800**	ug/L	
03/09/04	MW-549B	**1200**	ug/L	
06/04/04	MW-549B	**1400**	ug/L	
09/23/04	MW-549B	**1500**	ug/L	
12/09/04	MW-549B	**1200**	ug/L	
03/03/05	MW-549B	**1200**	ug/L	
06/03/05	MW-549B	**650**	ug/L	
10/14/05	MW-549B	**1300**	ug/L	
11/21/02	MW-549C	**2600**	ug/L	
11/21/02	MW-550B	**440**	ug/L	
3/26/03	MW-550B	**870**	ug/L	
9/23/03	MW-550B	**800**	ug/L	
12/10/03	MW-550B	**780**	ug/L	
3/9/04	MW-550B	**750**	ug/L	
6/4/04	MW-550B	**650**	ug/L	
9/23/04	MW-550B	**1400**	ug/L	
12/9/04	MW-550B	**720**	ug/L	
3/3/05	MW-550B	**620**	ug/L	
6/3/05	MW-550B	**760**	ug/L	
9/8/05	MW-550B	**740**	ug/L	
9/20/06	MW-550B	**860**	ug/L	
3/22/07	MW-550B	**600**	ug/L	

Sample Date	Well #	TCE Concentration	Units	Q
11/21/02	MW-550C	**77**	ug/L	
03/26/03	MW-550C	**130**	ug/L	
06/25/03	MW-550C	**180**	ug/L	
09/23/03	MW-550C	**140**	ug/L	
12/10/03	MW-550C	**150**	ug/L	
03/09/04	MW-550C	**170**	ug/L	
06/04/04	MW-550C	**140**	ug/L	
09/23/04	MW-550C	**140**	ug/L	
12/09/04	MW-550C	**130**	ug/L	
03/03/05	MW-550C	**120**	ug/L	
06/03/05	MW-550C	**140**	ug/L	
09/08/05	MW-550C	**160**	ug/L	
09/20/06	MW-550C	**110**	ug/L	
03/08/07	MW-550C	**100**	ug/L	
11/10/94	P-522A	**2.2**	ug/L	
12/14/94	P-522A	**4.8**	ug/L	
03/31/96	P-522A	0.4	ug/L	J
09/27/97	P-522A	0.8	ug/L	J
05/01/98	P-522A	1.8	ug/L	
09/26/98	P-522A	**1.1**	ug/L	
11/10/99	P-522A	0.9	ug/L	
11/19/02	P-522A	**1.6**	ug/L	
03/25/03	P-522A	**14**	ug/L	
09/23/03	P-522A	**3.8**	ug/L	
03/09/04	P-522A	**3.0**	ug/L	
09/24/04	P-522A	**3.6**	ug/L	
03/03/05	P-522A	**3.3**	ug/L	
09/08/05	P-522A	**3.0**	ug/L	
03/08/07	P-522A	**2.2**	ug/L	
12/14/94	P-522B	**157**	ug/L	
03/31/96	P-522B	**230**	ug/L	
09/27/97	P-522B	**180**	ug/L	
09/27/97	P-522B	**190**	ug/L	
05/01/98	P-522B	**140**	ug/L	
09/27/98	P-522B	**180**	ug/L	
11/10/99	P-522B	**200**	ug/L	
11/19/02	P-522B	**120**	ug/L	
03/25/03	P-522B	**160**	ug/L	
09/23/03	P-522B	**220**	ug/L	
03/09/04	P-522B	**220**	ug/L	
09/24/04	P-522B	**200**	ug/L	
03/03/05	P-522B	**190**	ug/L	
09/08/05	P-522B	**210**	ug/L	
09/20/06	P-522B	**190**	ug/L	
03/08/07	P-522B	**34**	ug/L	
11/10/94	P-522C	**18.6**	ug/L	
12/13/94	P-522C	**20.9**	ug/L	
03/31/96	P-522C	**50**	ug/L	
09/27/97	P-522C	**6.1**	ug/L	
05/01/98	P-522C	**67**	ug/L	
09/27/98	P-522C	**16**	ug/L	
11/10/99	P-522C	**12**	ug/L	
11/19/02	P-522C	**17**	ug/L	
03/25/03	P-522C	**22**	ug/L	
09/23/03	P-522C	**16**	ug/L	
03/09/04	P-522C	0.2	ug/L	U
09/24/04	P-522C	0.4	ug/L	U
03/03/05	P-522C	**25**	ug/L	
09/08/05	P-522C	0.4	ug/L	U
09/20/06	P-522C	0.5	ug/L	
03/08/07	P-522C	0.4	ug/L	U

GWQS = New Jersey Groundwater Quality Standard
Bold- Concentration exceeds GWQS for TCE of 1 micrograms/Liter
Indicates that well has either been abandoned or destroyed
ug/L - micrograms/Liter
D - Concentration reported at dilution
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.
- Represents the highest concentration of the bags sampled on that date.
Q - Qualifiers
U - The compound was not detected at the indicated concentration

TABLE 6
SURFACE WATER ANALYTICAL RESULTS
SEPTEMBER 2006 THROUGH MARCH 2007
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Sample ID	**New Jersey**	TB091906	FB091906	SW-1	SW-2	SW-3	SW-4
Lab Sample Number	**Fresh Water - 2**	770603	770604	770607	770606	770605	770608
Sampling Date	**Quality**	09/19/06	09/19/06	09/19/06	09/19/06	09/19/06	09/19/06
Matrix	**Criteria**	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor	**(FWQC)**	1.0	1.0	1.0	1.0	1.0	1.0
Units	**ug/L**	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
VOLATILE COMPOUNDS (GC/MS)							
Chloromethane	*NA*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Bromomethane	*48.4*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Vinyl Chloride	*0.083*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chloroethane	*NA*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Methylene Chloride	*2.49*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	*NA*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	*4.81*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethane	*NA*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
trans-1,2-Dichloroethene	*592*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
cis-1,2-Dichloroethene	*NA*	0.4 U	0.4 U	0.4 U	1.4	0.7	0.4 U
Chloroform	*5.67*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	*0.291*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-Trichloroethane	*127*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Carbon Tetrachloride	*0.363*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Bromodichloromethane	*0.266*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloropropane	*NA*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
cis-1,3-Dichloropropene	*0.193*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	*1.09*	0.4 U	0.4 U	0.4 U	0.6	0.4 U	0.4 U
Dibromochloromethane	*72.6*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-Trichloroethane	*13.5*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	*0.15*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
trans-1,3-Dichloropropene	*0.193*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl Vinyl Ether	*NA*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Bromoform	*4.38*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	*0.388*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	*1.72*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Toluene	*7440*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Chlorobenzene	*22.0*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Ethylbenzene	*3030*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	*NA*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Total Confident Conc. VOAs (s)		ND	ND	ND	2	0.7	ND
Total Estimated Conc. VOA TICs (s)		ND	ND	ND	ND	ND	ND

Notes:
ug/L - micrograms/Liter
U - compound not detected at indicated concentration
NA - No applicable criteria
VOCs - Volatile Organic Compounds
TICs - Tenetatively Identified Compounds
Bold - indicates exceedence of New Jersey FWQC

TABLE 6
SURFACE WATER ANALYTICAL RESULTS
SEPTEMBER 2006 THROUGH MARCH 2007
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Sample ID	**New Jersey**	TB030607	FB030607	SW-1	SW-2	SW-3	SW-4
Lab Sample Number	**Fresh Water - 2**	811717	811716	811715	811714	811713	811712
Sampling Date	**Quality**	03/06/07	03/06/07	03/06/07	03/06/07	03/06/07	03/06/07
Matrix	**Criteria**	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor	**(FWQC)**	1.0	1.0	1.0	1.0	1.0	1.0
Units	**ug/L**	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
VOLATILE COMPOUNDS (GC/MS)							
Chloromethane	*NA*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Bromomethane	*48.4*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Vinyl Chloride	*0.083*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	*NA*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Methylene Chloride	*2.49*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane	*NA*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	*4.81*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	*NA*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
trans-1,2-Dichloroethene	*592*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
cis-1,2-Dichloroethene	*NA*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chloroform	*5.67*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	*0.291*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-Trichloroethane	*127*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Carbon Tetrachloride	*0.363*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Bromodichloromethane	*0.266*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	*NA*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	*0.193*	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Trichloroethene	*1.09*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Dibromochloromethane	*72.6*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-Trichloroethane	*13.5*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzene	*0.15*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	*0.193*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl Vinyl Ether	*NA*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	*4.38*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	*0.388*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	*1.72*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	*7440*	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chlorobenzene	*22.0*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	*3030*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Xylene (Total)	*NA*	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Total Confident Conc. VOAs (s)		ND	ND	ND	ND	ND	ND
Total Estimated Conc. VOA TICs (s)		ND	ND	ND	ND	ND	ND

Notes:
ug/L - micrograms/Liter
U - compound not detected at indicated concentration
NA - No applicable criteria
VOCs - Volatile Organic Compounds
TICs - Tenetatively Identified Compounds
Bold - indicates exceedence of New Jersey FWQC

TABLE 7
HISTORICAL TCE CONCENTRATIONS IN STREAM LOCATIONS
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Location	Sample Date	Analyte	Conc	Result Unit	Qualifiers
SW-1	May-94	Trichloroethene	0.5	ug/L	
SW-1	Jun-94	Trichloroethene	0.81	ug/L	
SW-1	Jun-94	Trichloroethene	0.88	ug/L	
SW-1	Jul-94	Trichloroethene	0.29	ug/L	J
SW-1	Aug-94	Trichloroethene	0.12	ug/L	J
SW-1	Feb-95	Trichloroethene	0.84	ug/L	
SW-1	Apr-96	Trichloroethene	0.6	ug/L	
SW-1	Apr-98	Trichloroethene	0.9	ug/L	
SW-1	Nov-99	Trichloroethene	0.4	ug/L	
SW-1	Dec-02	Trichloroethene	0	ug/L	
SW-1	Mar-03	Trichloroethene	0	ug/L	
SW-1	Jul-03	Trichloroethene	0.7	ug/L	
SW-1	Aug-03	Trichloroethene	0.2	ug/L	U
SW-1	Sep-03	Trichloroethene	0.3	ug/L	U
SW-1	Oct-03	Trichloroethene	0.2	ug/L	U
SW-1	Nov-03	Trichloroethene	0.2	ug/L	U
SW-1	Dec-03	Trichloroethene	0.2	ug/L	U
SW-1	Jan-04	Trichloroethene	0.2	ug/L	U
SW-1	Feb-04	Trichloroethene	0.2	ug/L	U
SW-1	Mar-04	Trichloroethene	0.2	ug/L	U
SW-1	Apr-04	Trichloroethene	0.2	ug/L	U
SW-1	May-04	Trichloroethene	0.2	ug/L	U
SW-1	Jun-04	Trichloroethene	0.2	ug/L	U
SW-1	Jul-04	Trichloroethene	0.4	ug/L	U
SW-1	Aug-04	Trichloroethene	0.4	ug/L	U
SW-1	Sep-04	Trichloroethene	0.4	ug/L	U
SW-1	Oct-04	Trichloroethene	0.4	ug/L	U
SW-1	Nov-04	Trichloroethene	0.4	ug/L	U
SW-1	Dec-04	Trichloroethene	0.4	ug/L	U
SW-1	Jan-05	Trichloroethene	0.4	ug/L	U
SW-1	Feb-05	Trichloroethene	0.4	ug/L	U
SW-1	Mar-05	Trichloroethene	0.4	ug/L	U
SW-1	Apr-05	Trichloroethene	0.4	ug/L	U
SW-1	May-05	Trichloroethene	0.4	ug/L	U
SW-1	Jun-05	Trichloroethene	0.4	ug/L	U
SW-1	Jul-05	Trichloroethene	0.4	ug/L	U
SW-1	Aug-05	Trichloroethene	NS	NS	NS
SW-1	Sep-05	Trichloroethene	NS	NS	NS
SW-1	Oct-05	Trichloroethene	0.4	ug/L	U
SW-1	Nov-05	Trichloroethene	0.4	ug/L	U
SW-1	Mar-06	Trichloroethene	0.4	ug/L	U
SW-1	Sep-06	Trichloroethene	0.4	ug/L	U
SW-1	Mar-07	Trichloroethene	0.4	ug/L	U
SW-2	Aug-93	Trichloroethene	39	ug/L	
SW-2	Aug-93	Trichloroethene	41	ug/L	
SW-2	Oct-93	Trichloroethene	160	ug/L	
SW-2	May-94	Trichloroethene	72	ug/L	
SW-2	Jun-94	Trichloroethene	55	ug/L	
SW-2	Jun-94	Trichloroethene	59	ug/L	
SW-2	Jun-94	Trichloroethene	63	ug/L	
SW-2	Jul-94	Trichloroethene	53	ug/L	
SW-2	Jul-94	Trichloroethene	42	ug/L	
SW-2	Aug-94	Trichloroethene	69	ug/L	D
SW-2	Oct-94	Trichloroethene	47	ug/L	
SW-2	Nov-94	Trichloroethene	71.2	ug/L	J
SW-2	Dec-94	Trichloroethene	75.5	ug/L	
SW-2	Jan-95	Trichloroethene	42	ug/L	
SW-2	Feb-95	Trichloroethene	81.1	ug/L	
SW-2	Apr-95	Trichloroethene	108	ug/L	

TABLE 7
HISTORICAL TCE CONCENTRATIONS IN STREAM LOCATIONS
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Location	Sample Date	Analyte	Conc	Result Unit	Qualifiers
SW-2	Jun-95	Trichloroethene	67.7	ug/L	
SW-2	Jun-95	Trichloroethene	70.9	ug/L	
SW-2	Jun-95	Trichloroethene	98.7	ug/L	
SW-2	Aug-95	Trichloroethene	127	ug/L	
SW-2	Apr-96	Trichloroethene	26	ug/L	
SW-2	Apr-96	Trichloroethene	27	ug/L	
SW-2	Sep-97	Trichloroethene	36.8	ug/L	
SW-2	Sep-97	Trichloroethene	41.9	ug/L	
SW-2	Apr-98	Trichloroethene	45.4	ug/L	
SW-2	Apr-98	Trichloroethene	48	ug/L	
SW-2	Sep-98	Trichloroethene	68.7	ug/L	
SW-2	Nov-99	Trichloroethene	80.1	ug/L	
SW-2	Mar-00	Trichloroethene	80	ug/L	
SW-2	Dec-02	Trichloroethene	57	ug/L	
SW-2	Mar-03	Trichloroethene	33	ug/L	
SW-2	Jul-03	Trichloroethene	3.6	ug/L	
SW-2	Aug-03	Trichloroethene	2.2	ug/L	
SW-2	Sep-03	Trichloroethene	0.3	ug/L	U
SW-2	Oct-03	Trichloroethene	0.2	ug/L	U
SW-2	Nov-03	Trichloroethene	0.2	ug/L	U
SW-2	Dec-03	Trichloroethene	0.2	ug/L	U
SW-2	Jan-04	Trichloroethene	2.1	ug/L	
SW-2	Feb-04	Trichloroethene	1.4	ug/L	
SW-2	Mar-04	Trichloroethene	0.2	ug/L	U
SW-2	Apr-04	Trichloroethene	0.4	ug/L	
SW-2	May-04	Trichloroethene	2.2	ug/L	
SW-2	Jun-04	Trichloroethene	0.2	ug/L	U
SW-2	Jul-04	Trichloroethene	0.4	ug/L	U
SW-2	Aug-04	Trichloroethene	0.6	ug/L	
SW-2	Sep-04	Trichloroethene	0.4	ug/L	U
SW-2	Oct-04	Trichloroethene	1.7	ug/L	
SW-2	Nov-04	Trichloroethene	0.4	ug/L	U
SW-2	Dec-04	Trichloroethene	0.5	ug/L	
SW-2	Jan-05	Trichloroethene	0.5	ug/L	
SW-2	Feb-05	Trichloroethene	0.8	ug/L	
SW-2	Mar-05	Trichloroethene	2.6	ug/L	
SW-2	Apr-05	Trichloroethene	0.8	ug/L	
SW-2	May-05	Trichloroethene	0.4	ug/L	U
SW-2	Jun-05	Trichloroethene	0.5	ug/L	
SW-2	Jul-05	Trichloroethene	0.4	ug/L	U
SW-2	Aug-05	Trichloroethene	0.4	ug/L	U
SW-2	Sep-05	Trichloroethene	0.4	ug/L	U
SW-2	Oct-05	Trichloroethene	0.4	ug/L	U
SW-2	Nov-05	Trichloroethene	0.4	ug/L	U
SW-2	Mar-06	Trichloroethene	1.2	ug/L	
SW-2	Sep-06	Trichloroethene	0.6	ug/L	
SW-2	Mar-07	Trichloroethene	0.4	ug/L	U

TABLE 7
HISTORICAL TCE CONCENTRATIONS IN STREAM LOCATIONS
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Location	Sample Date	Analyte	Conc	Result Unit	Qualifiers
SW-3	Jun-94	Trichloroethene	34.00	ug/L	
SW-3	Jun-94	Trichloroethene	36.00	ug/L	
SW-3	Jul-94	Trichloroethene	29.00	ug/L	
SW-3	Jul-94	Trichloroethene	26.00	ug/L	
SW-3	Aug-94	Trichloroethene	32.00	ug/L	
SW-3	Oct-94	Trichloroethene	14.5	ug/L	
SW-3	Nov-94	Trichloroethene	26.6	ug/L	J
SW-3	Dec-94	Trichloroethene	48.4	ug/L	
SW-3	Jan-95	Trichloroethene	31.7	ug/L	
SW-3	Feb-95	Trichloroethene	63.2	ug/L	
SW-3	Apr-95	Trichloroethene	48	ug/L	
SW-3	Apr-95	Trichloroethene	51.4	ug/L	
SW-3	Jun-95	Trichloroethene	29	ug/L	
SW-3	Jun-95	Trichloroethene	7.51	ug/L	
SW-3	Aug-95	Trichloroethene	32	ug/L	
SW-3	Apr-96	Trichloroethene	24	ug/L	
SW-3	Sep-97	Trichloroethene	43.7	ug/L	
SW-3	Apr-98	Trichloroethene	47	ug/L	
SW-3	Sep-98	Trichloroethene	26.6	ug/L	
SW-3	Sep-98	Trichloroethene	27.8	ug/L	
SW-3	Nov-99	Trichloroethene	41.4	ug/L	
SW-3	Mar-00	Trichloroethene	60	ug/L	
SW-3	Dec-02	Trichloroethene	44	ug/L	
SW-3	Mar-03	Trichloroethene	28	ug/L	
SW-3	Jul-03	Trichloroethene	2.6	ug/L	
SW-3	Aug-03	Trichloroethene	1.2	ug/L	
SW-3	Sep-03	Trichloroethene	0.3	ug/L	U
SW-3	Oct-03	Trichloroethene	0.2	ug/L	U
SW-3	Nov-03	Trichloroethene	0.2	ug/L	U
SW-3	Dec-03	Trichloroethene	0.2	ug/L	U
SW-3	Jan-04	Trichloroethene	1.1	ug/L	
SW-3	Feb-04	Trichloroethene	0.8	ug/L	
SW-3	Mar-04	Trichloroethene	0.2	ug/L	U
SW-3	Apr-04	Trichloroethene	0.3	ug/L	
SW-3	May-04	Trichloroethene	1.2	ug/L	
SW-3	Jun-04	Trichloroethene	0.2	ug/L	U
SW-3	Jul-04	Trichloroethene	0.4	ug/L	U
SW-3	Aug-04	Trichloroethene	0.4	ug/L	U
SW-3	Sep-04	Trichloroethene	0.4	ug/L	U
SW-3	Oct-04	Trichloroethene	0.7	ug/L	
SW-3	Nov-04	Trichloroethene	0.4	ug/L	U
SW-3	Dec-04	Trichloroethene	0.4	ug/L	U
SW-3	Jan-05	Trichloroethene	0.4	ug/L	U
SW-3	Feb-05	Trichloroethene	0.4	ug/L	
SW-3	Mar-05	Trichloroethene	1.6	ug/L	
SW-3	Apr-05	Trichloroethene	0.4	ug/L	U
SW-3	May-05	Trichloroethene	0.4	ug/L	U
SW-3	Jun-05	Trichloroethene	0.4	ug/L	U
SW-3	Jul-05	Trichloroethene	0.4	ug/L	U
SW-3	Aug-05	Trichloroethene	0.4	ug/L	U
SW-3	Sep-05	Trichloroethene	0.4	ug/L	U
SW-3	Oct-05	Trichloroethene	0.4	ug/L	U
SW-3	Nov-05	Trichloroethene	0.4	ug/L	U
SW-3	Mar-06	Trichloroethene	0.6	ug/L	
SW-3	Sep-06	Trichloroethene	0.4	ug/L	U
SW-3	Mar-07	Trichloroethene	0.4	ug/L	U

