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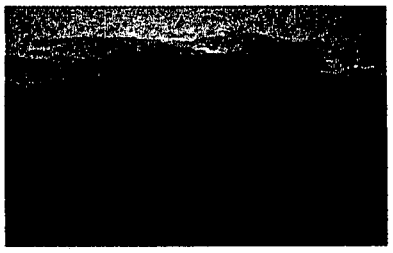

# QUARTERLY MONITORING REPORT
# 1ST QUARTER 2002

**L.E.CARPENTER & COMPANY**
**WHARTON, NEW JERSEY**

**USEPA ID# NJD002168748**

April 2002

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# Section 1
# Introduction

RMT, Inc. (RMT), on behalf of our client, has prepared this Quarterly Monitoring Report for the L.E. Carpenter and Company (LEC) ("site") located at 170 North Main Street, Wharton, New Jersey (Figure 1). Quarterly monitoring events are performed at the site to comply with paragraph 35 of the 1986 Administrative Consent Order (ACO) issued to LEC by the New Jersey Department of Environmental Protection (NJDEP). We provide a summary of activities completed during the first quarter of 2002, including routine quarterly groundwater monitoring and monthly free product recovery activities. In addition, this report includes summaries of additional site activities performed during first quarter of 2002, and activities scheduled for commencement during second quarter of 2002. We have certified this report in accordance with requirements outlined in N.J.A.C 7:26E-1.5 (Appendix A).

RMT conducted the following tasks during the first quarter of 2002:

- Monthly mobile free product recovery using enhanced fluid recovery (EFR) techniques in accordance with the NJDEP approval letter dated August 20, 1997 (Ref. Section 2).
- Quarterly groundwater monitoring as required under the ACO (Ref. Sections 3 and 4).
- Submittal of Nature and Extent of Lead in Soils and Groundwater (RMT, March 2002) (Ref. Section 5).
- Submittal of Findings & Recommendations Regarding a Conceptual Free-Product Remediation Strategy (RMT, March 2002) (Ref. Section 5).

We provide a discussion of these activities in the referenced sections.

# Section 2
# Monthly EFR Activities

## 2.1 Introduction

In August 1997, the NJDEP approved the Remedial Action Plan (RAP) which described free product removal using enhanced fluid recovery (EFR) for the eastern portion of the subject site (east of the railroad right-of-way). EFR is conducted by applying a vacuum to product recovery wells to primarily remove free-phase product in addition to limited volumes of contaminated groundwater and contaminant vapors within vadose zone and capillary fringe soils. As the result of increased aeration, this procedure enhances any natural biodegredation that may be occurring in the soil and groundwater. The locations of the twenty-eight (28) EFR wells purged during each monthly EFR event and all groundwater monitoring wells are shown in Figure 2.

RMT arranged performance of three monthly EFR events during the first quarter of 2002 on January 29, February 20, and March 26, 2002. RMT coordinated measurement of the free product thickness in each recovery well (where applicable), followed by EFR. RMT's subcontractor, CEMCO, used the recorded free product measurements to determine the placement of the drop pipe that maximized free product recovery volumes. Table 1 lists apparent free product thickness measurements recorded during first quarter 2002. RMT observed a measurable thickness of free product in 12 of the 71 locations monitored on March 5, 2001. Table 1 also provides a cumulative breakdown of EFR specific information such as minimum and maximum free product thickness levels (in feet), associated waste management costs, and extracted product (liquid and vapor phase) and groundwater volumes (in gallons) to date.

During first quarter 2002, EFR activities were conducted utilizing a Nortech, Inc. 55B vacuum head apparatus capable of producing a vacuum of 17-inches of mercury (in Hg) at 100 cubic feet per minute (cfm). This unit is connected to a fitted 55-gallon drum, and braced to a mobile 4-wheel drive vehicle. When compared to the previously utilized vacuum trucks, use of this system has enabled CEMCO to get closer to each individual EFR well head, minimizing potential losses in the system previously experienced due to the use of greater lengths of extraction hose, while maximizing the maneuverability of the drop pipe. Use of this system has also resulted in a more efficient EFR event, minimizing the volume of groundwater extracted. The average ratio of extracted groundwater to free product during the first quarter of 2002 was approximately 0.08 gallons/gallon. Before use of this method (November 1997 to December 1999), the ratio of extracted groundwater to free product was 4.7 gallons/gallon.

Once the extraction apparatus is full (approximately 55-gallons), the free product and limited volume of groundwater are transferred to the on-site 550-gallon aboveground storage tank (AST) equipped with secondary containment for satellite storage. The fluids generated during EFR events, including purged groundwater generated during groundwater monitoring activities, are transported off-site by Clean Venture, Inc. (US EPA ID No. NJ0000027193) and managed by Cycle Chem, Inc. (USEPA ID No. NJD002200046) at their facility located in Elizabeth, New Jersey. During first quarter 2002, 100 gallons of waste fluids were transported off-site on March 26, 2002. The 100 gallons accounted for extracted volumes accumulated on-site from EFR events conducted in December 2001, and January, February and March 2002. The total fluid disposal volume consisted of approximately 92 gallons of free product and 8 gallons of groundwater resulting from free product extraction.

## 2.2 Apparent Free Product Trends

The following sections describe apparent product trends in the western, west-central, east-central, and eastern portions of the free product area. Apparent product refers to a volume (in gallons) of free product occupying the casings of each EFR well. As described in the following sections, "total volume of apparent free product" represents the sum of product volumes from each EFR well within each of the four segregated regions.

The apparent product thickness is not representative of the actual free product thickness or volume that exists within the formation. RMT previously evaluated actual free product thickness and volume in our report entitled Free Product Volume Analysis (May 2000). That report estimated a total volume of recoverable free product actually present in the subsurface to be between at 8,000 and 13,000 gallons. To facilitate description of the current distribution of free product, the zone of free product occurrence has been divided into four sub areas. These four areas from west to east are:

### 2.2.1 Western Region of Free Product

In the western portion of the free product area (EFR wells 1, 2, 3, 17, 18, 20, 21, and 28), there was a decrease in the total volume of apparent free product measured during the first quarter of 2002. Apparent total free product volume decreased from 8.08 gallons in January 2002 to 6.51 gallons in March 2002. Free product thickness decreased at EFR wells 1, 18, 20 and 28, increased at EFR wells 3, 17 and 21, and remained relatively consistent at EFR well 2 over the first quarter. In general, apparent free product volume in the western region appears to be decreasing (see Appendix B).

### 2.2.2 West-Central Region of Free Product

In the western-central portion of the free product area (EFR wells 4, 5, 6, 7, 19, 22, 23, 24, 25, 26, and 27), the total volume of apparent free product increased from 7.03 gallons in January 2002 to 8.31 gallons in March 2002. Free product thickness decreased at EFR wells 22, 23, 25, and 2, and increased at EFR wells 4, 5, 6, 19, 24 and 26 during first quarter. No free product was detected at EFR well 7 over the first quarter. However, the apparent free product volume in the west-central region appears to be decreasing since LEC initiated EFR in 1997(see Appendix B).

### 2.2.3 East-Central Region of Free Product

The total volume of apparent free product increased slightly in the east-central portion of the free product area (EFR wells 8, 9, 10, 11, 12, and 13) during first quarter 2002. Apparent free product volume increased from 4.10 gallons in January 2002 to 4.52 gallons in March 2002. Free product thickness decreased at EFR wells 11 and 12, increased at EFR wells 8, 9 and 10, and remained relatively consistent at EFR well 13 over the first quarter. However, the apparent free product volume in the eastern-central region appears to be decreasing since LEC initiated EFR in 1997 (see Appendix B).

### 2.2.4 Eastern Region of Free Product

During first quarter 2002, a small thickness of free product was detected in the eastern portion of the free product area at EFR Well 15. EFR extraction-wells 14 and 16 had no free product detected in them.