TABLE 7
HISTORICAL TCE CONCENTRATIONS IN STREAM LOCATIONS
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Location	Sample Date	Analyte	Conc	Result Unit	Qualifiers
SW-4	May-94	Trichloroethene	14	ug/L	
SW-4	Jun-94	Trichloroethene	14	ug/L	
SW-4	Jun-94	Trichloroethene	6.9	ug/L	
SW-4	Jul-94	Trichloroethene	6.5	ug/L	
SW-4	Jul-94	Trichloroethene	6.6	ug/L	
SW-4	Jul-94	Trichloroethene	9.4	ug/L	
SW-4	Aug-94	Trichloroethene	11	ug/L	
SW-4	Oct-94	Trichloroethene	2.08	ug/L	
SW-4	Nov-94	Trichloroethene	4.31	ug/L	J
SW-4	Dec-94	Trichloroethene	19.5	ug/L	
SW-4	Jan-95	Trichloroethene	16.1	ug/L	
SW-4	Jan-95	Trichloroethene	17	ug/L	
SW-4	Feb-95	Trichloroethene	53.7	ug/L	
SW-4	Feb-95	Trichloroethene	54.4	ug/L	
SW-4	Apr-95	Trichloroethene	19.3	ug/L	
SW-4	Jun-95	Trichloroethene	6.29	ug/L	
SW-4	Aug-95	Trichloroethene	2.62	ug/L	
SW-4	Aug-95	Trichloroethene	2.83	ug/L	
SW-4	Apr-96	Trichloroethene	16	ug/L	
SW-4	Sep-97	Trichloroethene	3.9	ug/L	
SW-4	Apr-98	Trichloroethene	30.4	ug/L	
SW-4	Sep-98	Trichloroethene	1.4	ug/L	
SW-4	Nov-99	Trichloroethene	19.2	ug/L	
SW-4	Mar-00	Trichloroethene	36	ug/L	
SW-4	Dec-02	Trichloroethene	30	ug/L	
SW-4	Mar-03	Trichloroethene	18	ug/L	
SW-4	Jul-03	Trichloroethene	1.7	ug/L	
SW-4	Aug-03	Trichloroethene	0.2	ug/L	U
SW-4	Sep-03	Trichloroethene	0.3	ug/L	U
SW-4	Oct-03	Trichloroethene	0.2	ug/L	U
SW-4	Nov-03	Trichloroethene	0.2	ug/L	U
SW-4	Dec-03	Trichloroethene	0.2	ug/L	U
SW-4	Jan-04	Trichloroethene	0.6	ug/L	
SW-4	Feb-04	Trichloroethene	0.6	ug/L	
SW-4	Mar-04	Trichloroethene	0.2	ug/L	U
SW-4	Apr-04	Trichloroethene	0.2	ug/L	U
SW-4	May-04	Trichloroethene	0.7	ug/L	
SW-4	Jun-04	Trichloroethene	0.2	ug/L	U
SW-4	Jul-04	Trichloroethene	0.4	ug/L	U
SW-4	Aug-04	Trichloroethene	0.4	ug/L	U
SW-4	Sep-04	Trichloroethene	0.4	ug/L	U
SW-4	Oct-04	Trichloroethene	0.4	ug/L	
SW-4	Nov-04	Trichloroethene	0.4	ug/L	U
SW-4	Dec-04	Trichloroethene	0.4	ug/L	
SW-4	Jan-05	Trichloroethene	0.4	ug/L	U
SW-4	Feb-05	Trichloroethene	0.4	ug/L	U
SW-4	Mar-05	Trichloroethene	1.1	ug/L	
SW-4	Apr-05	Trichloroethene	0.4	ug/L	U
SW-4	May-05	Trichloroethene	0.4	ug/L	U
SW-4	Jun-05	Trichloroethene	0.4	ug/L	U
SW-4	Jul-05	Trichloroethene	0.4	ug/L	U
SW-4	Aug-05	Trichloroethene	0.4	ug/L	U
SW-4	Sep-05	Trichloroethene	0.4	ug/L	U
SW-4	Oct-05	Trichloroethene	0.4	ug/L	U
SW-4	Nov-05	Trichloroethene	0.4	ug/L	U
SW-4	Mar-06	Trichloroethene	0.4	ug/L	U
SW-4	Sep-06	Trichloroethene	0.4	ug/L	U
SW-4	Mar-07	Trichloroethene	0.4	ug/L	U

TABLE 7
HISTORICAL TCE CONCENTRATIONS IN STREAM LOCATIONS
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Location	Sample Date	Analyte	Conc	Result Unit	Qualifiers
SW-12	Dec-02	Trichloroethene	7.8	ug/L	
SW-12	Mar-03	Trichloroethene	5	ug/L	
SW-12	Mar-03	Trichloroethene	3	ug/L	
SW-12	Jul-03	Trichloroethene	1.7	ug/L	
SW-12	Aug-03	Trichloroethene	2.2	ug/L	
SW-12	Sep-03	Trichloroethene	3	ug/L	
SW-12	Oct-03	Trichloroethene	3.4	ug/L	U
SW-12	Nov-03	Trichloroethene	3.2	ug/L	
SW-12	Dec-03	Trichloroethene	1.1	ug/L	
SW-12	Jan-04	Trichloroethene	2.1	ug/L	
SW-12	Feb-04	Trichloroethene	1.4	ug/L	
SW-12	Mar-04	Trichloroethene	0.2	ug/L	U
SW-12	Apr-04	Trichloroethene	2.3	ug/L	
SW-12	May-04	Trichloroethene	2.4	ug/L	
SW-12	Jun-04	Trichloroethene	1.3	ug/L	
SW-12	Jul-04	Trichloroethene	2.5	ug/L	
SW-12	Aug-04	Trichloroethene	2.4	ug/L	
SW-12	Sep-04	Trichloroethene	2.1	ug/L	
SW-12	Oct-04	Trichloroethene	2.2	ug/L	
SW-12	Nov-04	Trichloroethene	2.4	ug/L	
SW-12	Dec-04	Trichloroethene	1.1	ug/L	
SW-12	Jan-05	Trichloroethene	1.0	ug/L	
SW-12	Feb-05	Trichloroethene	2.3	ug/L	
SW-12	Mar-05	Trichloroethene	1.0	ug/L	
SW-12	Apr-05	Trichloroethene	1.2	ug/L	
SW-12	May-05	Trichloroethene	0.4	ug/L	U
SW-12	Jun-05	Trichloroethene	2.9	ug/L	
SW-12	Jul-05	Trichloroethene	3.3	ug/L	
SW-12	Aug-05	Trichloroethene	3.0	ug/L	
SW-12	Sep-05	Trichloroethene	3.6	ug/L	
SW-12	Oct-05	Trichloroethene	0.4	ug/L	U
SW-12	Nov-05	Trichloroethene	0.4	ug/L	U

ug/L	micrograms/Liter
U	The compound was not detected above method detection limit
J	Data indicates the presence of a compound detected at less than the quantitation limit. The value is approximate.
D	Concentration was reported from a diluted analysis. The value is approximate.

TABLE 8
SYSTEM PERFORMANCE SUMMARY
FORMER LEC SITE - WATCHUNG, NEW JERSEY

Sample Month	Influent TCE (ug/L)	Mid TCE (ug/L)	Effluent TCE (ug/L)	Average Pumping Rate (gpm)	Monthly Pumpage (MGM)	RW-1 Water Level (feet)
July 2003	62	ND	ND	133.4	2.31	43.8
August 2003	470	ND	ND	128.0	5.53	44.9
September 2003	62	ND	ND	127.5	5.51	44.6
October 2003	470	ND	ND	122.8	5.31	41.8
November 2003	510	58	ND	124.2	5.36	44.1
December 2003	650	160	ND	138.2	5.97	50.3
January 2004	430	310	1.2	138.8	6.00	51.5
February 2004	450	460	ND	135.5	5.85	52.5
March 2004	480	190	2.8	132.3	5.72	54
April 2004	370	340	2.0	129.6	5.57	49.9
May 2004	350	320	2.0	134.9	6.02	53.7
June 2004	370	3.3	0.8	100.1	4.32	55.8
July 2004	420	3.9	1	132.7	5.73	45.01
August 2004	390	53	0.6	132.3	5.72	53.73
September 2004	480	200	0.7	128.5	5.55	58.63
October 2004	400	1.2	0.5	104.5	4.52	56.06
November 2004	400	16	0.4	136.3	5.89	41.79
December 2004	360	73	0.4	118.8	5.13	55.19
January 2005	330	180	0.5	135.6	5.86	54.42
February 2005	380	260	ND	125.0	5.40	47.06
March 2005	370	47	ND	121.5	5.25	60.19
April 2005	350	130	0.4	144.2	6.23	52.3
May 2005	330	190	ND	127.8	5.52	60.8
June 2005	360	1.8	0.5	118.1	5.10	62.6
July 2005	360	5.1	0.5	129.1	5.58	61
August 2005	270	76	0.6	126.6	5.47	66.3
September 2005	240	120	NS	125.6	5.43	62.4
October 2005	320	2.9	0.5	82.7	3.57	49.9
November 2005	280	9	NS	126.5	5.47	58.9
December 2005	280	67	NS	126.9	5.48	56.5
January 2006	210	100	NS	126.3	5.46	60
February 2006	180	1.6	1.0	119.6	5.17	58.8
March 2006	260	4.1	NS	126.5	5.47	59.2
April 2006	230	14	1.2	122.0	5.27	56.7
May 2006	180	55	NS	129.4	5.59	64.9
June 2006	200	120	1.4	125.2	5.41	59.3
July 2006	180	180	NS	118.1	5.10	55
August 2006	200	200	NS	95.1	4.11	56.2
September 2006	150	27	1.5	103.2	4.46	58.4
October 2006	170	44	NS	121.2	5.24	60.1
November 2006	170	69	NS	124.8	5.39	58.4
December 2006	120	86	1.5	122.6	5.30	61.8
January 2007	85	110	NS	118.9	5.14	58.7
February 2007	90	4.7	NS	119.6	5.17	66.8
March 2007	60	4	1.7	103.9	4.49	57.5

NS	Not sampled, only need to sample effluent one time per quarter as per NJPDES Permit
ND	Not detected
ug/L	micrograms/Liter
gpm	gallons per minute
MGM	million gallons per month

TABLE 9
IMPLEMENTATION SCHEDULE
FORMER LEC SITE - WATCHUNG, NEW JERSEY

TASKS	2007								2008				
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
System Monitoring and Sampling													
Ground Water/Surface Water Sample Collection and Analysis													
Report Preparation													
Remedial Action Progress Report to NJDEP													

APPENDIX A

NJDEP Contour Map Reporting Forms

CONTOUR MAP REPORTING FORM –
Shallow Zone
September 19, 2006

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

1. Did any surveyed well casing elevations change from the previous sampling event? Yes___No___X. If yes, attach new "Well Certification - Form B" and identify the reason for the elevation change (damage to casing, installation of recovery system in monitoring well, etc.).

2. Are there any monitoring wells in unconfined aquifers in which in which the water table elevation is higher than the top of the well screen? Yes_____X No _ . If yes, identify these wells. All the wells used in the construction of contours are for monitoring a chlorinated solvent plume. The well screens are typically below static water level.

3. Are there any monitoring wells present at the site but omitted from the contour map? Yes _____No___X . Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

4. Are there any monitoring wells containing separate phase product during this measuring event? Yes _____ No___X. Were any of the monitoring wells with separate phase product included in the ground water contour map? Yes_____ No __ . If yes, show the formula used to correct the water table elevation.

5. Has the ground water flow direction changed more than 45° from the previous ground water contour map? Yes___ No X. If yes, discuss the reasons for the change.

6. Has ground water mounding and/or depressions been identified in the ground water contour map? Yes___X No_ Unless the ground water mounds and/or depressions are caused by the ground water remediation system, discuss the reasons for this occurrence.

7. Are all the wells used in the contour map screened in the same water-bearing zone? Yes X No___. If no, justify inclusion of those wells. See Table 3-includes the wells listed in shallow zone which are included on the contour map.

8. Were the ground water contours computer generated __, computer aided __, or hand-drawn X ? If computer aided or generated, identify the interpolation method(s) used.

CONTOUR MAP REPORTING FORM –
Shallow Zone
March 6, 2007

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

1. Did any surveyed well casing elevations change from the previous sampling event? Yes___No___X. If yes, attach new "Well Certification - Form B" and identify the reason for the elevation change (damage to casing, installation of recovery system in monitoring well, etc.).

2. Are there any monitoring wells in unconfined aquifers in which in which the water table elevation is higher than the top of the well screen? Yes_____X No _____. If yes, identify these wells. All the wells used in the construction of contours are for monitoring a chlorinated solvent plume. The well screens are typically below static water level.

3. Are there any monitoring wells present at the site but omitted from the contour map? Yes _____No___X . Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

4. Are there any monitoring wells containing separate phase product during this measuring event? Yes _____ No___X. Were any of the monitoring wells with separate phase product included in the ground water contour map? Yes_____ No __ . If yes, show the formula used to correct the water table elevation.

5. Has the ground water flow direction changed more than 45° from the previous ground water contour map? Yes___ No X. If yes, discuss the reasons for the change.

6. Has ground water mounding and/or depressions been identified in the ground water contour map? Yes___X No_ Unless the ground water mounds and/or depressions are caused by the ground water remediation system, discuss the reasons for this occurrence.

7. Are all the wells used in the contour map screened in the same water-bearing zone? Yes X No___. If no, justify inclusion of those wells. See Table 3-includes the wells listed in shallow zone which are included on the contour map.

8. Were the ground water contours computer generated __, computer aided __, or hand-drawn X ? If computer aided or generated, identify the interpolation method(s) used.

CONTOUR MAP REPORTING FORM –
Intermediate Zone
March 6, 2007

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

1. Did any surveyed well casing elevations change from the previous sampling event? Yes___No___X. If yes, attach new "Well Certification - Form B" and identify the reason for the elevation change (damage to casing, installation of recovery system in monitoring well, etc.).

2. Are there any monitoring wells in unconfined aquifers in which in which the water table elevation is higher than the top of the well screen? Yes_____No X . If yes, identify these wells. The wells used in this contour map are screened within an intermediate bedrock zone.

3. Are there any monitoring wells present at the site but omitted from the contour map? Yes _____No___X . Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

4. Are there any monitoring wells containing separate phase product during this measuring event? Yes _____ No___X. Were any of the monitoring wells with separate phase product included in the ground water contour map? Yes_____ No __ . If yes, show the formula used to correct the water table elevation.

5. Has the ground water flow direction changed more than 45° from the previous ground water contour map? Yes___ No X. If yes, discuss the reasons for the change.

6. Has ground water mounding and/or depressions been identified in the ground water contour map? Yes___X No___ Unless the ground water mounds and/or depressions are caused by the ground water remediation system, discuss the reasons for this occurrence.

7. Are all the wells used in the contour map screened in the same water-bearing zone? Yes X No___. If no, justify inclusion of those wells. See Table 3 for the wells used in the intermediate zone contour map

8. Were the ground water contours computer generated __, computer aided ___, or hand-drawn X ? If computer aided or generated, identify the interpolation method(s) used.

CONTOUR MAP REPORTING FORM –
Deep Zone
March 6, 2007

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

1. Did any surveyed well casing elevations change from the previous sampling event? Yes___No___X. If yes, attach new "Well Certification - Form B" and identify the reason for the elevation change (damage to casing, installation of recovery system in monitoring well, etc.).

2. Are there any monitoring wells in unconfined aquifers in which in which the water table elevation is higher than the top of the well screen? Yes_____No X . If yes, identify these wells. The wells used in this contour map are screened within the deep bedrock zone.

3. Are there any monitoring wells present at the site but omitted from the contour map? Yes _____No___X . Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

4. Are there any monitoring wells containing separate phase product during this measuring event? Yes _____ No___X. Were any of the monitoring wells with separate phase product included in the ground water contour map? Yes_____ No __ . If yes, show the formula used to correct the water table elevation.

5. Has the ground water flow direction changed more than 45° from the previous ground water contour map? Yes___ No X. If yes, discuss the reasons for the change.

6. Has ground water mounding and/or depressions been identified in the ground water contour map? Yes_____No___X Unless the ground water mounds and/or depressions are caused by the ground water remediation system, discuss the reasons for this occurrence.

7. Are all the wells used in the contour map screened in the same water-bearing zone? Yes X No___. If no, justify inclusion of those wells. See Table 3 for the wells used in the deep zone contour map

8. Were the ground water contours computer generated __, computer aided ___, or hand-drawn X ? If computer aided or generated, identify the interpolation method(s) used.

CONTOUR MAP REPORTING FORM –
Intermediate Zone
September 19, 2006

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

1. Did any surveyed well casing elevations change from the previous sampling event? Yes___No___X. If yes, attach new "Well Certification - Form B" and identify the reason for the elevation change (damage to casing, installation of recovery system in monitoring well, etc.).

2. Are there any monitoring wells in unconfined aquifers in which in which the water table elevation is higher than the top of the well screen? Yes_____No X . If yes, identify these wells. The wells used in this contour map are screened within an intermediate bedrock zone.

3. Are there any monitoring wells present at the site but omitted from the contour map? Yes _____No___X . Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

4. Are there any monitoring wells containing separate phase product during this measuring event? Yes _____ No___X. Were any of the monitoring wells with separate phase product included in the ground water contour map? Yes_____ No __ . If yes, show the formula used to correct the water table elevation.

5. Has the ground water flow direction changed more than 45° from the previous ground water contour map? Yes___ No X. If yes, discuss the reasons for the change.

6. Has ground water mounding and/or depressions been identified in the ground water contour map? Yes___X No___ Unless the ground water mounds and/or depressions are caused by the ground water remediation system, discuss the reasons for this occurrence.

7. Are all the wells used in the contour map screened in the same water-bearing zone? Yes X No___. If no, justify inclusion of those wells. See Table 3 for the wells used in the intermediate zone contour map

8. Were the ground water contours computer generated __, computer aided ___, or hand-drawn X ? If computer aided or generated, identify the interpolation method(s) used.

CONTOUR MAP REPORTING FORM –
Deep Zone
September 19, 2006

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

1. Did any surveyed well casing elevations change from the previous sampling event? Yes___No___X. If yes, attach new "Well Certification - Form B" and identify the reason for the elevation change (damage to casing, installation of recovery system in monitoring well, etc.).

2. Are there any monitoring wells in unconfined aquifers in which in which the water table elevation is higher than the top of the well screen? Yes_____No X . If yes, identify these wells. The wells used in this contour map are screened within the deep bedrock zone.

3. Are there any monitoring wells present at the site but omitted from the contour map? Yes _____No___X . Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

4. Are there any monitoring wells containing separate phase product during this measuring event? Yes _____ No___X. Were any of the monitoring wells with separate phase product included in the ground water contour map? Yes_____ No __ . If yes, show the formula used to correct the water table elevation.

5. Has the ground water flow direction changed more than 45° from the previous ground water contour map? Yes___ No X. If yes, discuss the reasons for the change.

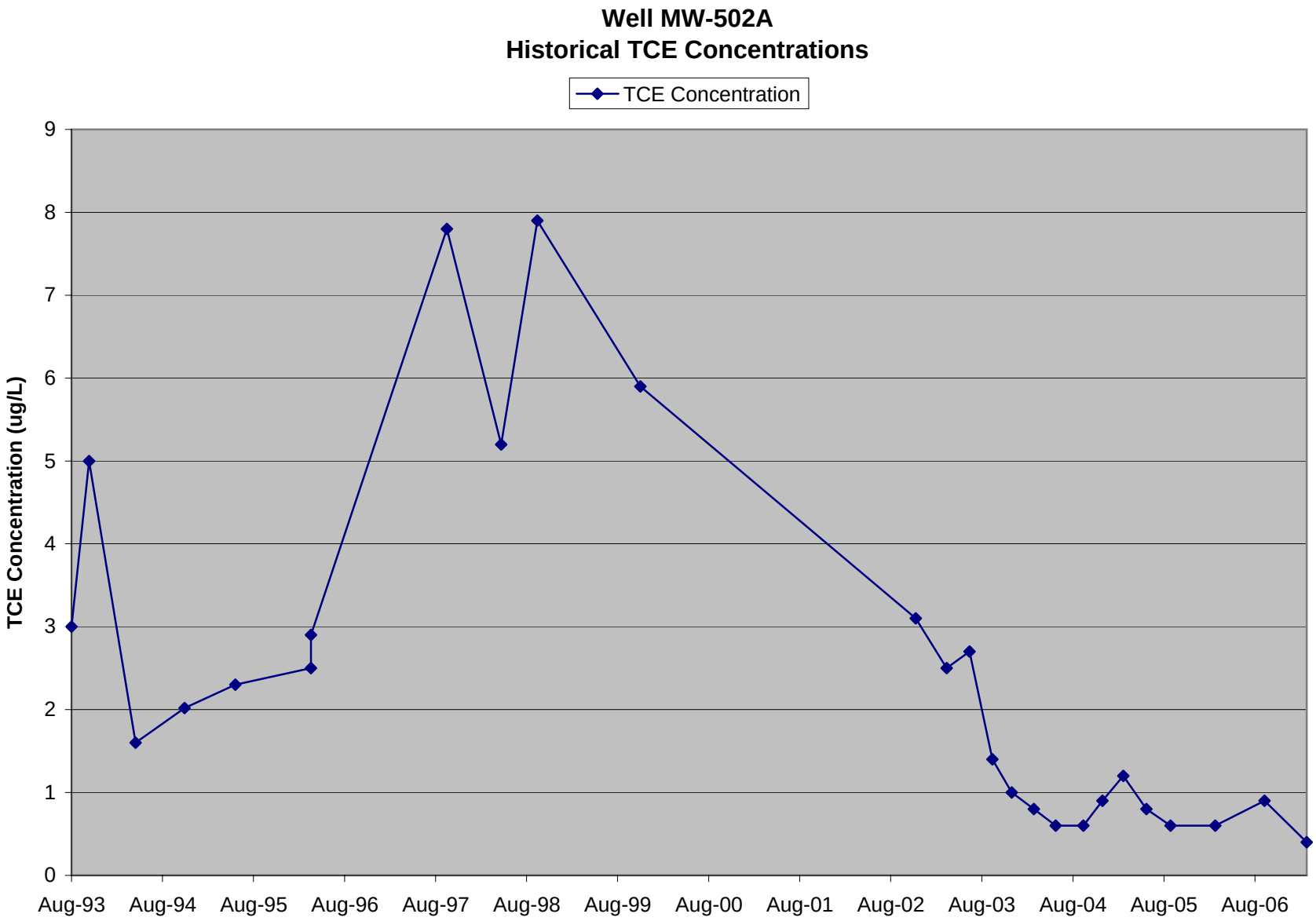
6. Has ground water mounding and/or depressions been identified in the ground water contour map? Yes_____No___X Unless the ground water mounds and/or depressions are caused by the ground water remediation system, discuss the reasons for this occurrence.

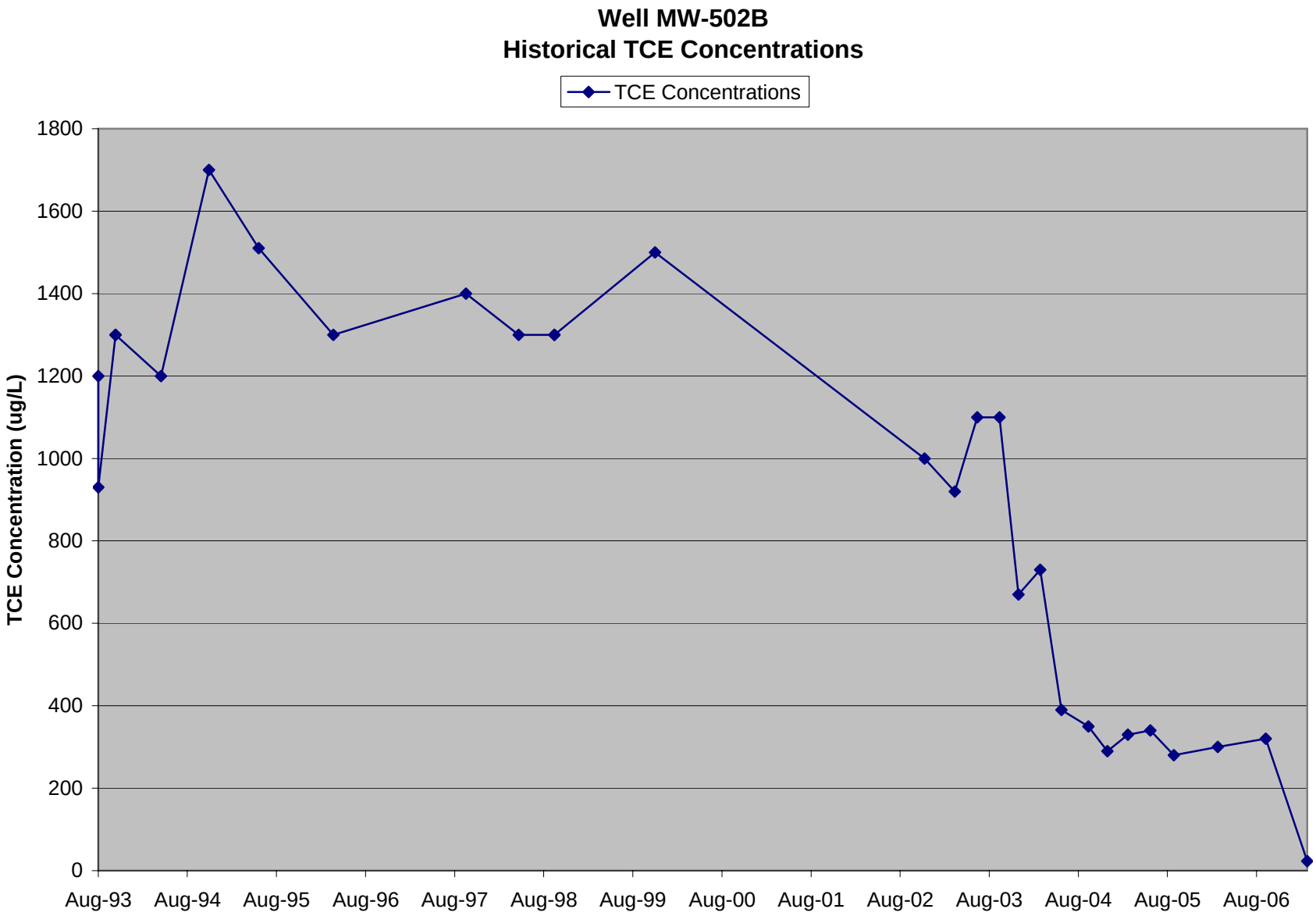
7. Are all the wells used in the contour map screened in the same water-bearing zone? Yes X No___. If no, justify inclusion of those wells. See Table 3 for the wells used in the deep zone contour map

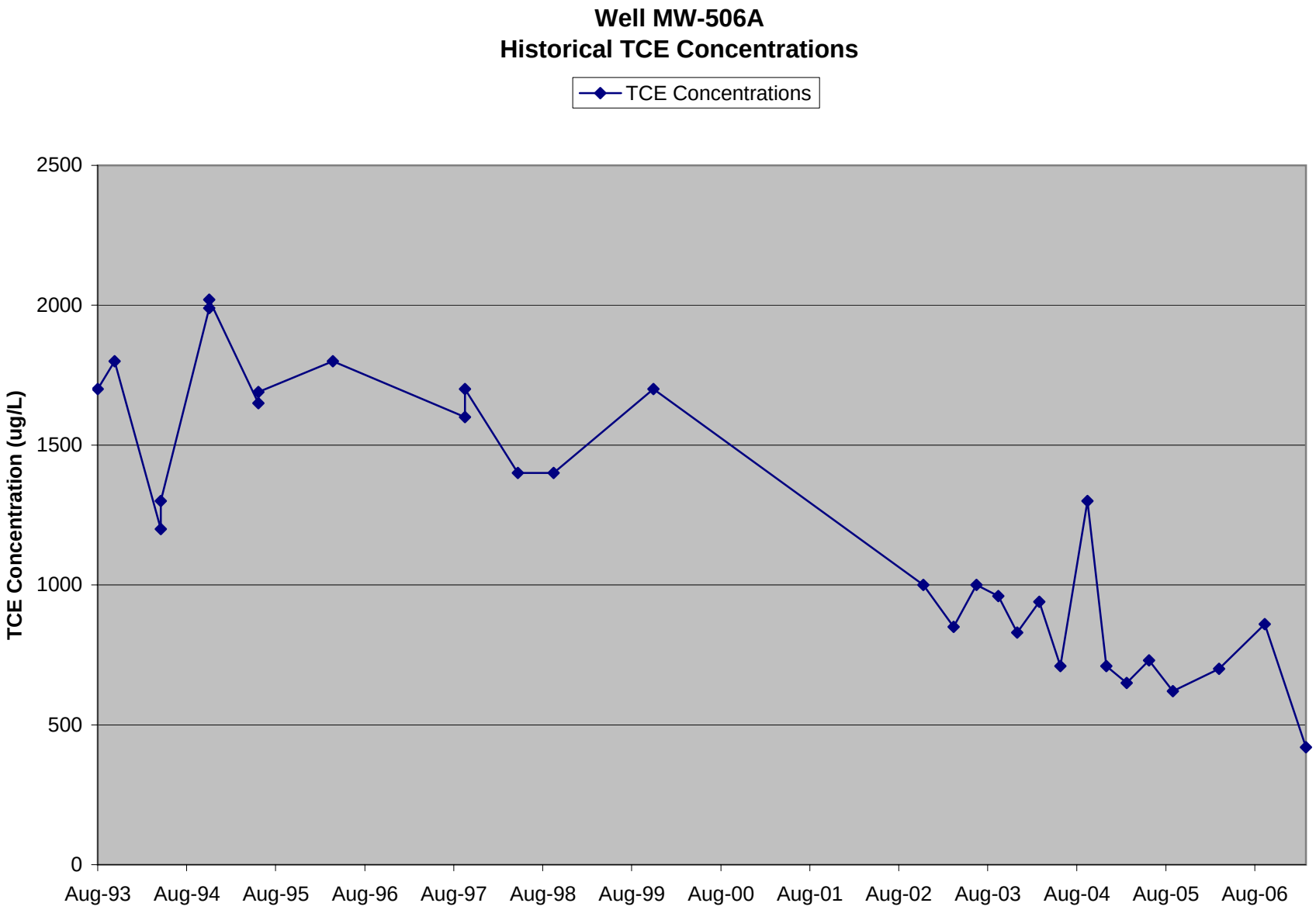
8. Were the ground water contours computer generated __, computer aided ___, or hand-drawn X ? If computer aided or generated, identify the interpolation method(s) used.

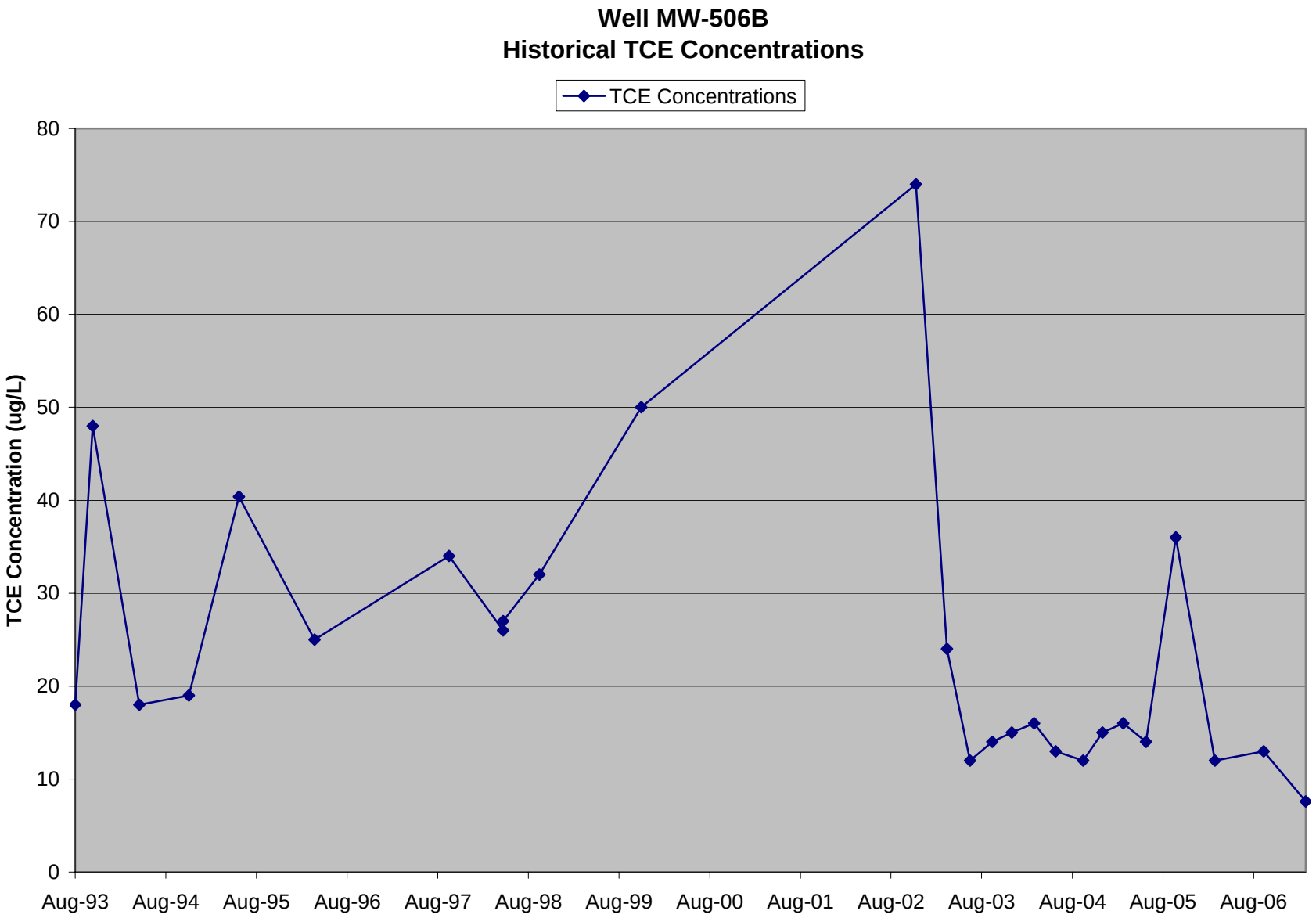
APPENDIX B

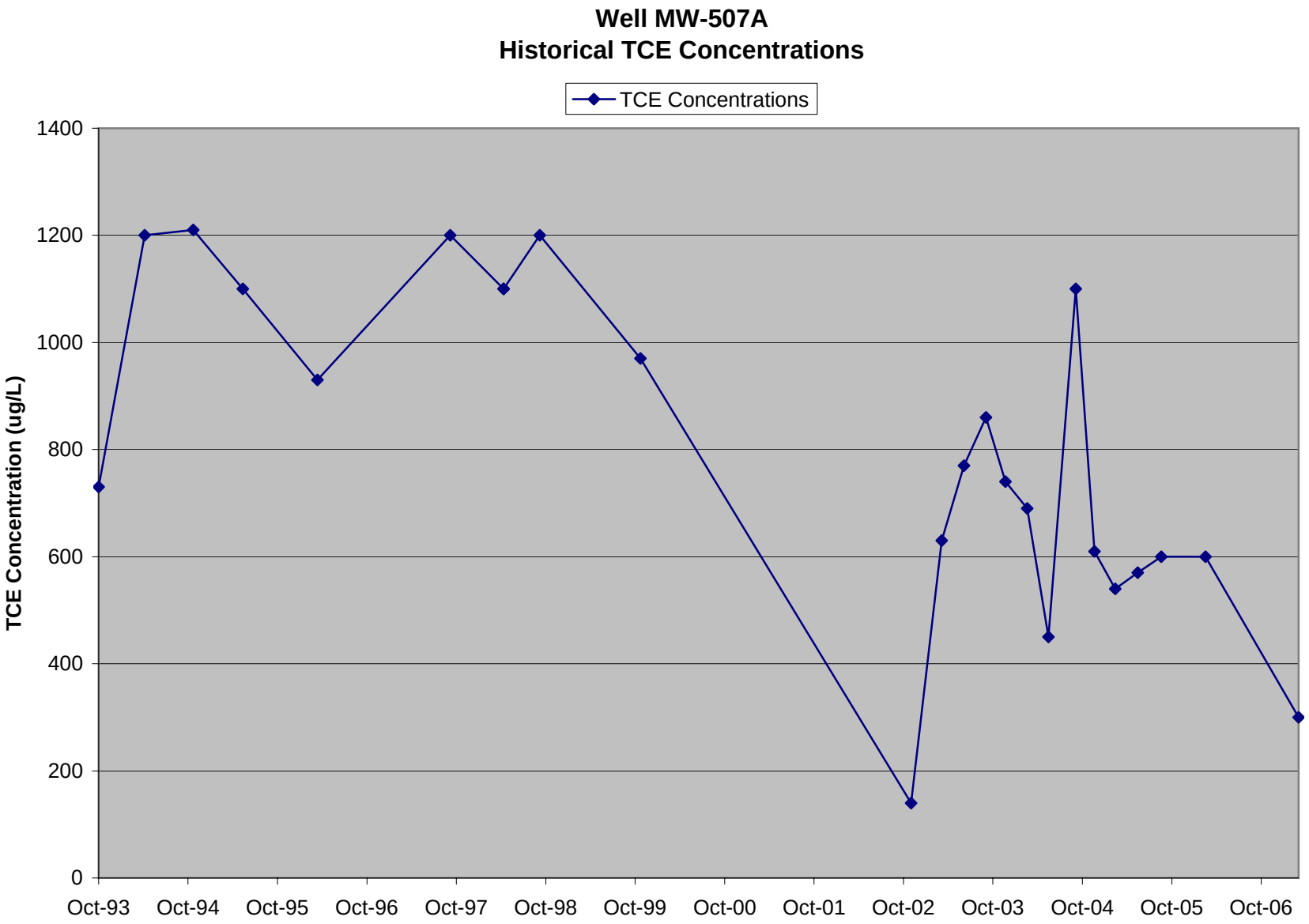
Plots of TCE Concentration Versus Time for Selected Monitoring Wells

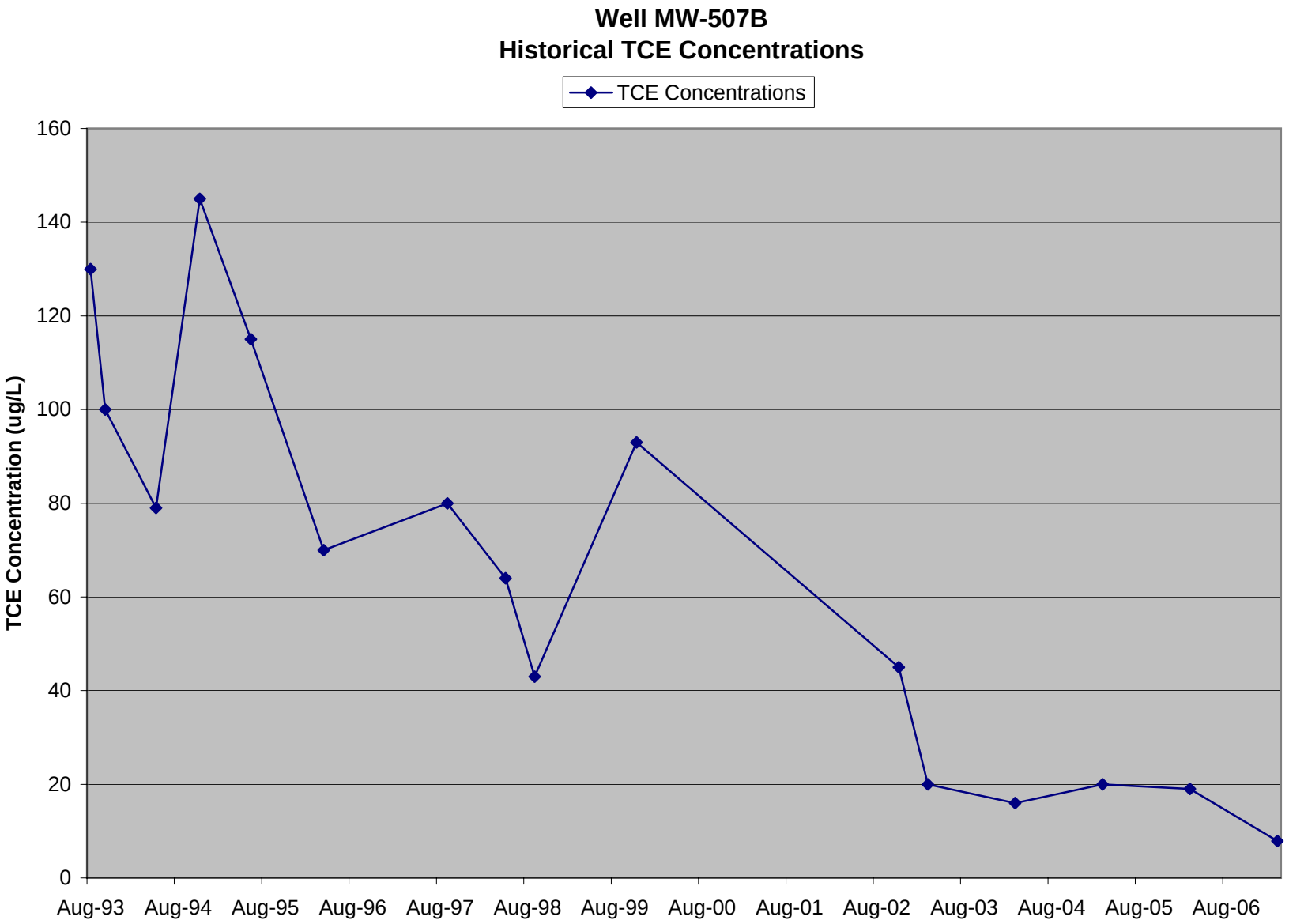

Well MW-502A
Historical TCE Concentrations
TCE Concentration
TCE Concentration (ug/L)
0
1
2
3
4
5
6
7
8
9
Aug-93
Aug-94
Aug-95
Aug-96
Aug-97
Aug-98
Aug-99
Aug-00
Aug-01
Aug-02
Aug-03
Aug-04
Aug-05
Aug-06

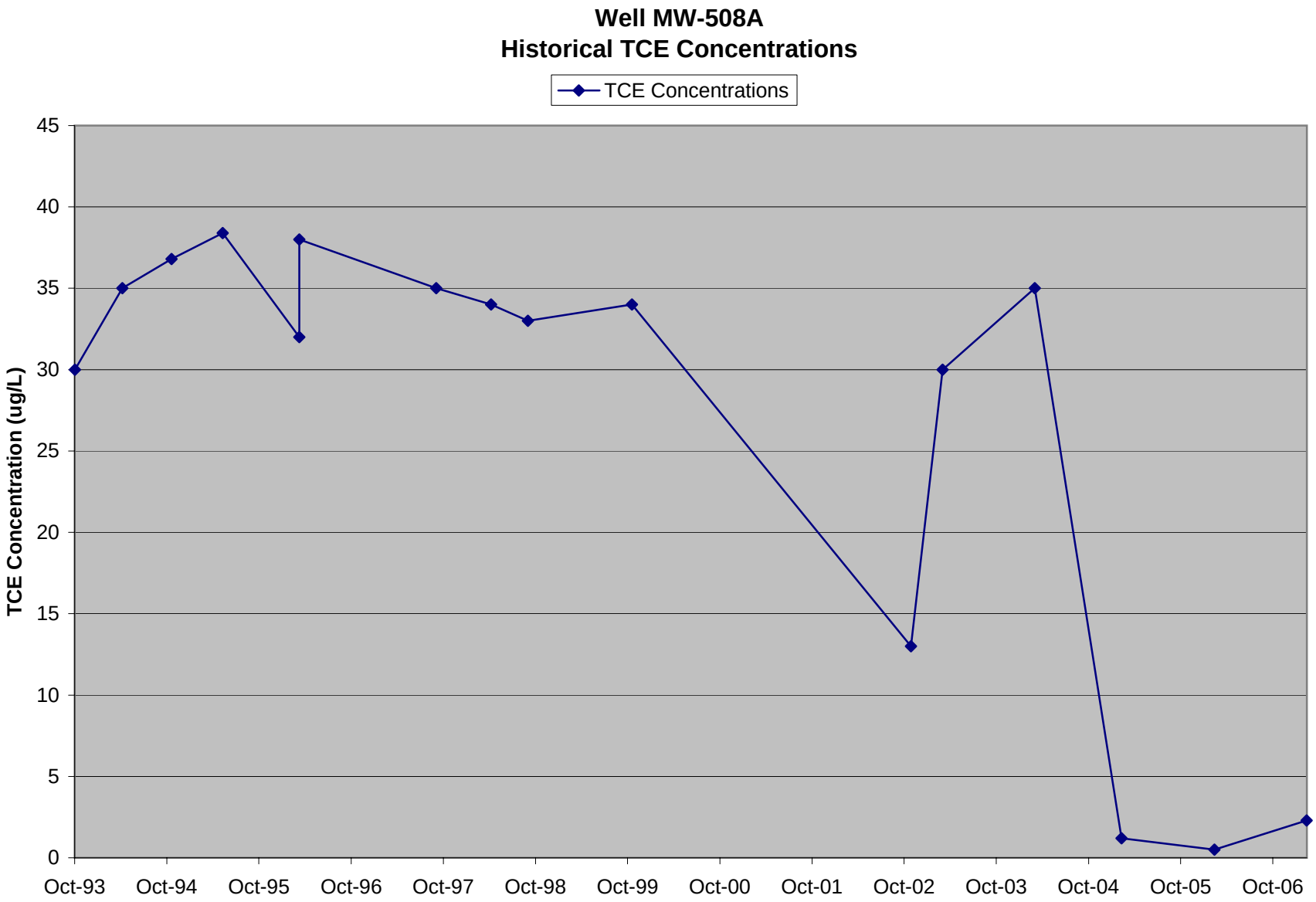

Well MW-502B
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
1800
1600
1400
1200
1000
800
600
400
200
0
Aug-93
Aug-94
Aug-95
Aug-96
Aug-97
Aug-98
Aug-99
Aug-00
Aug-01
Aug-02
Aug-03
Aug-04
Aug-05
Aug-06