### 2.2.5 Site Total Apparent Free Product Area

The total volume of apparent free product on the site, accounting for all 28 EFR wells, increased slightly over the course of the first quarter from 19.21 gallons in January 2002 to 19.38 gallons in March 2002. In general, the total apparent free product trend chart indicates a steady decrease in the volume of apparent free product existing on-site. A cumulative breakdown of free product thickness and apparent free product volumes specific to each region is presented in Table 2. Additionally, trend charts for each of the four free product regions, and for the site as a whole, that graphically display apparent free product volume fluctuations over time are presented in Appendix B. Figure 3 shows iso-thickness contours and the lateral extent of apparent free product on-site during first quarter 2002. This figure incorporates the apparent free product thickness measurements from the groundwater monitoring event conducted by RMT on March 5, 2002, and the pre-EFR event measurements obtained by CEMCO on March 26, 2002.

## 2.3 Recovered Free Product Volume Estimations

After the completion of each EFR event, the total volume of extracted fluid was determined by gauging the 55-gallon vacuum head drum previously mentioned in section 2.1 with an oil/water interface probe. The drum was allowed to stabilize for one hour prior to gauging to allow for separation of emulsified product resulting from aggressive recovery. Gauging was conducted on a level surface and recorded thicknesses were converted to volumes based on a conversion of 1.65 gallons per inch of fluid thickness in the 55-gallon drum. Recovered liquid free product volume was determined by subtracting the volume of water from the total fluid volume collected in the 55-gallon drum. Vapor phase product volume was estimated based on vacuum head airflow (in cfm) and vented contaminant concentrations (in ppm) obtained during extraction at each EFR well. The volume (combined liquid and vapor phase) of free product extracted during each month's EFR event is presented in Table 3.

The total extraction volume (measurable free product, product vapor, and groundwater) during first quarter was 100.85 gallons. Approximately 95.49 gallons were measurable free phase product as determined by vacuum head drum gauging and vapor phase volume calculations, and 5.36 gallons were groundwater. Since initiation in December 1997, site EFR activities have removed approximately 14,496 gallons of total fluids, of which, approximately 3,373 gallons were measurable free phase product. Based on historical modeling data (Ref. Section 2,2), approximately 4,627 to 9,627 gallons of recoverable free product remains in the ground. Reference Table 1 for a complete breakdown of EFR related information.

# Section 3
# Quarterly Groundwater Monitoring

RMT conducted groundwater monitoring activities in the first quarter of 2002 on March 5, 6, and 7. In the past, we performed groundwater monitoring in accordance with the procedures contained in the NJDEP's *Field Sampling Procedures Manual* dated May 1992. However, for the first quarter of 2002, we performed groundwater monitoring using the low-flow methodology outlined in our May 2001 "Workplan for Supplemental Investigation of Natural Attenuation of Dissolved Constituents in Groundwater" (MNA workplan). The MNA workplan was approved by NJDEP on January 24, 2002. Although the sampling was performed using low-flow methods, the remaining parts of the MNA workplan have not yet been initiated. In addition, a non-dedicated bladder pump was used in lieu of a bladder pump with disposable bladders. A QED bladder pump system with disposable bladders (as described in the approved MNA workplan Quality Assurance Project Plan (QAPP)) has been purchased and will be used as dedicated monitoring equipment at LEC for all future sampling events. Locations of the quarterly monitoring wells are shown on Figure 2.

Monitoring wells MW-4, MW-11D(R), MW-14I, MW-15S, MW-15I, MW-19-5, MW-19-7, MW-21, MW-22(R), and MW-25(R) were sampled utilizing the low-flow methodology outlined in the QAPP, presented in Appendix A of the approved MNA workplan. Specifically, RMT used a QED bladder pump to remove groundwater at a low rate (average of 0.3 L/minute). Before sampling the wells we measured field parameters until they stabilized to obtain a representative sample of the formation water for laboratory testing. Monitoring well sample data for the first quarter of 2002 is presented in Appendix C. Once the field parameters in each well stabilized (or following adequate purging if stabilization could not be achieved), samples were collected from the Teflon tubing of the bladder pump. We submitted the samples to the STL Edison laboratory to test for benzene, toluene, ethylbenzene, xylenes (BTEX) and bis (2-ethylhexyl) phthalate (DEHP) per the current groundwater monitoring protocol presented in Table 4.