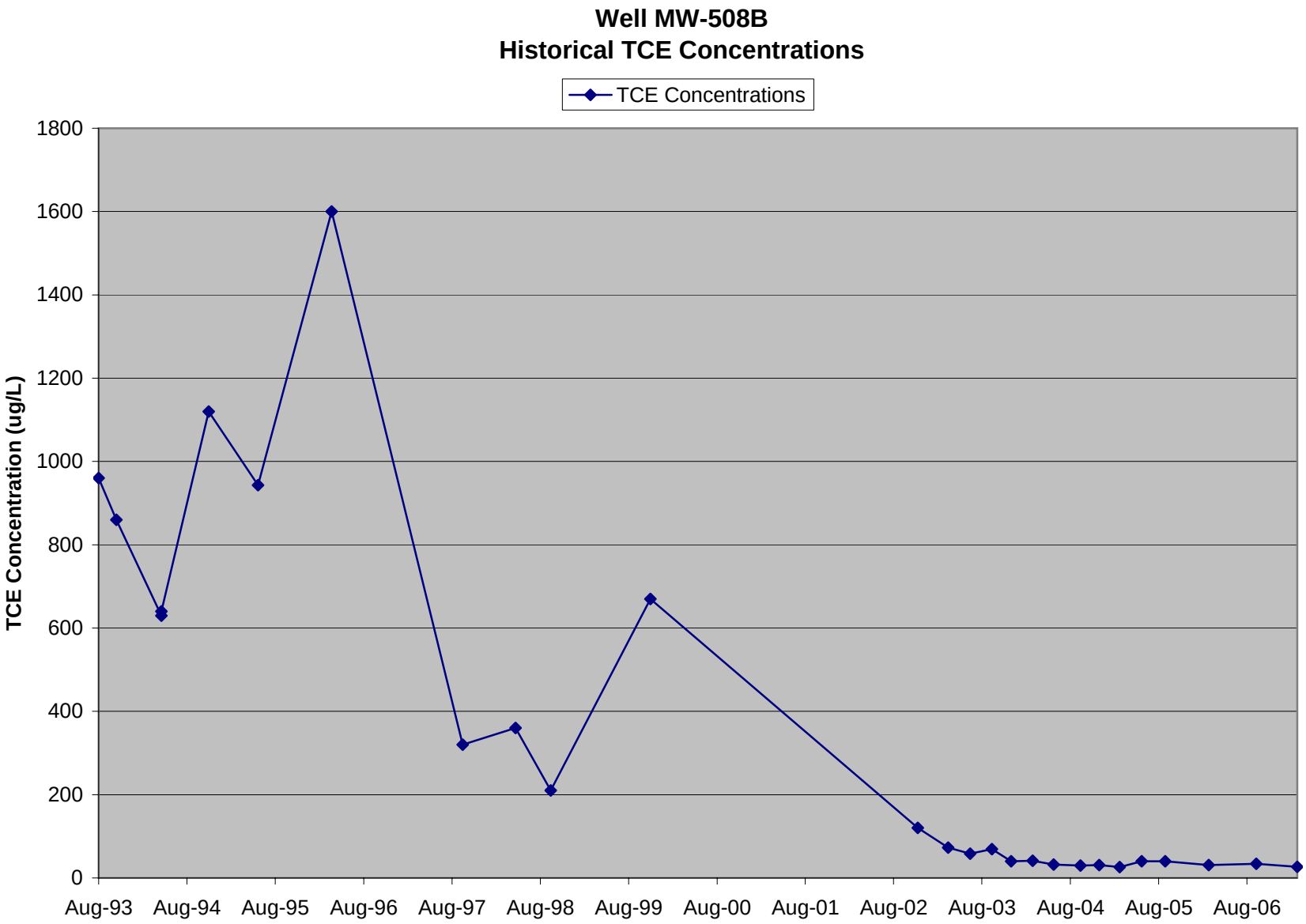

Well MW-506A
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
2500
2000
1500
1000
500
0
Aug-93
Aug-94
Aug-95
Aug-96
Aug-97
Aug-98
Aug-99
Aug-00
Aug-01
Aug-02
Aug-03
Aug-04
Aug-05
Aug-06

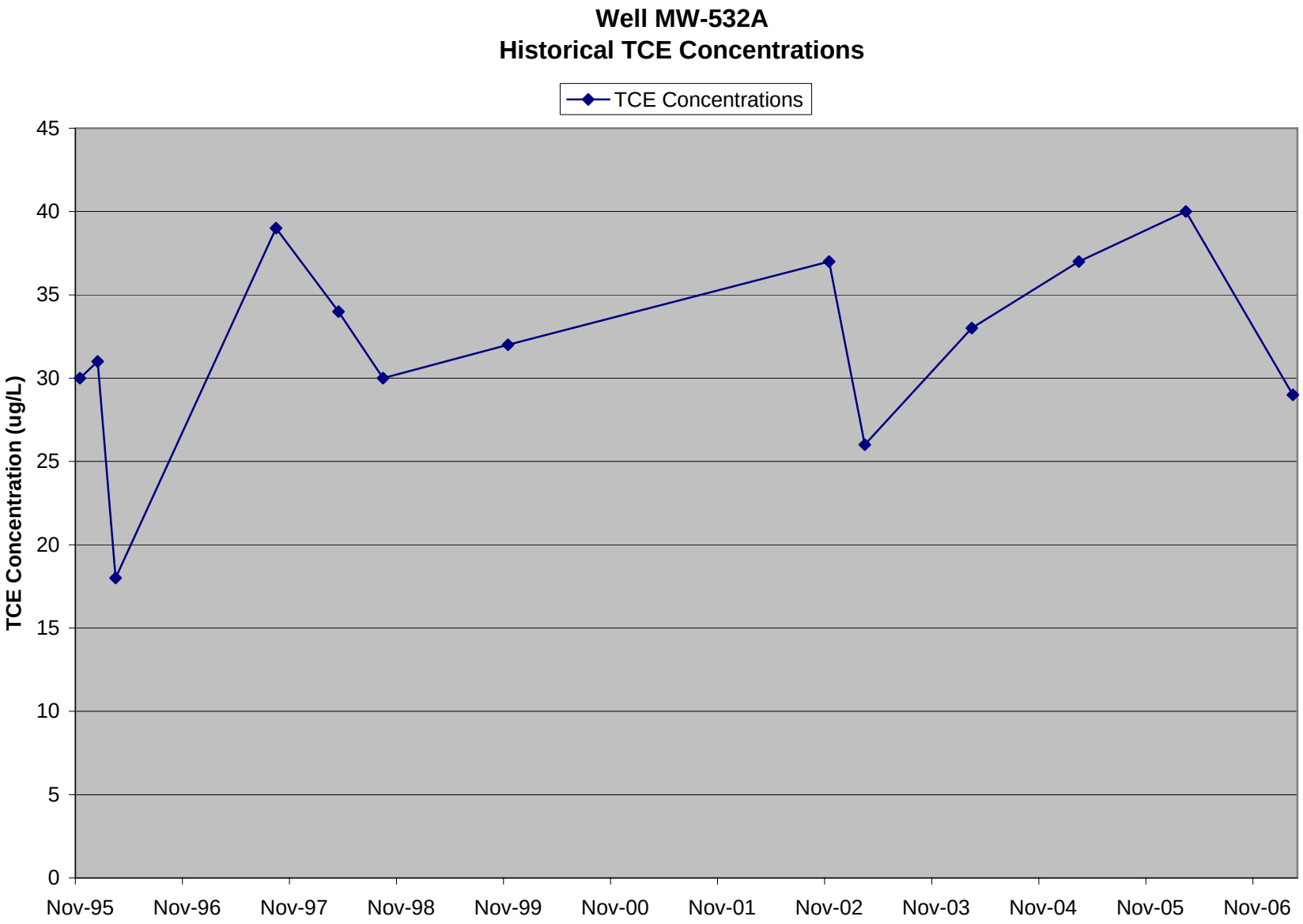

Well MW-506B
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
80
70
60
50
40
30
20
10
0
Aug-93
Aug-94
Aug-95
Aug-96
Aug-97
Aug-98
Aug-99
Aug-00
Aug-01
Aug-02
Aug-03
Aug-04
Aug-05
Aug-06

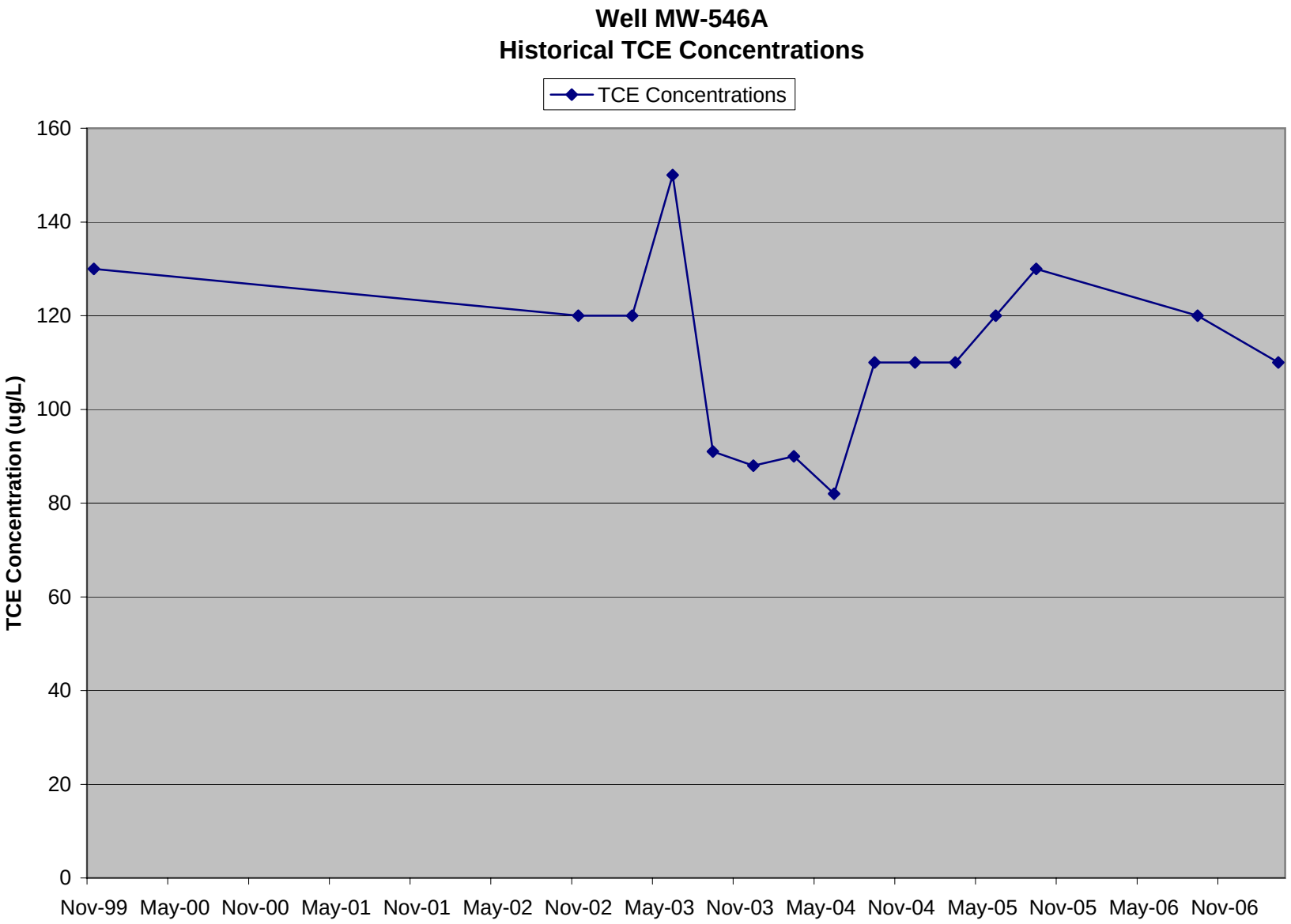

Well MW-507A
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
1400
1200
1000
800
600
400
200
0
Oct-93
Oct-94
Oct-95
Oct-96
Oct-97
Oct-98
Oct-99
Oct-00
Oct-01
Oct-02
Oct-03
Oct-04
Oct-05
Oct-06

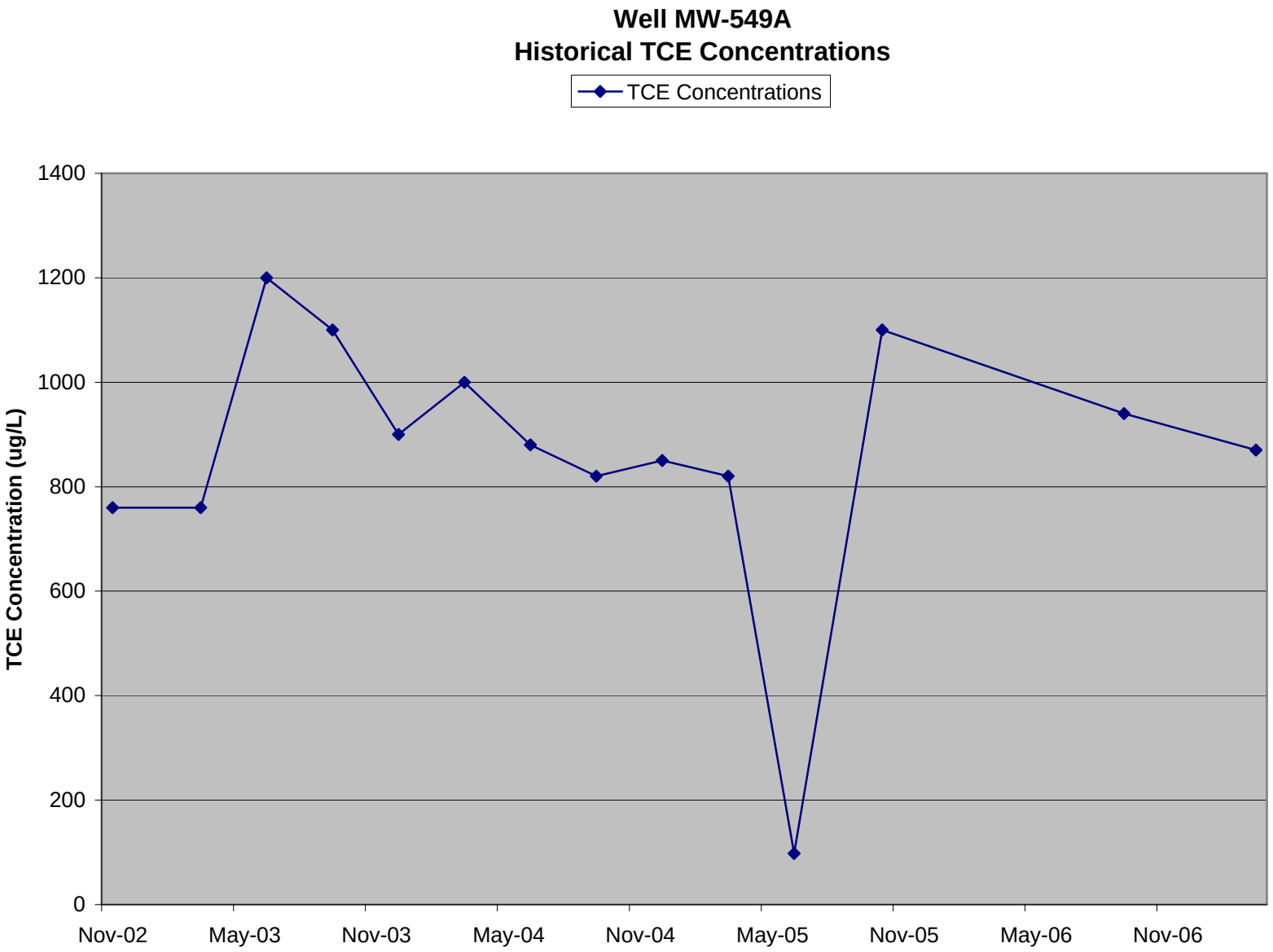

Well MW-507B
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
160
140
120
100
80
60
40
20
0
Aug-93
Aug-94
Aug-95
Aug-96
Aug-97
Aug-98
Aug-99
Aug-00
Aug-01
Aug-02
Aug-03
Aug-04
Aug-05
Aug-06

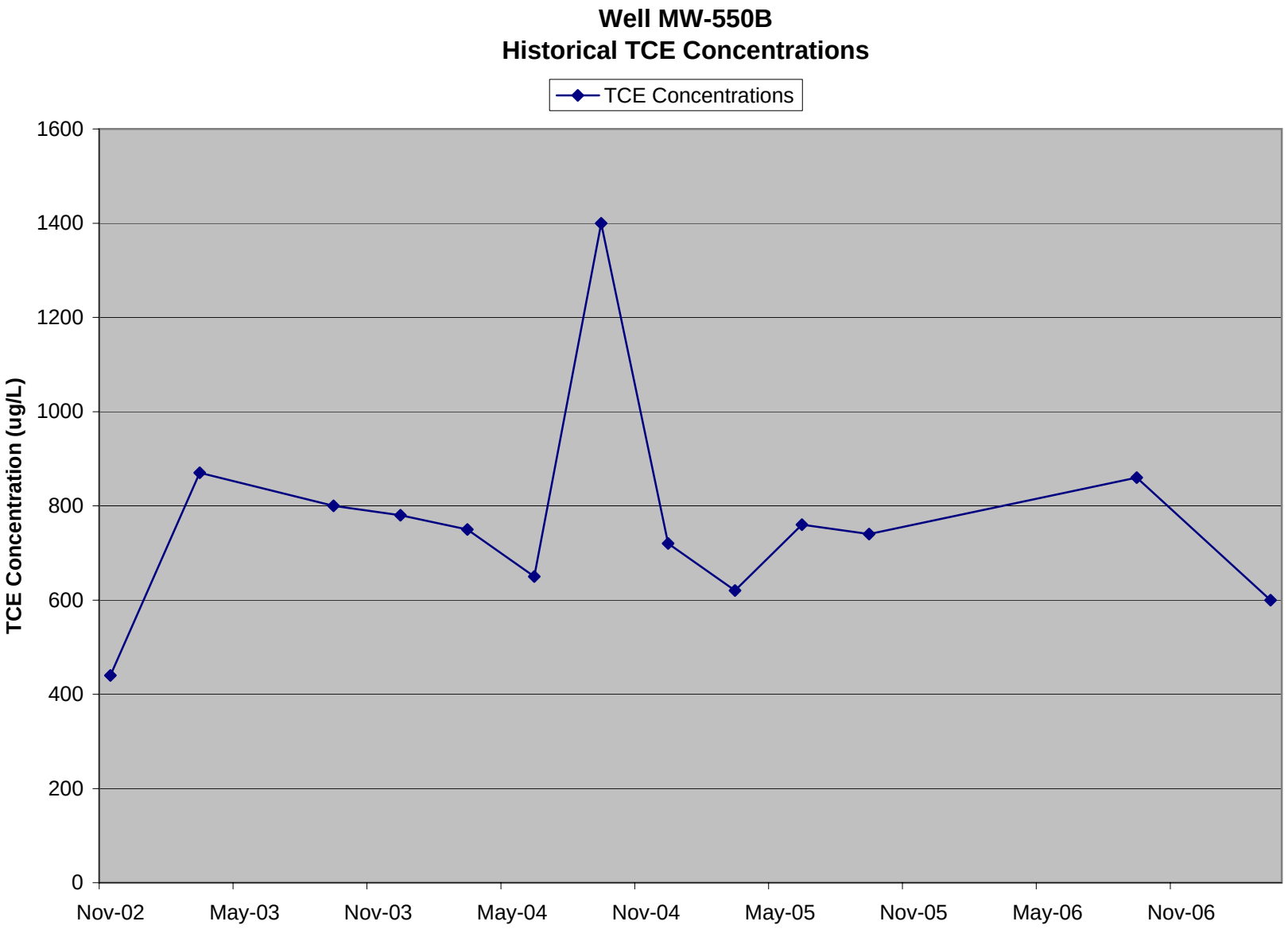

Well MW-508A
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
45
40
35
30
25
20
15
10
5
0
Oct-93
Oct-94
Oct-95
Oct-96
Oct-97
Oct-98
Oct-99
Oct-00
Oct-01
Oct-02
Oct-03
Oct-04
Oct-05
Oct-06

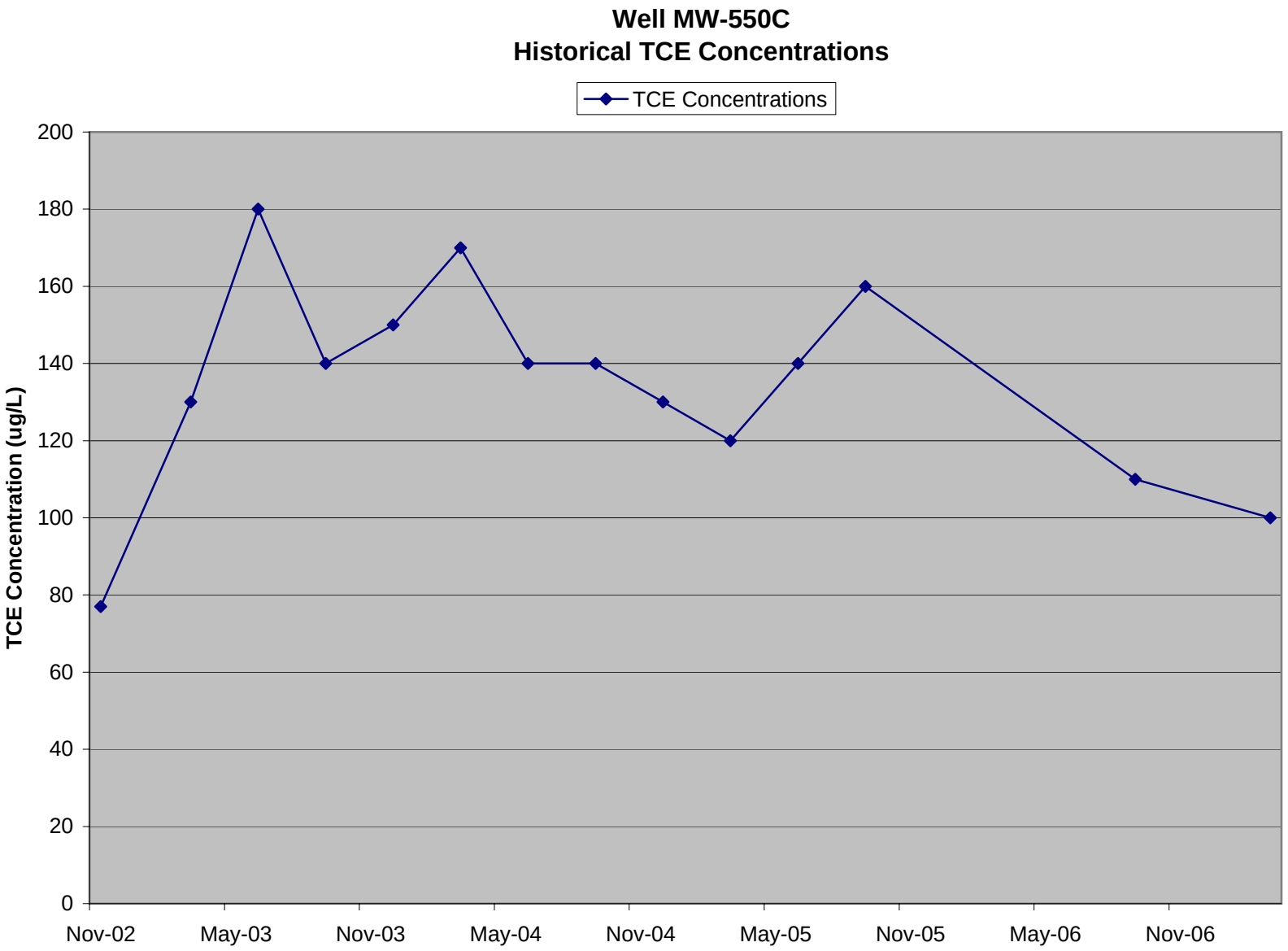

Well MW-508B
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
1800
1600
1400
1200
1000
800
600
400
200
0
Aug-93
Aug-94
Aug-95
Aug-96
Aug-97
Aug-98
Aug-99
Aug-00
Aug-01
Aug-02
Aug-03
Aug-04
Aug-05
Aug-06

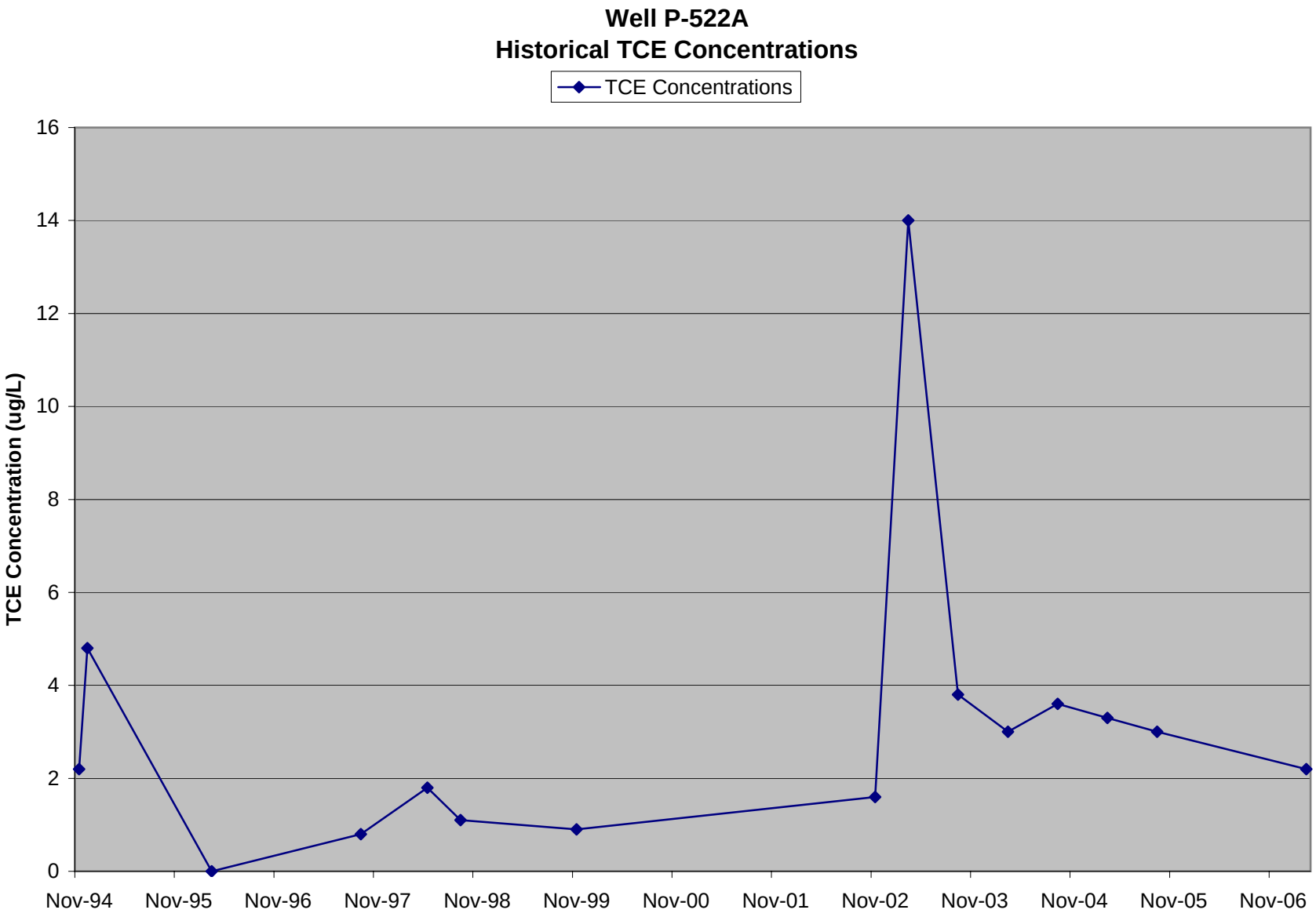

Well MW-532A
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
45
40
35
30
25
20
15
10
5
0
Nov-95
Nov-96
Nov-97
Nov-98
Nov-99
Nov-00
Nov-01
Nov-02
Nov-03
Nov-04
Nov-05
Nov-06

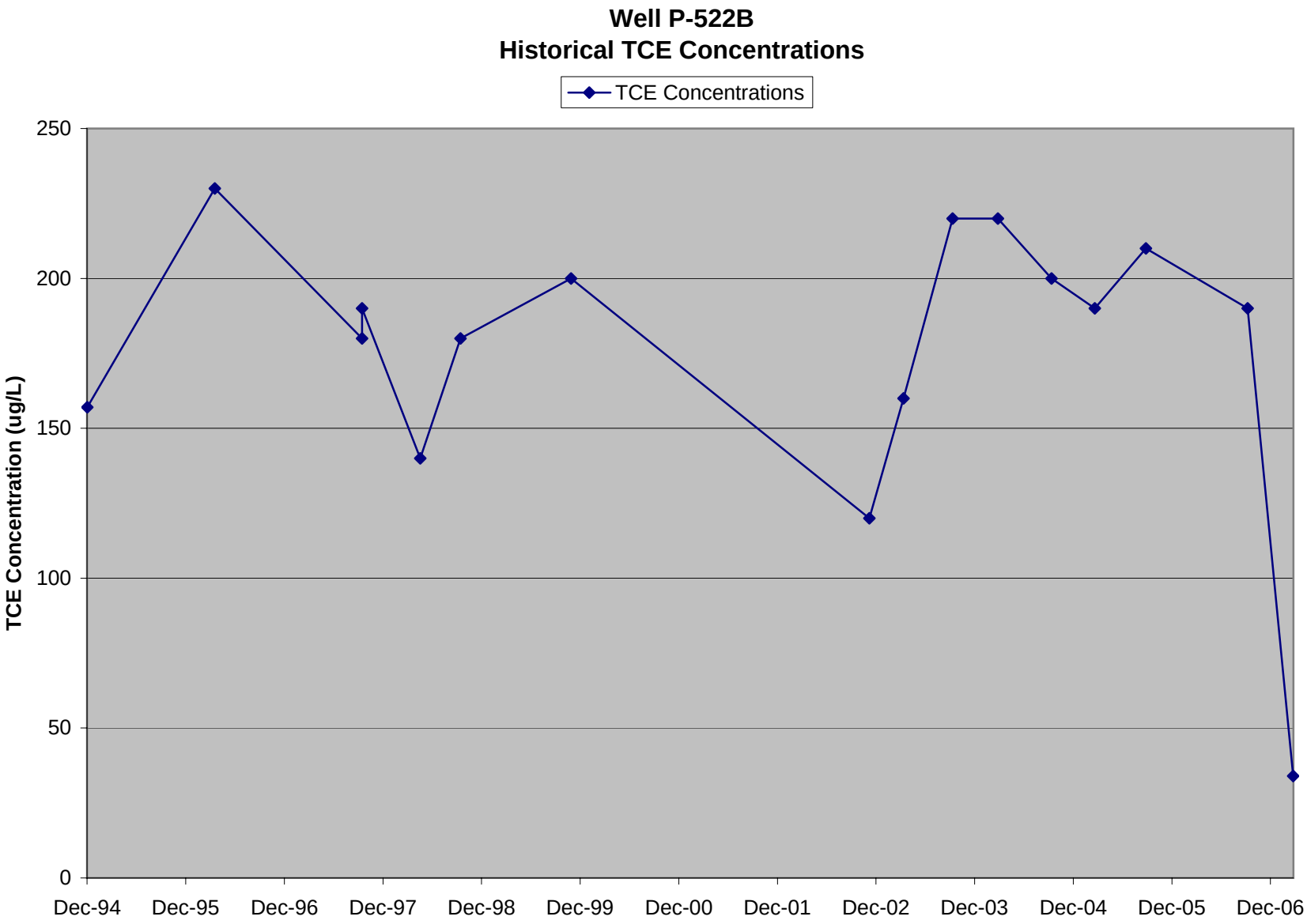

Well MW-546A
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
160
140
120
100
80
60
40
20
0
Nov-99
May-00
Nov-00
May-01
Nov-01
May-02
Nov-02
May-03
Nov-03
May-04
Nov-04
May-05
Nov-05
May-06
Nov-06

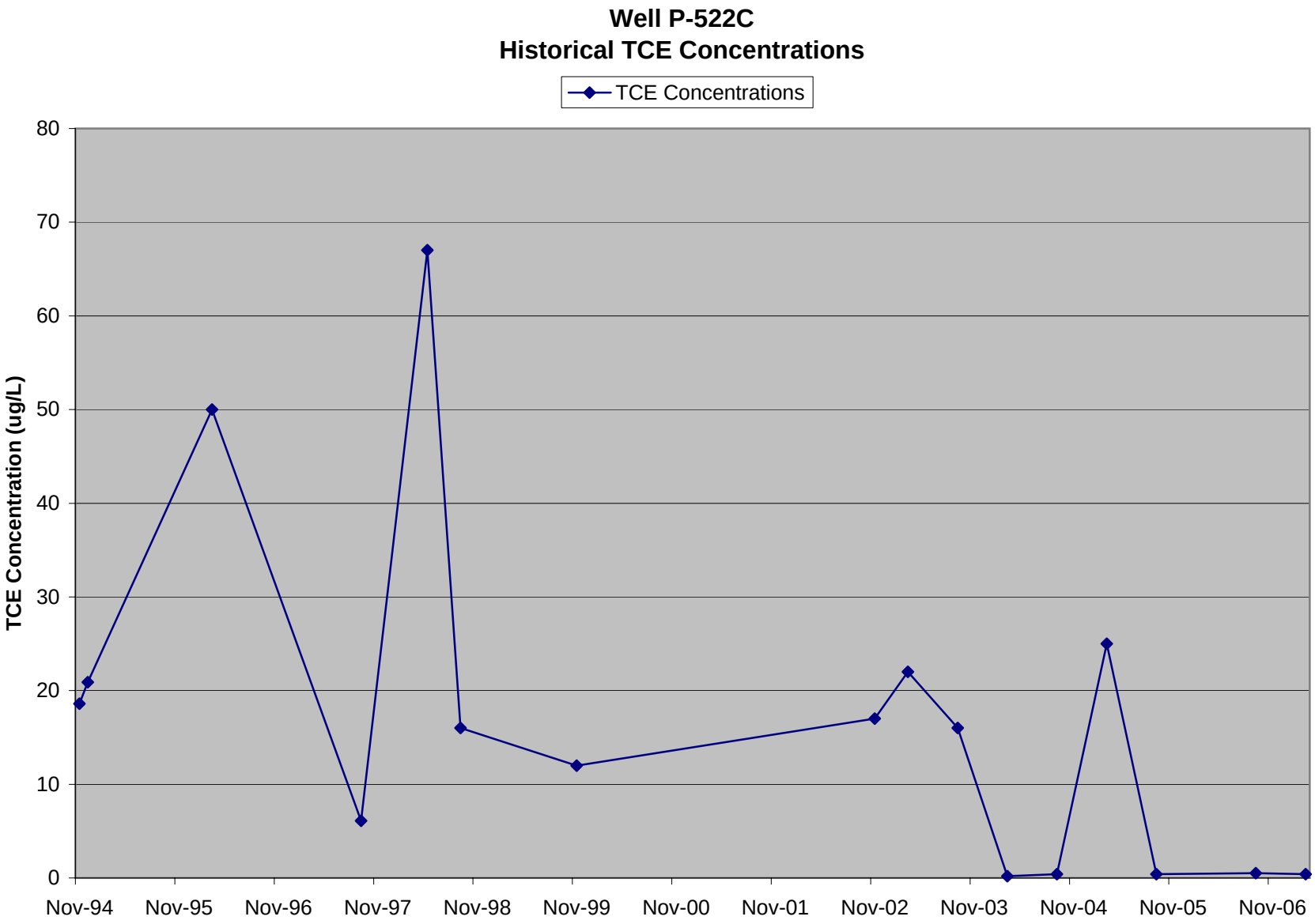

Well MW-549A
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
1400
1200
1000
800
600
400
200
0
Nov-02
May-03
Nov-03
May-04
Nov-04
May-05
Nov-05
May-06
Nov-06


Well MW-550B
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
1600
1400
1200
1000
800
600
400
200
0
Nov-02
May-03
Nov-03
May-04
Nov-04
May-05
Nov-05
May-06
Nov-06


Well MW-550C
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
200
180
160
140
120
100
80
60
40
20
0
Nov-02
May-03
Nov-03
May-04
Nov-04
May-05
Nov-05
May-06
Nov-06


Well P-522A
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
16
14
12
10
8
6
4
2
0
Nov-94
Nov-95
Nov-96
Nov-97
Nov-98
Nov-99
Nov-00
Nov-01
Nov-02
Nov-03
Nov-04
Nov-05
Nov-06


Well P-522B
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
250
200
150
100
50
0
Dec-94
Dec-95
Dec-96
Dec-97
Dec-98
Dec-99
Dec-00
Dec-01
Dec-02
Dec-03
Dec-04
Dec-05
Dec-06


Well P-522C
Historical TCE Concentrations
TCE Concentrations
TCE Concentration (ug/L)
80
70
60
50
40
30
20
10
0
Nov-94
Nov-95
Nov-96
Nov-97
Nov-98
Nov-99
Nov-00
Nov-01
Nov-02
Nov-03
Nov-04
Nov-05
Nov-06

APPENDIX C

Stream Sampling Field Measurements

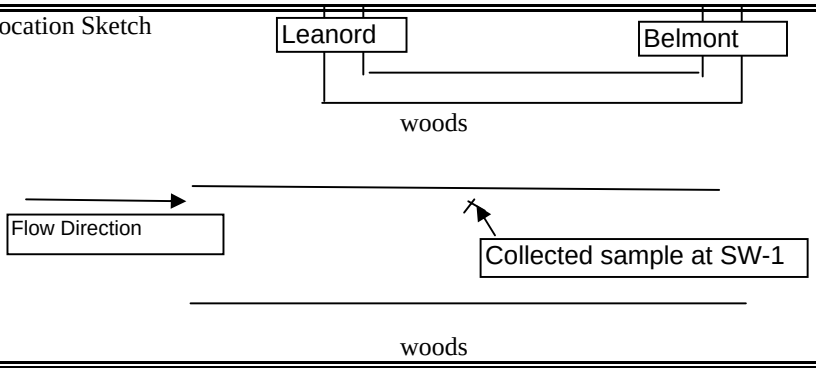
TRC Environmental Corporation
SAMPLE DATA RECORD : Crab Brook

Site ID:	Former LEC Site			Sample Date:	9/19/2006
Stream Location:	Crab Brook			Sample Time:	10:00
Sample Location:	SW-1	Water Body Sample Type:		Surface Water Sample	
Sample ID:	SW-1		Decon (y/n)		
Sample Collection Method:	bailer	Velocity(ft3/sec):	0.42	Flow Rate(gpm):	188.50

Sample Appearance/Odor:	Clear	Sampler(s):	DD/TD
pH	7.60	Temperature	19.7
Conductivity	0.56 mS/cm	Salinity	0.0
Turbidity	6.7	Eh	287
DO	7.41		
Sample Bottles ID	SW-1	Sample EPA Method	624+10

Notes: HORIBA U-22

Location Sketch



Stream Location: Belmont & Leanord

SW-1	Width ft	Depth ft	Velocity ft/sec	Stream Flow ft3/sec	Stream Flow gpm
#1	3.0	0.35	0.40	0.4	188.496
#2	3.0	0.70	0.00	0.0	0.000
Total Width	5.0			0.42	188.50

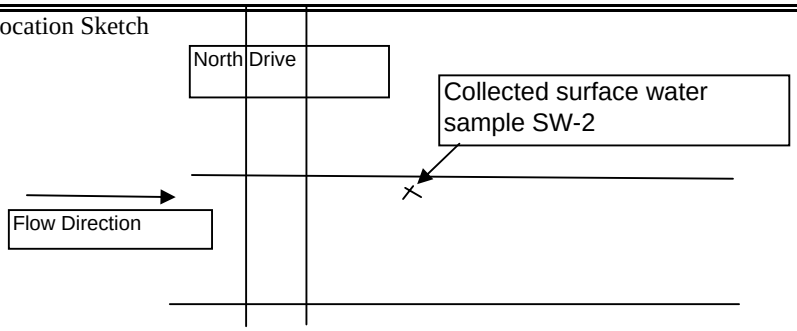
TRC Environmental Corporation
SAMPLE DATA RECORD : Crab brook

Site ID:	Former LEC Site			Sample Date:	9/19/2006
Stream Location:	Crab Brook			Sample Time:	9:40
Sample Location:	SW-2	Water Body Sample Type:		Surface Water Sample	
Sample ID:	SW-2		Decon (y/n)		
Sample Collection Method:	bailer	Velocity(ft3/sec):	1.12	Flow Rate(gpm):	502.66

Sample Appearance/Odor:	Clear	Sampler(s):	DD/TD
pH	7.36	Temperature	16.98
Conductivity	0.60 mS/cm	Salinity	0.0
Turbidity	3.9	Eh	255
DO	7.63		
Sample Bottles ID	SW-2	Sample EPA Method	624+10

Notes: HORIBA U-22

Location Sketch



Stream Location: North Drive

SW-2	Width	Depth	Velocity	Stream Flow	Stream Flow
	ft	ft	ft/sec	ft3/sec	gpm
#1	4.0	0.20	0.00	0.0	0.000
#2	4.0	0.35	0.80	1.1	502.656
#3	4.0	0.45	0.00	0.0	0.000
Total Width	5.0			1.12	502.66

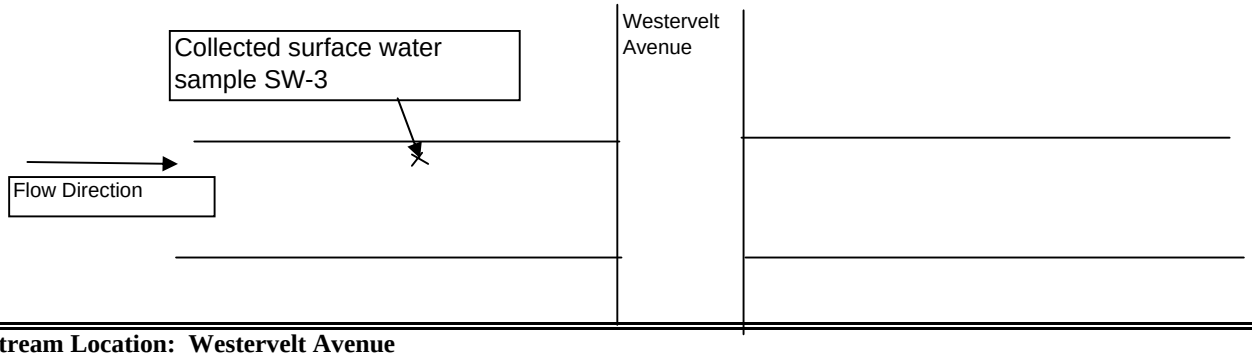
TRC Environmental Corporation
SAMPLE DATA RECORD : Crab Brook

Site ID:	Former LEC Site	Sample Date:	9/19/2006
Stream Location:	Crab Brook	Sample Time:	9:21
Sample Location:	SW-3	Water Body Sample Type:	Surface Water Sample
Sample ID:	SW-3	Decon (y/n)	
Sample Collection Method:	bailer	Velocity(ft3/sec): 1.08	Flow Rate(gpm): 484.70