A sample duplicate, a field blank, a trip blank and a rinsate blank were collected to satisfy quality control requirements. The trip blank was prepared by the laboratory and remained with the sample containers until the samples were returned to the laboratory. The duplicate was collected from monitoring well MW-17S (duplicate sample No. DUP01) and analyzed for BTEX and DEHP. The rinsate blank was collected by circulating distilled water through the cleaned bladder pump assembly to verify that the decontamination procedures were adequate. Any sampling equipment used at each well was decontaminated prior to each use utilizing a

soap and water wash and distilled water rinse. The field (atmosphere) blank was collected during the sampling event by opening the bottle of preserved DI water provided by the laboratory, leaving the bottle open during the sampling of one well, and pouring that water directly into empty clean sample bottles also provided by the laboratory.

A comparison of the results of the chemical analyses to New Jersey Class IIa Groundwater Quality Standards (NJGWQS) is in Table 5. The presence of BTEX and DEHP was not detected at concentrations above NJGWQS in samples collected from MW-11(DR), MW-14S, MW-14I, MW-15S, MW-15I, MW-17S, MW-21, and MW-25(R). At MW-22(R), ethylbenzene, total xylenes and DEHP were detected at concentrations of 140 µg/L, 420 µg/L, and 18 µg/L respectively. Only the total xylene concentration detected at MW-22(R) exceeds the corresponding NJGWQS. In addition, the concentrations of all three detected constituents have decreased significantly compared to the previous groundwater-sampling event. At MW-4, BTEX compounds were not detected above NJGWQS, however, DEHP was detected above NJGWQS at a concentration of 150 µg/L, which is also a significant decrease compared to the last sampling event.

Significant decreases were also found in the two MW-19 area wells sampled. At MW-19-5 only toluene and total xylenes exceed their respective NJGWQS, but the concentration of toluene has decreased by a factor of 7 (the concentration was about 7 times higher in August 2001 than it was in March 2002), and the concentration of total xylenes was about 3 times higher in August 2001. Similar reductions were observed for MW-19-7, where benzene and total xylenes were the only constituents exceeding NJDWQS. A comparison of the results of the chemical analyses to New Jersey Class IIa Groundwater Quality Standards (NJGWQS) is in Table 6.

Even though contaminant concentrations at MW-22(R) have consistently exceeded NJGWQS, contaminant concentrations at downgradient monitoring location MW-14S have been non-detect. In addition, contaminant concentrations at monitoring location MW-25(R) have not exceeded NJGWQS since second quarter 1997, and contaminant concentration further downgradient at MW-21 have never exceeded NJGWQS since sampling began at this location in first quarter 1999. (Note: during some times of the year, it appears that MW-25(R) and MW-21 are downgradient from MW-22(R)). We will continue to closely monitor the contaminant concentration-trend at all four locations. Concentration trends for contaminants of concern detected at MW-22(R) and MW-25(R) are presented as Appendix D.

Agency comments outlined in the NJDEP letter dated April 5, 2001 regarding their review of the 4th Quarter 2000 Monitoring Report (RMT, February 2001) requested that MW-11D(R) remain incorporated in the quarterly monitoring protocol. Groundwater collected from this location will continue to be analyzed for DEHP only; however, during the March 2002 monitoring event, we also tested for BTEX, and none were detected.

RMT has summarized the historical groundwater monitoring data, including the results from the first quarter 2002 sampling event for both the wells on the quarterly monitoring program, and the MW19/Hot Spot 1 wells, on Tables 5 and 6 respectively. We have included the corresponding analytical laboratory reports in Appendix E. Severn Trent Services of Edison, New Jersey (STL-Edison) performed all laboratory analyses.

# Section 4
# Water Table Elevations

On March 5, 2002, RMT measured static groundwater levels from 72 different locations throughout the site (Table 7). RMT used these data to calculate groundwater elevations and evaluate the groundwater flow pattern in the shallow aquifer system.

Figure 4 displays the site-wide shallow groundwater equipotential surface, and indicates that groundwater flow direction in the shallow aquifer east of the rail spur is similar to that observed historically (generally toward the east). Also exhibited in Figure 4 are the effects caused by the presence of the drainage ditch and the Rockaway River. The drainage ditch acts as a local groundwater "sink", and shallow groundwater from a large portion of the site seeps into the drainage ditch. Shallow groundwater at the southern edge of the LEC site is recharged directly by the Rockaway River and flows towards the site before turning eastward toward the Air Products property.

Figure 5 displays the elevations of the water-table surface in the MW19/Hot Spot 1 area (northwest corner of the subject site). The data show that groundwater flow direction in the shallow aquifer underlying this area is generally towards the east-northeast and is predominantly driven by recharge from Washington Forge Pond. Elevations measured in wells MW19-7, MW19-6, and MW19-2 control the bending of the contours where they are roughly perpendicular to the regional interceptor sewer that is located under Ross Street. This supports data that shows the regional sewer line intercepts and locally controls shallow groundwater flow. The pattern of groundwater flow in this area is similar to that throughout 2000 and 2001.

The potentiometric surface contours were generated using the measured fluid level elevations in site shallow wells. Some shallow well fluid elevations were not used to generate these contours because the observed values appeared to be in error, specifically, many of the wells denoted as "well points". We also used head values for the Rockaway River, the drainage ditch and the Washington Forge Reservoir to control and interpret the groundwater elevation contours.

# Section 5
# Site Investigation and Remedial Actions

The following section briefly outlines additional activities and scopes of work performed at various on-site areas of environmental concern during first quarter 2002, and summarizes future activities associated with each area.

## 5.1 MW19/Hot Spot 1 Area Groundwater Delineation

Monitoring well MW19-9D was installed, developed, sampled and surveyed during third quarter 2001. Documentation of these activities, sampling results, conclusions and recommendations were provided in the document entitled Results of MW19/Hot Spot 1 Area Well Investigation and Groundwater Sampling (RMT, October 19, 2001). The NJDEP provided a response to the October 19, 2001 document in their letter dated April 8, 2002. The department found the document to be conditionally acceptable, and requested that additional monitoring be performed in this area. Specifically, the NJDEP requested that a comprehensive round of monitoring (both sampling and water table elevation measurements) be performed including monitoring the two historical piezometers GEI-2S and GEI-2I. RMT anticipates completion of this task during second quarter 2002. Results of this investigation will be provided to both the NJDEP and USEPA under separate cover.

## 5.2 Free Product

In December 2001, RMT conducted a subsurface investigation to further investigate viable free product remedial technologies as outlined in the NJDEP approved workplan and amendment entitled Workplan to Evaluate Free Product Remedial Strategies (RMT, November 2001), and Amendment to Workplan to Evaluate Free Product Remedial Strategies (RMT, November 2001). Results of this investigation were submitted to USEPA and NJDEP in the document entitled Findings & Recommendations Regarding a Conceptual Free-Product Remediation Strategy in March 2002. No written response from either NJDEP or USEPA has been received to date.

## 5.3 Lead Soils

In November 2001, RMT conducted a subsurface investigation as outlined in the Revised Workplan for Delineating and Characterizing Elevated Lead Concentrations in Soil (RMT, May

2001) to delineate the extent of on-site lead contamination in soils. Results of this investigation were submitted to USEPA and NJDEP in the document entitled Nature and Extent of Lead in Soils and Groundwater in March 2002. No written response from either NJDEP or USEPA has been received to date.

## 5.4 Monitored Natural Attenuation (MNA)

RMT provided a letter response dated October 23, 2001 to agency comments dated August 23, 2001 regarding the Workplan for Supplemental Investigation of Natural Attenuation of Dissolved Constituents in Groundwater (RMT, May 2001). Both the NJDEP and USEPA approved this workplan as outlined in the NJDEP letter dated January 24, 2002. Full implementation of the approved MNA evaluation is currently on hold pending comments regarding the lead investigation and free product remedial options analysis.