Sample Appearance/Odor:	Clear	Sampler(s):	DD/TD
pH	6.94	Temperature	17.4
Conductivity	0.62 mS/cm	Salinity	0.0
Turbidity	4.2	Eh	245
DO	8.09		
Sample Bottles ID	SW-3	Sample EPA Method	624+10

Notes: HORIBA U-22

Location Sketch



Stream Location: Westervelt Avenue

SW-3	Width ft	Depth ft	Velocity ft/sec	Stream Flow ft3/sec	Stream Flow gpm
#1	6.0	0.20	0.10	0.120	53.856
#2	6.0	0.20	0.50	0.600	269.28
#3	6.0	0.20	0.30	0.36	161.568
Total Width	4.0			1.080	484.704

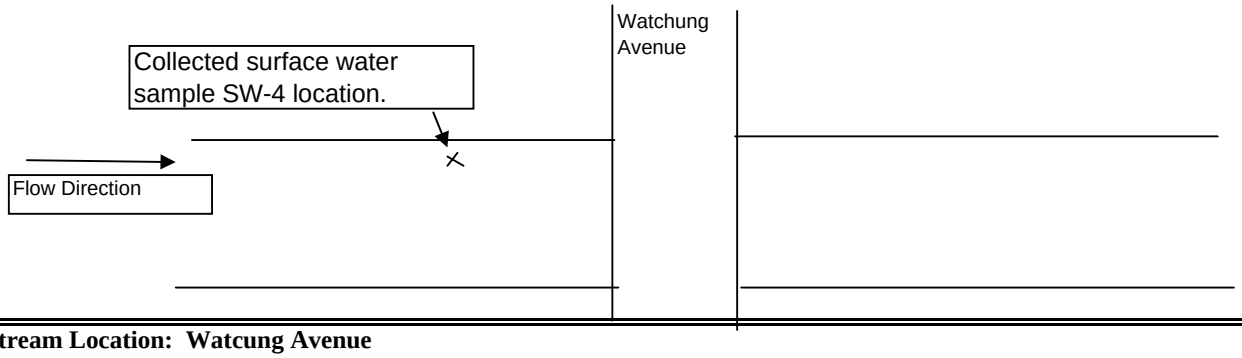
TRC Environmental Corporation
SAMPLE DATA RECORD : Crab Brook

Site ID:	Former LEC Site			Sample Date:	9/19/2006
Stream Location:	Crab Brook			Sample Time:	10:20
Sample Location:	SW-4	Water Body Sample Type:		Surface Water Sample	
Sample ID:	SW-4		Decon (y/n)		
Sample Collection Method:	bailer	Velocity(ft3/sec): 2.46		Flow Rate(gpm):	1104.04

Sample Appearance/Odor:	Clear	Sampler(s):	DD/TD
pH	7.73	Temperature	18.62
Conductivity	0.60 mS/cm	Salinity	0.0
Turbidity	7.1	Eh	287
DO	8.47		
Sample Bottles ID	SW-4	624+10	

Notes: HORIBA U-22

Location Sketch



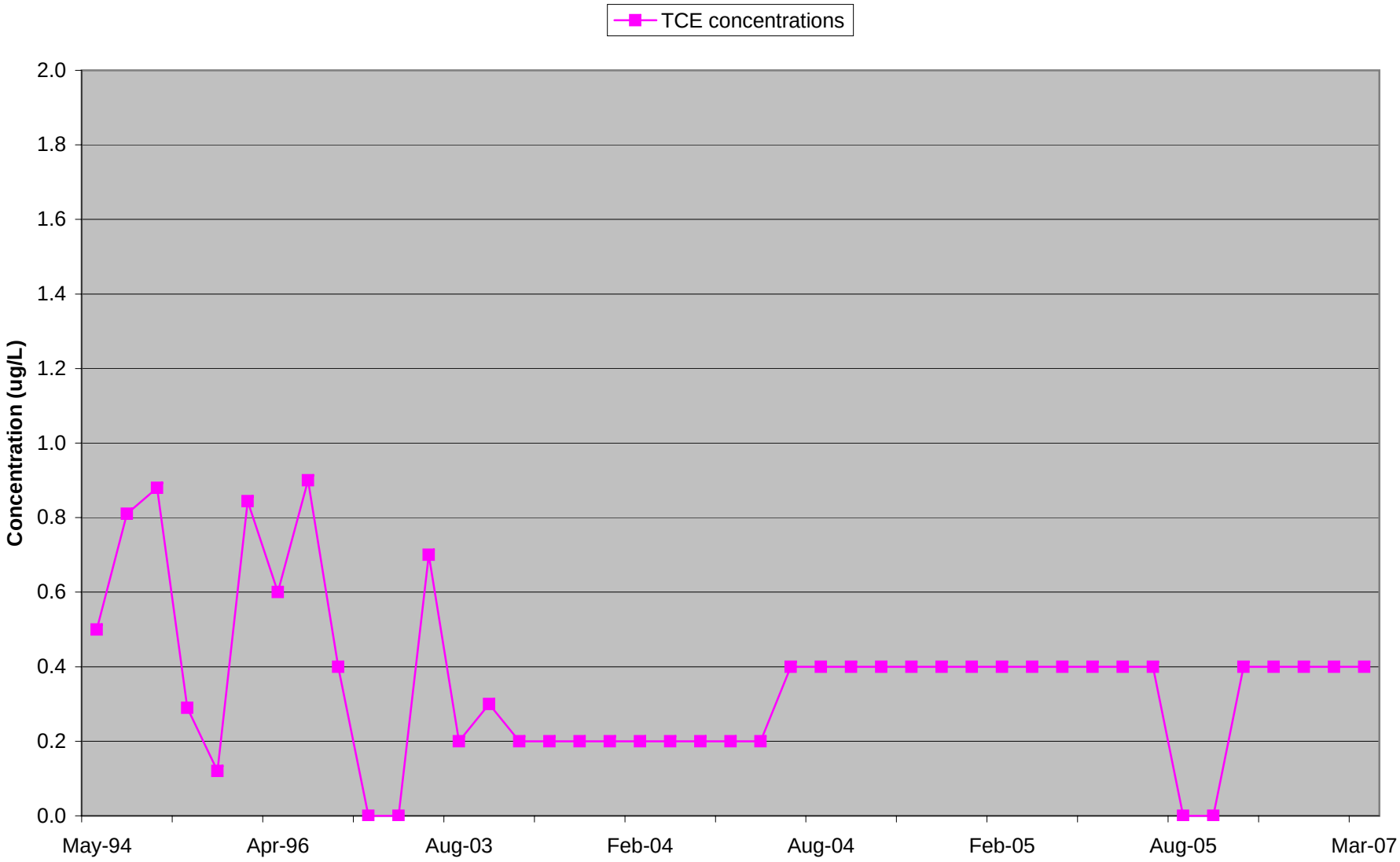
Stream Location: Watcung Avenue

SW-4	Width	Depth	Velocity	Stream Flow	Stream Flow
	ft	ft	ft/sec	ft3/sec	gpm
#1	6.0	0.20	0.1	0.12	53.856
#2	6.0	0.25	0.7	1.05	471.24
#3	6.0	0.30	0.3	0.54	242.352
#4	6.0	0.25	0.5	0.75	336.6
Total Width	5.0			2.46	1104.048

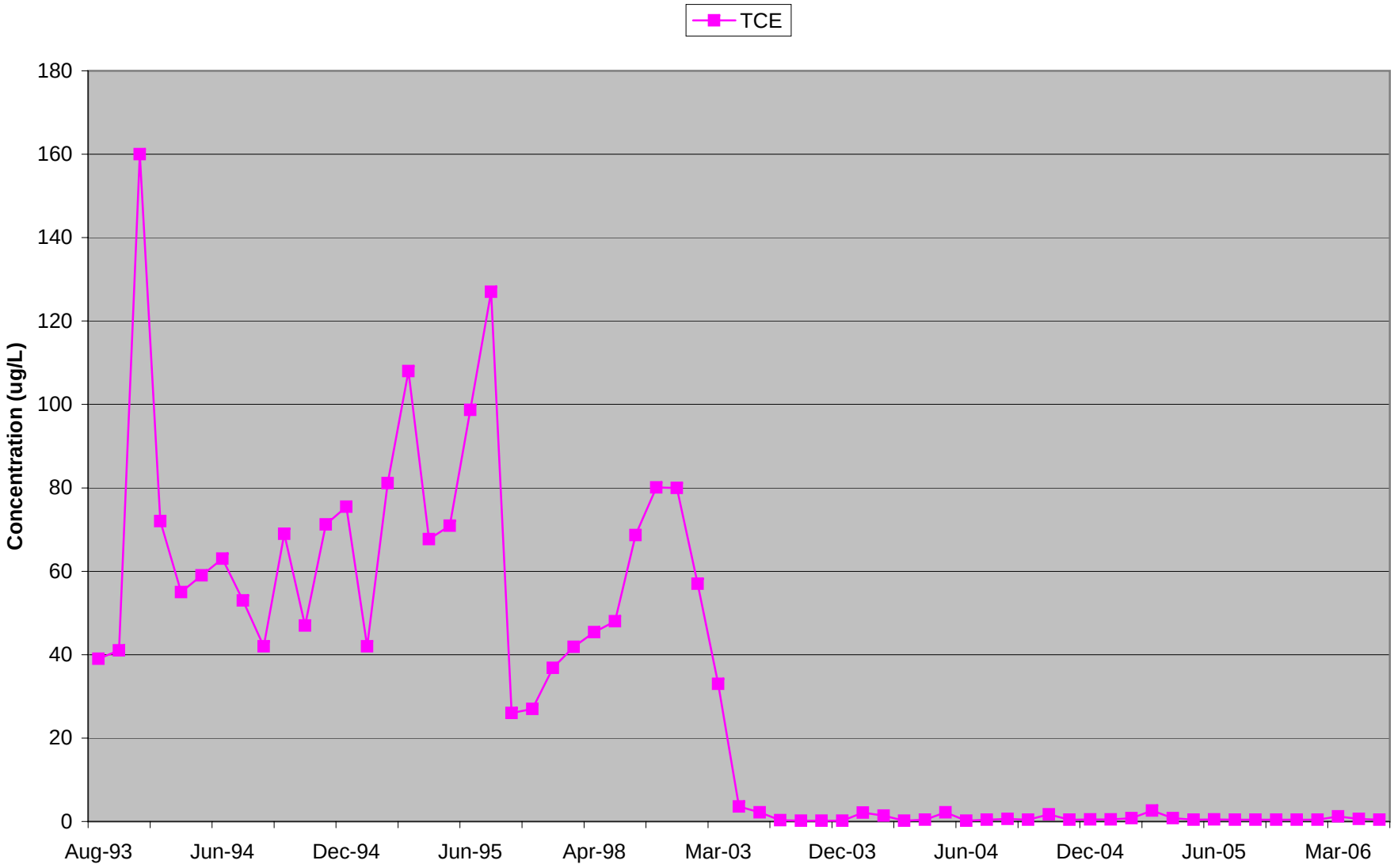
APPENDIX D

Plots of TCE Concentration Versus Time for Stream Locations

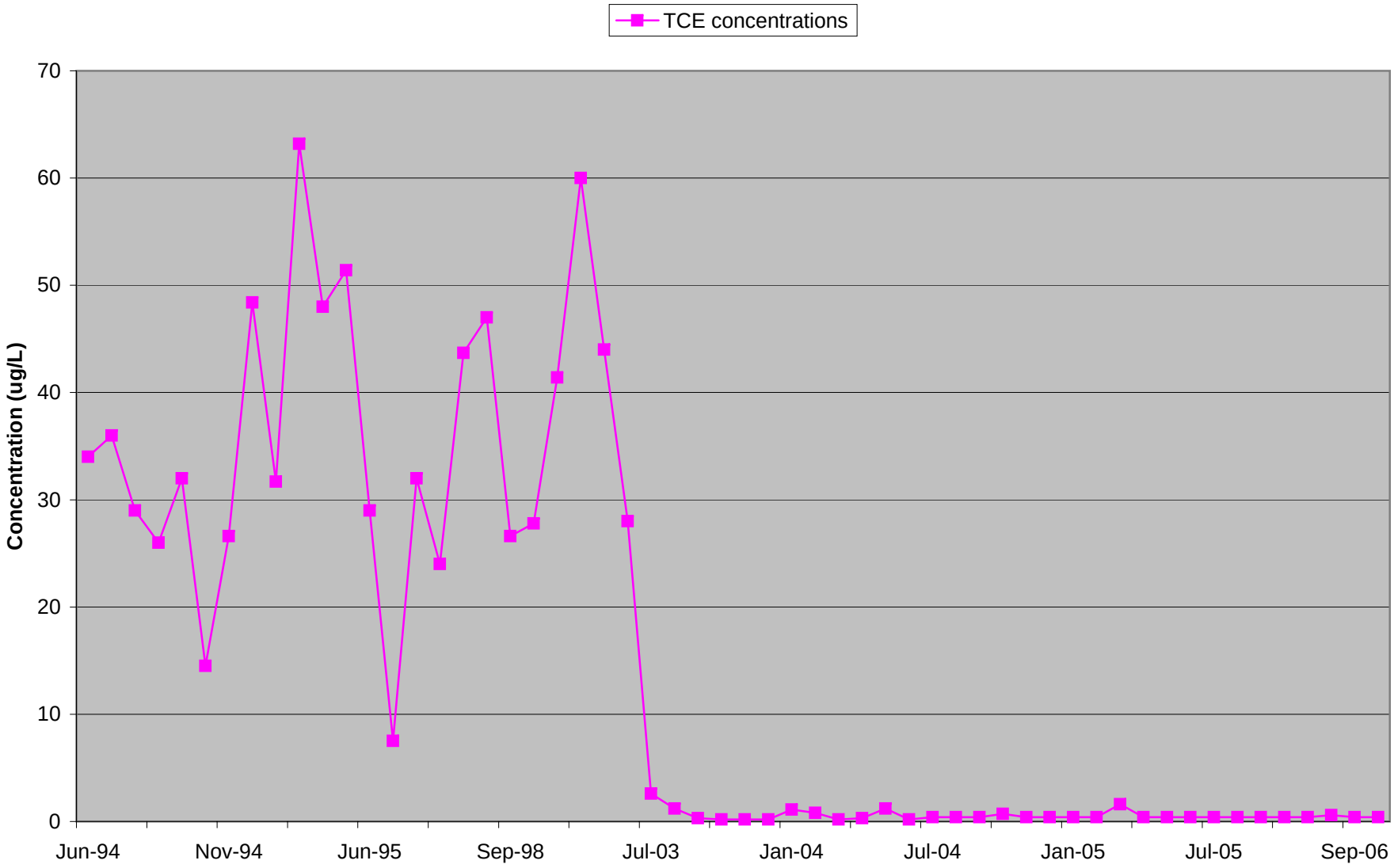
Historical TCE concentrations at Stream Location SW-1



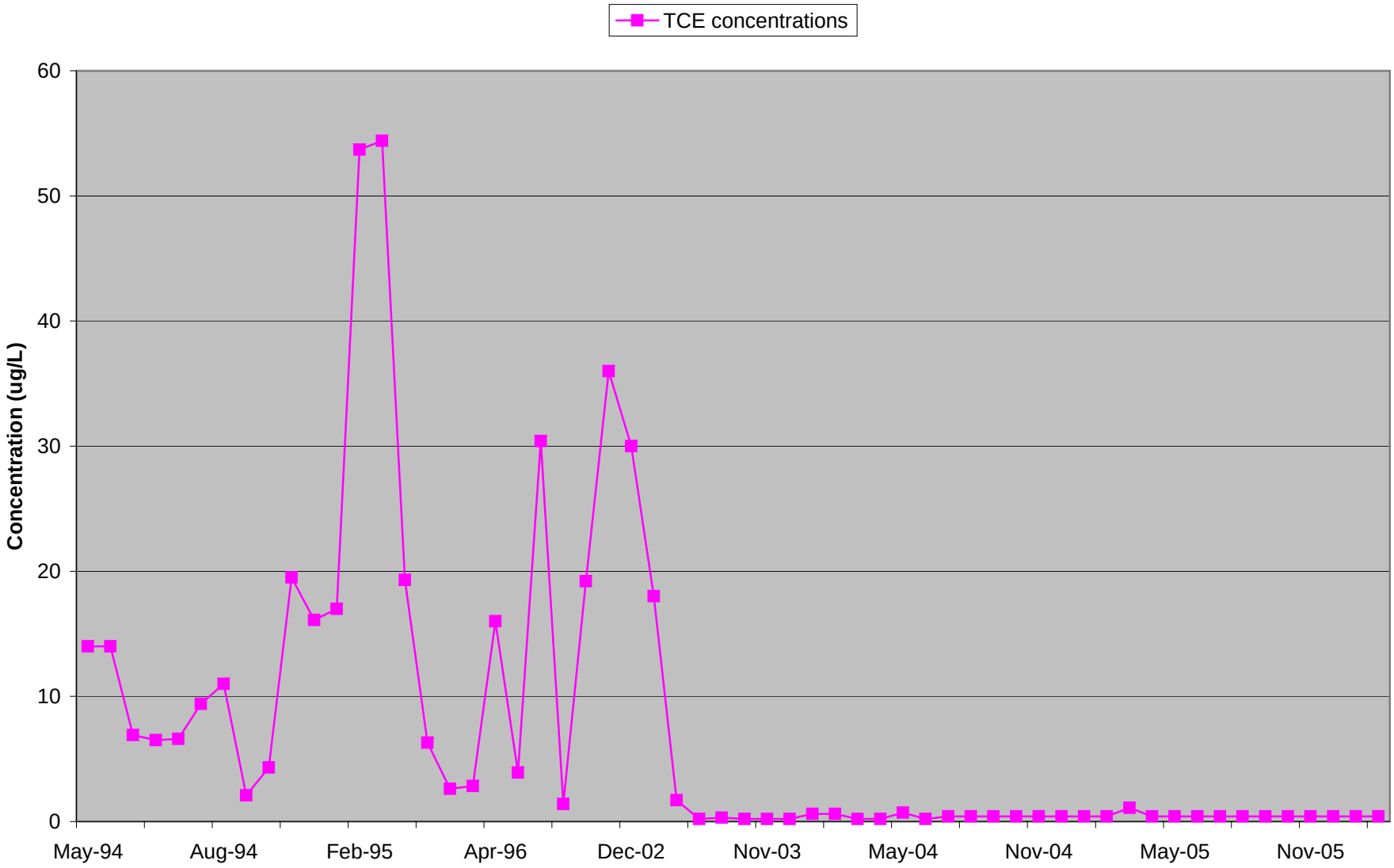
Historical TCE concentrations at Stream Location SW-2



Historical TCE concentrations at Stream Location SW-3



Historical TCE concentrations at Stream Location SW-4



APPENDIX E

Health and Safety Plan

HEALTH AND SAFETY PLAN

FORMER LOCKHEED ELECTRONICS COMPANY SITE
WATCHUNG, NEW JERSEY

TRC Job No. 2542-116473.0000

Prepared by:

TRC Environmental Corporation
57 East Willow Street
Millburn, New Jersey 07041

September 2007

SITE-SPECIFIC
HEALTH AND SAFETY PLAN
FORMER LOCKHEED ELECTRONICS COMPANY SITE
WATCHUNG, NEW JERSEY

Prepared by: _____ Date: _____
Danielle Doremus, Geologist III

Approved by: _____ Date: _____
Michael Speck, HSO

Approved by: _____ Date: _____
Stephen E. Tappert, Sr. Project Manager

This Health and Safety Plan (HASP) must be read and signed by all personnel at the site, including TRC employees and subcontractors.

I have reviewed this HASP and agree to abide by the requirements contained herein

TRC Employees

Name	Signature	Date

TRC Employees (cont'd)

Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date

Subcontractors

Name	Signature	Company	Date
Name	Signature	Company	Date
Name	Signature	Company	Date
Name	Signature	Company	Date
Name	Signature	Company	Date
Name	Signature	Company	Date
Name	Signature	Company	Date
Name	Signature	Company	Date
Name	Signature	Company	Date
Name	Signature	Company	Date
Name	Signature	Company	Date

TAILGATE SAFETY MEETING AND SAFETY INSPECTIONS

Pre-Field Activities

- Read and understand this Health & Safety Plan to ensure that all safety measures are considered (i.e., traffic control, overhead lines, etc.).
- Provide the subcontractors with a copy of TRC's HASP and be sure they bring their own HASP related to their field of expertise.
- If performing intrusive work, request from subcontractors a copy of the NJ One Call Mark-Out Confirmation Sheet and include it in your workplan.
- Confirm Utility Companies in HASP match the Utility Companies on the One Call Mark-Out Confirmation Sheet.

In the Field

- Make sure that all TRC field personnel and subcontractors have signed this HASP.
- When the subcontractors arrive, the Site Safety Officer shall perform a daily tailgate safety meeting that includes, but is not limited to, the following:
    - Brief discussion of site history and contaminants of concern.
    - Confirm subcontractors have appropriate H&S training.
    - Discuss the day's scope of work, and the suspected and potential hazards of each task, including chemical hazards and physical hazards (i.e., trip and fall, lifting, overhead obstacles, traffic, etc.).
    - Discuss the required protective personal equipment (PPE); confirm that all personnel have the appropriate PPE and have been trained to use it properly.
    - Discuss communication and chain of command.
    - Discuss emergency actions and emergency evacuation procedures.
    - Document meeting in field book.
    - Always ask if anyone has questions.
    - The meeting should be about 15 minutes long.

- The Site Safety Officer shall perform additional tailgate safety meetings whenever (1) risks or hazards change, (2) new personnel arrive, and (3) site operations warrant training.
- When procedural deficiencies are identified, the Site Safety Officer shall perform additional safety meetings to address the situation.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

HEALTH AND SAFETY PLAN

FORMER LOCKHEED ELECTRONICS COMPANY SITE
WATCHUNG, NEW JERSEY

1.0 INTRODUCTION

The purpose of a Health and Safety Plan (HASP) is to establish requirements for protecting the health and safety of personnel from possible exposure to potentially hazardous substances during site activities. This HASP has been developed by TRC Environmental Corporation (TRC) to establish the site-specific health and safety procedures required to minimize potential risk to personnel performing certain activities at the above-referenced site (hereinafter "the Site") (Figure 1).

The provisions of this HASP apply to all personnel who may potentially be exposed to health and safety hazards related to specific activities at the site. All activities will be conducted in accordance with this HASP.

All TRC's HASPs are written to meet the requirements of all applicable federal, state and local health and safety regulations, including 29 CFR 1910.120, and are based on current knowledge regarding the specific chemical and physical hazards that are known or anticipated to be present at the Site.

TRC will provide subcontractors with a copy of TRC's site-specific HASP that includes a description of the chemical hazards that may be present at the Site. The subcontractor is required to provide a copy of TRC's site-specific HASP to all of its employees and subcontractors who perform work at the Site and who may come into contact with waste or other contaminated materials derived from the Site. The subcontractor's employees and its subcontractors must review TRC's HASP and, when on-site, sign documentation that they have read and understand TRC's HASP. Personnel who cannot or will not comply with TRC's HASP will be excluded from on-site activities.

Subcontractors must prepare their own HASP related to their specific expertise and are solely responsible for complying with all OSHA requirements and federal, state and local safety requirements applicable to their work.

2.0 EMERGENCY INFORMATION

The appropriate telephone numbers are listed below for medical emergencies. For non-life threatening emergencies, Immedicenters can be used if distance permits.

ANY SERIOUS EMERGENCY - DIAL 911

Nearest Hospital: Muhlenburg Regional Medical Center
Hospital Emergency Room Telephone Number: (908) 668-2127
Hospital Main Telephone Number: (908) 668-2000

Directions to Hospital (road map with driving directions to hospital is on Figure 2)
Make a left turn onto Route 22 West and proceed 1.2 miles to the Watchung Avenue Exit. Follow signs to Somerset Avenue (South). Go south on Somerset Avenue and proceed approximately 2.25 miles. Somerset Avenue turns into Park Avenue. Hospital will be on the left at the corner of Park Avenue and Randolph Road.

Other Emergency Numbers

Millburn Medical Center	(973) 379-5055
Police Emergency	911
Fire Emergency	911
Rescue Squad	911
N.J. Poison Control Center	(800) 962-1253
National Response Center and Terrorist Hotline	(800) 424-8802
American Association of National Poison Control	(800) 222-1222
Center for Disease Control	(800) 311-3435
Utility Mark-Out	(800) 272-1000
U.S. Coast Guard National Response Center	(800) 424-8802
Chemtrec (Chemical Spills)	(800) 424-9300

Utilities

Electric	PSE&G	Number:	(800) 436-7734
Gas	PSE&G	Number:	(800) 436-7734
Phone	Verizon	Number:	(800) 275-2355
Water	Elizabethtown Water Co.	Number:	(908) 222-8739
Other		Number:	

3.0 TRC CONTACTS AND KEY PERSONNEL

3.1 TRC Contacts

In the event of problems that require notification of TRC, the following contacts are listed in order of priority:

Name	Title	Number and Ext.	Cell Number
Stephen E. Tappert	Project Manager	(973) 564-6006, Ext. 240	(973) 670-5107
Danielle Doremus	Geologist	(973) 564-6006, Ext. 221	(973) 445-2192
Michael Speck	Health and Safety Officer	(973) 564-6006, Ext. 227	(201) 390-9534
Ken Siet	Vice-President	(973) 564-6006, Ext. 217	(973) 715-8449

3.2 Key TRC Personnel

The key TRC personnel involved with this project are listed below.

Project Manager	Site Safety Officer	Field Supervisor	Field Personnel
Stephen E. Tappert	Tom Dolan	Danielle Doremus	Tom Dolan
			Rich Alborn

* Site Safety Officer and Field Supervisor can be the same TRC personnel.

3.3 Responsibilities

Responsibilities for implementing safe work practices and specifically the requirements of this are described below.

Project Manager

The Project Manager is responsible for controlling all technical work in an environmentally safe manner, assuring that operational hazards are minimized and implementing this during all project task elements. Specific responsibilities include but are not limited to:

(1) Verifying that all personnel involved with this project have read and understand this HASP and have signed the HASP.

(2) Assuring that all personnel involved with this project have attended a briefing or a tailgate safety meeting regarding the contents of the HASP and site-specific hazards prior to performing work.

(3) Determining that sufficient PPE, air monitoring and equipment as required by this HASP is available.

(4) Assuring that all contractor personnel submit documentation of employee participation in a medical, training and drug & alcohol programs (when applicable).

(5) Maintaining a high level of health and safety consciousness among the field personnel.

Health and Safety Officer (HSO)

The Health and Safety Officer is responsible for the preparation, interpretation and modification of the HASP. Specific duties include but are not limited to:

(1) Advising the Project Manager and field personnel on matters relating to health and safety.

(2) Recommending appropriate PPE and air monitoring instrumentation to protect personnel from site hazards.

(3) Conducting field audits to monitor the effectiveness of the HASP and to assure compliance with the HASP.

(4) Performing personal exposure monitoring where required and to determine the adequacy of protective measures and PPE specified by this HASP.

(5) Maintaining contact with the Project Manager and field personnel to regularly evaluate site conditions and any new information that might require modifications to the HASP.

(6) Working with the Project Manager to ensure that sufficient PPE is available onsite.

(7) Conducting briefing meetings and apprise personnel of the contents of the HASP and site hazards.

(8) Conducting accident/incident investigations and preparing accident/incident investigation reports.

Site Safety Officer (SSO)

The Site Safety Officer is responsible for ensuring the Health & Safety guidelines are followed, in addition to monitoring for airborne contaminants when necessary and evaluating new hazards and operation changes. The Site Safety Officer has the authority to correct all noncompliance situations immediately and to stop work in cases of immediate danger. Specific responsibilities include but are not limited to:

(1) Perform daily safety meetings prior to commencement of work, commencement of a new task and whenever new personnel arrive.

(2) Obtaining the air monitoring instrumentation required and conducting the necessary air monitoring.

(3) Verifying that all PPE and other health and safety equipment is in proper working condition.

(4) Upgrading and downgrading PPE as specified in the HASP.

(5) Notifying the Project Manager and Health & Safety Officer of all noncompliance and dangerous situations.

(6) Supervising and monitoring the safety performance of all field personnel to ensure required safety and health procedures are followed and correct any deficiencies.

(7) Reporting all accidents/incidents to the Health & Safety Officer.

(8) Initiating emergency response procedures.

(9) Establishing the work zones whenever necessary.

Field Supervisor

The Field Supervisor is responsible for the field operations needed to complete the project. The Field Supervisor may also be the Site Safety Officer. Specific responsibilities include but are not limited to:

(1) Ensuring all equipment needed for the project is available and properly maintained.

(2) Ensuring field personnel have received the necessary training and Health & Safety briefings before work begins. Conduct a Tailgate Safety Briefing each day before fieldwork is started and review emergency procedures.

(3) Correcting any deficiencies regarding health, safety or operating procedures.

(4) Communicating newly identified hazards or noncompliance issues with the Project Manager, Health & Safety Officer and the Site Safety Officer.

(5) Reporting any injuries and illnesses to the Project Manager and Company Health & Safety Officer.

(6) Stopping work in cases of immediate danger.

Field Personnel

All field personnel are responsible for following the Health & Safety procedures specified in this and work practices specified in applicable operating procedures. Some specific responsibilities include but are not limited to:

(1) Reporting all accidents, incidents, injuries or illnesses to the Field Supervisor

(2) Complying with the requests of the Site Safety Officer.

(3) Immediately communicating newly identified hazards or noncompliance issues to the Field Supervisor or Site Safety Officer.

(4) Stopping work in cases of immediate danger.

4.0 SCOPE OF WORK AND SITE BACKGROUND

4.1 Scope of Work

Sampling (Check all appropriate)

____	Soil	___X___	Ground Water
____	Sediment	___X___	Surface Water
____	Sludge	____	Sanitary Wastewater
____	Air	____	Process Wastewater
____	Other (Specify) _____		

Soil Borings ____

Well Installation ____

Soil Excavation ____

UST Closure ____

Vapor Intrusion ____

Other ___X___ Explain: Ground Water/Surface water sampling, water-levels

TYPE OF SITE (Check all appropriate)

____	Active	____	Gas Station	__X__	Industrial Facility
__X__	Inactive	____	R&D Facility	____	Power Facility
__X__	Manufacturing	____	TSDF Facility	____	Military Base
____	Private Facility	____	Other (specify): _____		

RELEASE HISTORY

____ No evidence of soil contamination
____ Suspected or known soil contamination
__X__ Suspected or known ground water contamination

4.2 General Site Background

Site Description

The former Lockheed Electronics Company (LEC) site was comprised of approximately 80 acres of land north of Route 22 in the boroughs of Watchung and North Plainfield in Somerset County, New Jersey. (The site is now operating as the Watchung Square Mall). Figure 1 is a portion of the USGS Chatham, NJ 7.5 Minute Quadrangle depicting the site location, local topography, surface drainage, and cultural patterns.

Site History

The site was originally developed in 1953 by Stavid Engineering. Lockheed Corporation acquired Stavid Engineering in 1959 and created Lockheed Electronics Corporation, which was subsequently operated by Sanders, A Lockheed Martin Company (Sanders). Additional land acquisitions resulted in the current site boundaries. The site was used to manufacture, test, and assemble electronic components. Trichloroethene (TCE) was used in Building 7 as a solvent to clean circuit boards.

Site operations ceased in 1989, triggering a site investigation under the New Jersey Environmental Cleanup Responsibility Act (ECRA). Regulations promulgated under ECRA have been superseded by new regulations pursuant to the Industrial Site Recovery Act (ISRA). The initial investigations identified several areas of concern (AOCs) and included collection of soil, sediment, ground water, and surface water samples. Investigation and remedial action results have been documented in a series of reports submitted to the NJDEP since 1991. Soil impacted by volatile organic compounds (VOCs), primarily TCE, was identified in the vicinity of Building 7 and Building 3. Soil impacted by fuel oil contamination was identified under Building 2. Soil AOCs were addressed either through excavation and off-site disposal or soil vapor extraction, and site-wide soil remediation has been completed to the satisfaction of the NJDEP.

An extensive monitoring well network has delineated a ground water plume comprised primarily of TCE in the local bedrock aquifer and shallow unconsolidated sediments in certain locations. TCE has been reported at concentrations exceeding the Ground Water Quality Criteria (GWQC) of 1 microgram per liter (µg/L) (promulgated at N.J.A.C. 7-9.6) in ground water beneath the site, extending to the southwest approximately 7,000 feet. Contaminant migration is influenced by both bedrock structure and local ground water discharge areas, particularly Crab Brook. The axis of the plume extends to the southwest, approximating regional bedrock strike. The reach of Crab Brook between North Avenue (Norwood Avenue) and Watchung Avenue has consistently yielded water samples exhibiting measurable TCE concentrations exceeding the Surface Water Quality Criteria of 1.09 µg/L. Location SW-2 consistently exhibits the highest concentrations, indicating a significant discharge of impacted ground water at or near this location. Vertical hydraulic gradients are generally downward except for the immediate vicinity of Crab Brook, and TCE concentrations decrease sharply south of Crab Brook. There are currently 43 active monitoring wells associated with this project in the Boroughs of Watchung and North Plainfield, all of which are installed as either well couplets or triplets to evaluate the vertical distribution of contaminants. Ground water and surface water of Crab Brook are the only AOCs remaining related to the former LEC site.

5.0 CONTAMINANTS OF CONCERN

The primary contaminants of concern that have been identified or are anticipated at the site and the affected media are listed below. Material Safety Data Sheets are included in Appendix A.

Volatile Organic Compounds	Media
Trichloroethene (TCE)	Ground Water
Trichloroethene (TCE)	Surface Water

Base Neutrals	Media

Metals	Media

Pesticides	Media

Other Compounds	Media

Other Compounds	Media

The following is a list of the accepted exposure limits in parts per million (ppm) of the contaminants of concern.

Contaminant of Concern	PEL-TWA	PEL-STEL	TLV-TWA	TLV-STEL	A1	A2	Skin	Ceiling
Trichloroethene (TCE)	100	NA	50	100	No	No	No	200

PEL-TWA, OSHA = Permissible Exposure Limit-Time Weighted Average
PEL-STEL, OSHA = Permissible Exposure Limit-Short Term Exposure Limit
TLV-TWA, ACGIH = Threshold Limit Value-Time Weighted Average
TLV-STEL, ACGIH = Threshold Limit Value-Short Term Exposure Limit
A1, ACGIH = Known Human Carcinogen
A2 = Suspected Human Carcinogen
Skin = Potential overall exposure through skin absorption, including mucous membranes and eye, either airborne or through direct contact with the substance
Ceiling, ACGIH = Concentration that should not be exceeded during any part of the working exposure

6.0 PERSONAL PROTECTION EQUIPMENT

Employee safety is a paramount concern for TRC. OSHA Standard 29 CFR 1910.132 requires employers to assess the employer's work area and determine whether hazards are present that require Personal Protective Equipment (PPE). Due to the variety of job sites and situations that TRC may be involved in, it is important that TRC maintain a consistent approach with health and safety procedures. The Project Manager and Field Supervisor are responsible for ensuring that all personnel wear the appropriate PPE.

Protective footwear must be worn when working in the field. Footwear must at a minimum include steel toe and shank protection. Protective footwear must meet ANSI Z41-1991. Additionally, chemical protective footwear may also be required if the potential for contaminated materials exists.

Eye protection must be worn during all sampling activities, stack sampling and inside manufacturing facilities. Eye protection must include side shields. Prescription lenses worn as eye protection and other protective eyewear must meet ANSI Z87.1.

Hardhats are to be worn when overhead hazards are present. Hardhats must meet ANSI Z89.

Hand protection is to be worn on a site-specific basis. The hand protection must be selected based on the chemical hazards expected to be encountered. In addition, Kevlar gloves or other types of puncture resistant gloves are to be worn by all personnel working with or cleaning glass.

Other PPE, such as coveralls, respiratory protection and hearing protection, will be determined on a site-specific basis.

Before donning PPE, workers will estimate their anticipated work duration. There are several limiting factors that affect the length of work time. These factors must be addressed:

- Air supply consumption
- Permeation and penetration of the Chemical Protective Clothing;
- Ambient temperature; and
- Coolant supply (ice or chilled area to keep the worker's body temperature at a normal temperature).

Site-Specific PPE

Levels of protection will be upgraded as necessary based on action levels of the site-specific contaminant of concern. Only the Site Safety Officer, with the consent of the Health & Safety Officer, can downgrade to a lower level.

The contaminants of concern at the Site determine the level of PPE to be worn. For the work to be performed at the Site under this HASP, the following PPE will be worn.

X Level D Modified Protection (for minimal, non-intrusive work)

(a) Boots: Steel-toe and shank protection

(b) Safety Glasses with Side Shields Yes

(c) Hard Hat: Yes _____ No _____

(d) Coveralls: _____

(e) Glove Type: Latex/Vinyl

(f) Hearing Protection (if exposed to at least 85 dB of sound) _____

(g) High Visibility Safety Vest: In high traffic areas

(h) Other (Specify): _____

(i) Modifications: _____

_____ Level D Protection

(a) Boots: Steel-toe and shank protection

(b) Safety Glasses with Side Shields _____ or Chemical Splash Goggles _____

(c) Hard Hat: Yes _____ No _____

(d) Coveralls: _____

(e) Glove Type: _____

(f) Hearing Protection (if exposed to at least 85 dB of sound) _____

(g) High Visibility Safety Vest: _____

(h) Other (Specify): _____

(i) Modifications: _____

_____ Level C Protection (atmosphere must contain at least 19.5% oxygen)

(a) Full-Face, Air-Purifying Respirator [(1)]: _____

(b) Cartridge Type [(2)]: _____

(c) Coveralls: Chemical-resistant clothing or disposable chemical-resistant suit

(d) Glove Type: _____

(e) Boots: Steel-toe and shank protection with chemically-resistant outer boot cover

(f) Hard Hat: Yes _____ No _____

(g) Hearing Protection (if exposed to at least 85 dB of sound) _____

(h) High Visibility Safety Vest _____

(i) Other (Specify): Two-way radio communication

(j) Modifications: _____

(1) All personnel using a full-face air-purifying respirator must be quantitatively fit tested.

(2) Cartridges should not be used longer than one shift or when breakthrough occurs.

_____ Level B Protection

(a) Positive-pressure, full-face, self-contained breathing apparatus (SCBA) or a tethered, cascade breathing system: _____

(b) Coveralls: Chemical-resistant clothing or disposable chemical-resistant suit

(c) Glove Type: _____

(d) Boots: Steel-toe and shank protection with chemically-resistant outer boot cover

(e) Hard Hat: Yes _____ No _____

(f) Hearing Protection (if exposed to at least 85 dB of sound) _____

(g) High Visibility Safety Vest _____

(h) Other (Specify): Two-way radio communication

(i) Modifications: _____

Personnel Decontamination Procedure

Level D: Segregated equipment drop, boot and glove wash, boot and glove rinse, tape removal, boot cover removal, glove removal and field wash.

Level C: Segregated equipment drop, boot cover and glove wash, boot cover and glove rinse, tape removal, boot cover removal, outer glove removal, (canister or mask change), rubber boot removal, splash suit removal, inner glove removal, and field wash.

Level B: Segregated equipment drop, boot cover and glove wash, boot cover and glove rinse, tape removal, boot cover removal, outer glove removal, SCBA backpack removal, suit and hard hat removal, inner glove removal, and field wash.

7.0 AIR MONITORING AND ACTION LEVELS

When appropriate, an air-monitoring program should be implemented to identify areas of elevated airborne contaminant concentrations and to determine the level of the concentrations relative to background.

Monitoring Equipment/Model	Frequency of Surveillance
X PID	Headspace in wells
_____ Combustible Gas Indictor	_____
_____ Miniram	_____
_____ RAM	_____
_____ Drager Tube(s) and Pump	_____
_____ Additional Monitoring	_____

Dust quality should be monitored with a Miniram or similar instrument. If readings are above the action level, dust control measures will be implemented (i.e., water spraying).

ACTION LEVELS

Direct Reading Instruments

A complex variety of toxic air pollutants (including organic and inorganic vapors, gases or particulates) can be produced at abandoned waste sites. Direct-reading field instruments will not detect or measure all of these substances. Thus negative readings should not be interpreted as the complete absence of airborne toxic substances. Verification of negative results can only be done by collecting air samples and analyzing them in a laboratory or in an off-site location using portable analyzers and should be considered and determined on a case-by-case basis.

Instrument	Action Level	Action Required
Organic Vapor Monitoring		
PID with 10.6eV Lamp	Above 10 ppm sustained for 15 minutes or longer in the breathing zone.	Upgrade to Level C
PID with 10.6eV Lamp	Between 10 to 50 ppm sustained for 15 minutes or longer in the breathing zone.	Stop operations until levels remain < 10 ppm.
PID with 10.6eV Lamp	Above 50 ppm sustained for 15 minutes or longer in the breathing zone.	Stop operations. Level B necessary

Dust Monitoring		
Miniram	7 mg/m^3 sustained	Stop operations until levels remain <7 mg/m^3

(1) See the HSO for action levels using an 11.7eV lamp.
(2) Conduct air monitoring periodically to determine when and if work may be continued. For work to continue above 50 ppm, cease work immediately and upgrade to Level B.
(4) If dust is present above the action level, wear a dust mask or a respirator using a particulate filter (P100) and use dust control measures such as water spraying.

Inorganic Gases and Vapors

The ability to detect and quantify nonspecific inorganic vapors and gases is extremely limited. If specific inorganics are known or suspected to be present, measurements should be made with appropriate measuring device.

8.0 HAZARD EVALUATION AND MITIGATION

A summary of the potential hazards suspected to be present in work areas is provided below. For life threatening emergencies requiring immediate attention, dial 911.

The field team should make visual observations to help evaluate site hazards and other potentially hazardous conditions (i.e., animals; stressed vegetation; wind directions; labels on containers indicating explosive, flammable, toxic or corrosive materials; conditions conductive to splash or contact with unconfined liquids, sludges or solids).

8.1 Physical Hazards

Existing information for site:
__X__ Detailed _____ Preliminary _____ Sketchy _____ None

Hazardous/Contaminated Material Form(s):
_____ Solid __X__ Liquid _____ Sludge _____ Gas _____ Vapor

Containment Type(s):
_____ Drum _____ Tank _____ Pit _____ Debris
_____ Pond _____ Lagoon

Hazardous Material Characteristics:
__X__ Volatile _____ Corrosive _____ Reactive _____ Radioactive
_____ Ignitable _____ Toxic _____ Unknown _____ Other (Specify): _____

Routes of Exposure:
_____ Oral _____ Dermal _____ Eye _____ Respiratory

Potential Health and Safety Hazards

__X__ Heat
__X__ Cold
__X__ Falls, Slippage
_____ Noise
_____ Confined Space Entry
_____ Cave-Ins
_____ Asphyxiation
_____ Oxygen Depletion
_____ Non-Ionizing Radiation
__X__ Other (Specify): Ticks (Wood and Deer)

_____ Heavy Equipment
__X__ Traffic Hazards
_____ Congested Areas
_____ General Construction
_____ Electrical Hazards
_____ Handling and Transfer of Product
_____ Fire
_____ Flammable Hazards
__X__ Biological Hazards (Plant, Insect, Animal)

The following general and physical hazards may be associated with this project. TRC's Accident Reporting Form (Appendix B) must be completed if an accident occurs.

1. Potential Hazard: Slips, Trips and Falls

   Procedures to Mitigate Hazard: Exercise caution in all work areas. Be sure of footing when moving through the work area. Avoid stepping or standing on uneven or unsteady surfaces. Clearly delineate open pits, wells and other fall hazards with caution tape and securely cover as appropriate.

2. Potential Hazard: Traffic Hazards

   Procedures to Mitigate Hazard: Use cones, signs, sawhorses, caution tape and/or high visibility clothing around work area.

3. Potential Hazard: Struck by heavy equipment.

   Procedures to Mitigate Hazard: Heavy equipment should be equipped with back-up alarm or use horn when backing up. Stay clear of operating equipment and rig movement.

4. Potential Hazard: Underground Utilities

   Procedures to Mitigate Hazard: Underground utilities in and near the work area shall be identified prior to conducting subsurface work. A geophysical survey or hand/soft dig to the appropriate depth should be performed if necessary.

   No underground intrusive work is to commence without an underground utility markout. The One-Call Underground Utility Damage Prevention System (1-800-727-1000) must be notified not less than 3 full business days before and not more than 10 business days prior to beginning of an excavation or demolition.

5. Potential Hazard: Overhead Utilities and Other Overhead Objects.

   Procedures to Mitigate Hazard: Overhead utilities and other overhead objects in and near the work area shall be identified prior to conducting work. A minimum of 10-foot clearance should be maintained from overhead power lines. The drilling rig, excavator and all other equipment shall be positioned to avoid overhead utility lines in accordance with the distance requirements defined by voltage and local regulations. Use spotter when raising drilling rig mast to confirm clearance of overhead lines and other obstructions.

6. Potential Hazard: Stability of Drill Rig/Operating Equipment

   Procedures to Mitigate Hazard: Avoid positioning rig on soft or uneven ground.

7. Potential Hazard: Moving Equipment

   Procedures to Mitigate Hazard: Wear appropriate PPE including hardhat, properly sized gloves, and steel-toed boots. Stay clear of rotating auger or direct push equipment.

8. Potential Hazard: Suspended loads

   Procedures to Mitigate Hazard: Do not walk under suspended loads. Be aware of the travel path of suspended loads.

9. Potential Hazard: Excessive Noise

   Procedures to Mitigate Hazard: Acoustic hazards may be present during soil excavation or drilling activities. When a noise level prevents conversation in a normal voice at a distance of 3 feet, use proper National Institute of Occupational Safety and Health (NIOSH) approved hearing protection. Personnel will wear hearing protection to avoid the damaging effects of high noise levels that destroy the ability to hear and create a stressful environment. Proper hearing protection such as earplugs or earmuffs must be worn by all personnel around large machinery such as drill rigs and backhoes, or sources associated with the work site, such as vehicles. Noise levels in the work areas that potentially meet or exceed an 8-hour time-weighted average of 85 decibels, will be evaluated by the SSO to ensure proper protection is implemented. The hearing protection must provide a sufficient reduction in the noise exposure to be below 85 decibels. Wear hearing protection with in 20 feet of drill rig and other operating equipment.

10. Potential Hazard: Vapors and Dust

    Procedures to Mitigate Hazard: Wear appropriate PPE and wear air-purifying respirator when PID readings exceed action levels. Stop work if hazardous conditions are identified until precautions are taken and work deemed safe to restart. Workers should stay upwind of potential sources of dust and vapors. Calibrate PID prior to use.

11. Potential Hazard: Lighting

    Procedures to Mitigate Hazard: Work areas must have adequate lighting for employees to perform work and identify hazards, (5-foot candles minimum comparable to a single 70 to 100 watt bulb). Personnel should carry flashlights in all normally dark areas for use in the event of a power failure. Applicable OSHA standards for lighting, 29 CFR 1910.120 (m), shall apply.

12. Potential Hazard: Electrical Power

    Procedures to Mitigate Hazard: All electrical power must have a ground fault circuit interrupter as part of the circuit. All equipment must be suitable and approved for the class of hazard. Relevant OSHA standards for electrical safety, 29 CFR 1926 (k), shall apply.

13. Potential Hazard: Fire Protection/Fire Prevention

    Procedures to Mitigate Hazard: Operations involving the potential for fire hazards shall be conducted in a manner to minimize the risk. Non-sparking tools and fire extinguishers shall be used or available as appropriate. Sources of ignition shall be removed. When necessary, explosion-proof instruments and/or bonding and grounding will be used to prevent fire or explosion.

14. Potential Hazard: Excavations/Cave-ins

    Procedures to Mitigate Hazard: All excavations that could potentially expose cave-ins shall be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

15. Potential Hazard: Eye Wash Protection

    Procedures to Mitigate Hazard: All operations involving the potential for eye injury, splash, etc., must have eye wash units available.

16. Potential Hazard: Damaged and Deteriorated Buildings

    Procedures to Mitigate Hazard: Damaged and deteriorated buildings often contain unguarded walkways, doors, etc. where a fall potential exists. These must be guarded and/or posted to prevent employee use or passage. Areas where work will not be performed will be closed off and posted.

17. Potential Hazard: High or elevated work

    Procedures to Mitigate Hazard: All work over 4 feet in elevation or where a fall potential exists will be performed using appropriate ladders or step stools and/or fall protection (i.e., body harness and lifeline).

The following is a list of the potential hazards at the Site.

POTENTIAL HAZARD	**ANTICIPATED RISK**
Inhalation of Dusts	Low to high, keep soils wet to reduce dust, if necessary
Inhalation of Volatile Contaminants	Low to high, perform air monitoring
Ingestion of Contaminants	Low to moderate, use PPE to avoid contact; use washing facilities
Skin and Eye Contact with Contaminants	Low to high, use PPE to avoid contact; use washing facilities
Working with/near Heavy Equipment	Low to moderate, wear safety vests and stay away from swing radius of equipment
Excavation Hazards	Moderate, avoid standing near the perimeter of the excavation and do not enter the excavation if >4 feet
Noise Exposure	Low to moderate, use hearing protection
Tripping Hazards	High, avoid hazards; employ good housekeeping
Heat Stress	Depends on ambient temperature, drink fluids and monitor heart rate

POTENTIAL HAZARD	ANTICIPATED RISK
Cold Exposure	Depends on ambient temperature, wear warm clothing; if clothing gets wet, remove and replace with dry clothing
Biological Hazards	Low, identify nearby plants
Flammable Hazards	Low to moderate, use LEL meters and ventilate areas with LEL readings >10%; be aware when using gasoline generators
Electrical Hazards	Low to high; markout underground utilities; be aware of overhead power lines and maintain a safe distance; use ground fault circuit interrupters on portable power tools
Traffic Hazards	Moderate to high, wear safety vests and use cones, stay aware
Lighting Hazards	Low, ensure proper illumination

Hazard Identification/Ranking

Task: Ground Water Sampling Low X Medium _____ High _____

Task: Surface Water Sampling Low X Medium _____ High _____

Task: Water-levels Low X Medium _____ High _____

Task: _____ Low _____ Medium _____ High _____

Task: _____ Low _____ Medium _____ High _____

Low = non-intrusive work, exposure to contaminants possible.
Medium = intrusive work, possible safety hazards with powered tools and heavy equipment, exposure to contaminants possible.
High = intrusive work, possible safety hazards with equipment, exposure to contaminants very probable.

8.2 Chemicals Used by TRC

The following is a list of the chemicals to be brought on-site and used by TRC personnel (check all that apply):

	Acetone for decontamination
	Hexane for decontamination
	Nitric Acid for decontamination
	Methanol for sample preservation
X	Isobutylene for PID calibration

	H_2SO_4 for sample preservation
	HNO_3 for sample preservation
X	HCL for sample preservation
	Gasoline for generators

MSDSs for these chemicals are included in Appendix A.

The following is a list of the accepted exposure limits of the chemicals to be used by TRC, with concentrations in parts per million (ppm):

Chemical	PEL-TWA	PEL-STEL	TLV-TWA	TLV-STEL	A1	A2	Skin	Ceiling
Acetone	1000	NA	500	750	No	No	Yes	NA
Hexane	500	NA	500	1000	No	No	Yes	NA
Gasoline	NA	NA	300	500	No	No	Yes	NA
Nitric Acid*	2	4	2	4	No	No	Yes	NA
Hydrochloric Acid*	5	NA	NA	2	No	No	Yes	5
Sulfuric Acid	1	1	10	15	No	No	---	20
Methanol	200	250	200	250	No	No	Yes	NA

***** Diluted to 10%

PEL-TWA, OSHA = Permissible Exposure Limit-Time Weighted Average
PEL-STEL, OSHA = Permissible Exposure Limit-Short Term Exposure Limit
TLV-TWA, ACGIH = Threshold Limit Value-Time Weighted Average
TLV-STEL, ACGIH = Threshold Limit Value-Short Term Exposure Limit
A1, ACGIH = Known Human Carcinogen
A2 = Suspected Human Carcinogen
Skin = Potential overall exposure through skin absorption, including mucous membranes and eye, either airborne or through direct contact with the substance
Ceiling, ACGIH = Concentration that should not be exceeded during any part of the working exposure
NA = not available

The following information is based on the *2004 ACGIH's TLVs and BEIs* and *2006 NIOSH Pocket Guide to Chemical Hazards.*

CHEMICALS COMMONLY BROUGHT ON SITE					
Substance	**Route of Entry**	**Target Organs**	**Treatment**	**8-Hour TWA**	**STEL & IDLH**
Acetone	Inhalation Ingestion Skin/Eye Contact	Irritation, Eyes, Skin, Respiratory System, CNS	Eye: Immediately wash eyes Skin: Immediately flush skin with soapy water. Breath: Move to fresh air; perform mouth-to-mouth resuscitation if necessary. Swallow: Get medical attention immediately.	250 ppm	STEL: 750 ppm IDLH: 2500 ppm

CHEMICALS COMMONLY BROUGHT ON SITE					
Substance	**Route of Entry**	**Target Organs**	**Treatment**	**8-Hour TWA**	**STEL & IDLH**
Hexane	Inhalation Ingestion Skin/Eye Contact	Irritation, Eyes, Skin, Respiratory System, CNS, PNS	Eye: Immediately wash eyes. Skin: Immediately flush skin with soapy water. Breath: Move to fresh air; perform mouth-to-mouth resuscitation if necessary. Swallow: Get medical attention immediately.	50 ppm	IDLH: 1100 ppm
Gasoline	Inhalation Absorption Ingestion Skin/Eye Contact	Eyes, Skin, Respiratory System, CNS, Liver, Kidneys, Irritation, Neuropathy	Eye: Immediately wash eyes. Skin: Immediately flush with soapy water. Breath: Move to fresh air; perform mouth-to-mouth resuscitation if necessary. Swallow: Get medical attention immediately.	300 ppm	STEL: 500 ppm
Nitric Acid	Inhalation Ingestion Skin/Eye Contact	Irritation, Respiratory System, Teeth, Skin, Eyes, Corrosion, Pulmonary Edema	Eye: Immediately wash eyes. Skin: Immediately flush with soapy water. Breath: Move to fresh air; perform mouth-to-mouth resuscitation if necessary. Swallow: Get medical attention immediately.	2 ppm	STEL: 4 ppm IDLH: 25 ppm

CHEMICALS COMMONLY BROUGHT ON SITE					
Substance	**Route of Entry**	**Target Organs**	**Treatment**	**8-Hour TWA**	**STEL & IDLH**
Hydrochloric Acid	Inhalation Ingestion Skin/Eye Contact	Irritation, Corrosion, Eyes, Skin, Respiratory System	Eye: Immediately wash eyes. Skin: Immediately flush with soapy water. Breath: Move to fresh air; perform mouth-to-mouth resuscitation if necessary. Swallow: Get medical attention immediately.	5 ppm	STEL: 2 ppm IDLH: 50 ppm
Sulfuric Acid	Inhalation Ingestion Skin/Eye Contact	Eyes, Skin, Respiratory System, Teeth	Eye: Immediately wash eyes. Skin: Immediately flush with soapy water. Seek medical attention immediately	0.2 mg/m^3	IDLH: 15 mg/m^3
Methanol	Inhalation Absorption Ingestion Skin/Eye Contact	Neuropathy, Vision, CNS	Eye: Immediately wash eyes. Skin: Immediately flush with soapy water. Breath: Move to fresh air; perform mouth-to-mouth resuscitation if necessary. Swallow: Get medical attention immediately.	200 ppm	IDLH: 6000 ppm

8.3 Biological Hazards

The biological hazards anticipated at the site are noted below.

X Ticks and Chiggers

Ticks and chiggers may be present in vegetated areas during the spring, summer and fall seasons. Preventative measures include protective clothing; head/hair protection; and the use of insect repellant containing DEET on all exposed areas and coveralls. Workers should check their bodies thoroughly for ticks and should bathe soon after returning home. Remove any ticks carefully, using a gentle, firm, tugging motion with fine tweezers. Do not kill the tick before it has been removed. Workers should save the ticks and monitor their bites, checking for a rash and other symptoms (up to about eight weeks after the bite).

X Toxic Effects from Plants

Poison ivy, poison oak and poison sumac may be present during the spring, summer and fall seasons. Contact with it should be avoided, however, if one has come in contact with it. The affected skin area should be washed thoroughly with soap and cool water. Care should be taken when handling clothing or any other items that have come in contact with poison ivy. If an allergic reaction occurs, a physician's advice should be sought.

X Animal Bites or Stings

Animal bites or stings are usually nuisances (localized swelling, itching and minor pain) that can be handled by first aid treatment. The bites of certain snakes, lizards and spiders contain sufficient poison to warrant medical attention. There also are diseases that can be transmitted by animal bites that will require professional medical attention. Examples are rabies (mainly from dogs, skunks, raccoons, and foxes), Lyme Disease (from ticks), and West Nile Disease or encephalitis (from mosquitoes).

The biggest hazard and most common cause of fatalities from animal bites and inspect stings (particularly bees, wasps and spiders) is a sensitivity reaction. Anaphylactic shock due to stings can lead to severe reactions to the circulatory, respiratory, and central nervous system and it can also result in death.

Workers who are bitten by an animal or stung by an insect must immediately notify the HSO or his designated site representative.

_____ Bloodborne Pathogens

All employees trained in first aid may have exposure to infectious materials.

8.4 Radiological Hazards

Radiation monitoring should be incorporated in the initial survey where radioactive materials may be present, for example, fires at warehouses or hazardous material storage facilities, transportation incidents involving unknown materials, or abandoned waste sites.

Gamma Radiation

Normal gamma radiation background is approximately 0.01 to 0.02 milliroentgen per hour (mR/hr) on a gamma survey instrument. Work can continue with elevated radiation exposure rates; however, if the exposure rate increases to 3 to 5 times above gamma background, a qualified health physicist should be consulted. At no time should work continue with an exposure rate of 0.1 mR/hr or more above background without the advice of a health physicist. The Bureau of Emergency Response and the Radiation Protection Programs within NJDEP have radiation specialists on staff for assistance.

The absence of gamma readings above background should not be interpreted as the complete absence of radioactivity. Radioactive materials emitting low-energy Γ (gamma), α (alpha), or β (beta) radiation may be present, but for a number of reasons may not cause a response on the instrument. Unless airborne, these radioactive materials should present minimal hazard but more thorough surveys should be conducted as site operations continue to completely investigate the presence of any radioactive material.

8.5 General Safety Measures

All employees will wash their hands immediately after potential exposure to infectious materials.

No eating, drinking, chewing gum, tobacco smoking, applying cosmetics, lip balm or any other practice which increases the tendency for hand-to-mouth contact shall be prohibited within the contaminated zone(s) and prior to washing hands and face within the contamination reduction corridor or decontamination line.

Medicine and alcohol can intensify the effects of exposure to toxic chemicals. Alcohol, Caffeine products and certain medications can contribute to and exacerbate the effects of heat stress. Personnel during site activities should not take prescription and non-prescription drugs when the potential for absorption, inhalation or ingestion of toxic substances exists, unless specifically approved by a qualified physician.

Contact with surfaces known or suspected of being contaminated should be avoided during on-site activities. Avoid walking through puddles, mud, or discolored surfaces; kneeling on ground; leaning, sitting, or placing equipment on drums.

All equipment and environmental and working surfaces will be cleaned and decontaminated with an appropriate disinfectant immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials.

After an exposure incident, a confidential medical evaluation and follow-up will be immediately available to the exposed individual. Arrangements for the medical evaluation should be coordinated with the HSO.

9.0 SITE CONTROL MEASURES

If warranted by the Project Manager and Health & Safety Officer, zones may be established to prevent or minimize exposure of unauthorized personnel to hazards by establishing boundaries to reduce migration of contaminants from designated work areas into clean areas. These zones are designated as the Support Zone, the Contamination Reduction Zone and the Exclusion Zone. The zones will be identified during safety briefings and may be clearly marked by traffic cones, caution tape, barricades, signs or other means.

9.1 Support Zone

The Support Zone is the clean area where the possibilities of encountering hazardous materials or conditions are minimal. Therefore, personal protective and respiratory equipment are not necessary. Inside the Support Zone, the following will be available: an effective means of communication, first-aid supplies, fire extinguisher, drinking water and other appropriate support facilities. The Support Zone shall also serve as the main point of contact for the visitor check-in and initiation of emergency services when necessary.

Communications using radios or other means must be maintained between personnel performing the work at all times. Emergency communications should be prearranged in case of radio failure.

9.2 Contamination Reduction Zone

The Contamination Reduction Zone is the area where equipment and personnel are decontaminated after leaving the Exclusion Zone. Personnel will remove and/or decontaminate PPE and place it in appropriate containers. Site vehicles and equipment will also be decontaminated in the Contamination Reduction Zone. The Contamination Reduction Zone will consist of a temporary decontamination area, a means of washing protective equipment, site equipment; containers for liquids, solids and PPE; first-aid supplies; an eyewash kit; and a fire extinguisher. Eating, drinking, chewing gum or tobacco smoking or any activity that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in the Contamination Reduction Zone.

Personnel performing decontamination operations will be provided with appropriate personal protection equipment, including face shield, rain suits or chemical resistant PPE as needed, water/chemical resistant boot covers, gloves and hearing protection.

9.3 Exclusion Zone

The Exclusion Zone includes the designated work areas at the site. Only authorized, trained and qualified personnel with the appropriate personal protective equipment shall be admitted into the Exclusion Zone.

Work activities within the Exclusion Zone pose the greatest possibility of exposure to personnel and equipment. The Site Safety Officer shall be responsible for controlling the access points. The Exclusion Zone will be clearly marked with flagging, barricade tape, traffic cones or other signals to limit access.

Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in the Exclusion Zone.

10.0 MEDICAL SURVEILLANCE

All personnel participating in this activity must comply with the Medical Surveillance requirements of 29 CFR 1910.120 (f). Additionally, all personnel must be certified as medically fit to use a respirator in accordance with 29 CFR 1910.134 (Respiratory Protection) if Level C or higher PPE is used. Records including fit testing results and medical form stating that the person is fit to wear respirator are kept at TRC's office for TRC personnel.

11.0 HEALTH AND SAFETY PROGRAMS

11.1 Personnel Training and Respirator Protection

All personnel involved in the field work, including subcontractors conducting field activities, must be trained in accordance with OSHA's Hazwoper requirements in 29 CFR 1910.120 unless otherwise designated as exempt personnel described below. Personnel required to meet the training requirements must present evidence of this training when requested. The subcontractor is also solely responsible for complying with all applicable OSHA requirements and all other federal, state and local safety requirements for their field of expertise.

In addition, an annual 8-hour minimum refresher course after the initial training shall be provided to all field personnel.

All personnel must be certified as medically fit to use a respirator in accordance with 29 CFR 1910.134 (Respiratory Protection) if Level C or higher PPE is used. Records including fit testing results and medical form stating that the person is fit to wear respirator must be presented when requested.

11.2 Exempt Personnel

Those personnel working on the construction site in the support zone, but not entering the exclusion zone are exempt to these training requirements. Exempt personnel requesting access to the work areas could include, but not limited to, personnel making deliveries or performing repairs to utilities, public or government officials or untrained visitors. Individuals from these groups would not be required to comply with the OSHA training requirements.

Observation areas will be upwind from site operations, as decided on the basis of predominant wind directions. Weather conditions or site activities may restrict access to observation areas. Approvals for exempting personnel and decisions on access limitation for other personnel will be handled on a case-by-case basis by the SSO in consultation with the Field Supervisor and Project Manager.

11.3 Tailgate Safety Meetings and Safety Inspections

A safety meeting shall be conducted at least daily or (1) whenever risks or hazards change, (2) whenever new personnel arrive and (3) when site operations warrant training. Safety meetings shall be conducted by the SSO or another qualified individual. Where procedural deficiencies are identified, additional safety meetings will be conducted to address the situation. The following items are to be addressed during the meetings including review of the day's scope of work, suspected hazards, required PPE, communication and chain of command, decontamination procedures and emergency procedures.

The SSO will inspect the site daily to identify potential hazardous conditions or work areas. The HSO will visit the site periodically to evaluate whether work operations are being conducted in compliance with the protocols and procedures outlined in this HASP.

APPENDIX A

MATERIAL SAFETY DATA SHEETS (MSDS)

APPENDIX B

ACCIDENT REPORTING FORM

TRC ACCIDENT REPORTING FORM

Field Personnel		Job Name and No.	
Date & Time		Location	
Tasks performed		Witnesses	
Resulted in	__ Injury __ Fatality __ Property Damage	Property Damage	
Injured Person		Weather Conditions	
Describe Accident Facts & Events			

Supervisor's Root Cause Analysis Check ALL that apply to this accident

Unsafe Acts		**Unsafe Conditions**	
Improper work technique		Poor Workstation design	
Safety rule violation		Unsafe Operation Method	
Improper PPE or PPE not used		Improper Maintenance	
Operating without authority		Lack of direct supervision	
Failure to warn or secure		Insufficient Training	
Operating at improper speeds		Lack of experience	
By-passing safety devices		Insufficient knowledge of job	
Protective equipment not in use		Slippery conditions	
Improper loading or placement		Excessive noise	
Improper lifting		Inadequate guarding of hazards	
Servicing machinery in motion		Defective tools/equipment	
Horseplay		Poor housekeeping	
Drug or alcohol use		Insufficient lighting	

Unsafe Acts require a written warning and re-training before the Employee resumes work

Accident Report Review

Employee Signature _____ Date _____

Sr. Project Manager _____ Date _____

Health & Safety Officer _____ Date _____

- Find the cause to prevent future accidents - use an unbiased approach during investigation
- Interview witnesses & injured employees at the scene - conduct a walkthrough
- Conduct interviews in private - interview one witness at a time.
- Get signed statements from all involved.
- Take photos or make a sketch of the accident scene.
- What hazards are present - what unsafe acts contributed to accident
- Ensure hazardous conditions are corrected immediately.