# L.E. CARPENTER - Wharton, New Jersey

## Free Product Recovery - EFR Well # 1 - 28

| EFR Event Date / Well No. | Development November 21, 1997 Feet of Product | EFR #1 December 9, 1997 Feet of Product | EFR #2 January 7, 1998 Feet of Product | EFR #3 January 22, 1998 Feet of Product | EFR #4 February 17, 1998 Feet of Product | EFR #5 March 13, 1998 Feet of Product | EFR #6 March 27, 1998 Feet of Product | EFR #7 April 24, 1998 Feet of Product | EFR #8 May 29, 1998 Feet of Product | EFR #9 June 30, 1998 Feet of Product | EFR #10 July 31, 1998 Feet of Product | EFR #11[10] August 24, 1998 Feet of Product | EFR #12 September 17, 1998 Feet of Product |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EFR-1 | 1.44 | 1.53 | 1.94 | 0.36 | 2.48 | 0.93 | 0.94 | 1.42 | 1.55 | 2.11 | 1.28 | 1.22 | 1.71 |
| EFR-2 | 1.55 | 1.50 | 1.86 | 0.06 | 2.20 | 2.96 | 2.92 | 2.65 | 2.44 | 1.78 | 1.12 | 1.09 | 1.21 |
| EFR-3 | 0.85 | 1.02 | 1.27 | -- | 1.58 | 1.19 | 0.03 | 0.34 | 0.19 | 0.77 | 0.72 | 0.93 | 1.03 |
| EFR-4 | 1.03 | 2.27 | 0.54 | 0.07 | 0.30 | -- | -- | -- | -- | 0.03 | 0.38 | 1.23 | 2.40 |
| EFR-5 | 4.03 | 3.74 | 4.25 | 0.32 | 3.29 | 3.39 | 1.71 | 2.71 | 2.02 | 1.86 | 2.38 | 2.52 | 2.33 |
| EFR-6 | 0.72 | 1.00 | 1.24 | -- | 2.27 | 1.71 | 1.17 | 2.23 | 1.55 | 1.56 | 1.96 | 1.56 | 1.42 |
| EFR-7 | 0.17 | 0.09 | 0.16 | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.03 | 0.07 |
| EFR-8 | 0.00 | 0.00 | 0.00 | -- | 0.08 | -- | -- | -- | -- | 0.03 | 0.04 | 0.08 | 0.13 |
| EFR-9 | 0.00 | 1.10 | 1.79 | 1.15 | 0.16 | 3.08 | 0.08 | 0.07 | 0.11 | 0.29 | 0.61 | 0.98 | 1.23 |
| EFR-10 | 5.20 | 5.80 | 6.42 | 2.34 | 7.47 | 7.06 | 6.05 | 6.71 | 5.47 | 5.68 | 4.94 | 4.52 | 4.34 |
| EFR-11 | 3.07 | 4.04 | 4.28 | 5.64 | 4.47 | 4.32 | 4.67 | 5.91 | 5.73 | 6.08 | 4.73 | 4.47 | 3.95 |
| EFR-12 | 0.04 | 0.03 | 0.00 | -- | 0.07 | -- | -- | -- | 0.02 | 0.28 | 0.22 | 0.28 | 0.24 |
| EFR-13 | 0.48 | 0.56 | 1.33 | 0.05 | 1.28 | 1.07 | 1.07 | 0.67 | -- | 0.90 | 0.56 | 0.68 | 0.66 |
| EFR-14 | 0.10 | 0.16 | 0.00 | -- | -- | -- | -- | -- | -- | -- | - | -- | 0.00 |
| EFR-15 | 0.09 | 0.12 | 0.27 | -- | 0.06 | -- | -- | -- | -- | 0.03 | 0.02 | 0.03 | 0.03 |
| EFR-16 | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | - | -- | 0.00 |
| EFR-17 | 0.04 | 0.17 | 1.56 | 0.39 | 0.17 | 0.08 | -- | 0.09 | -- | 0.02 | 0.37 | 0.29 | 0.46 |
| EFR-18 | 0.10 | 0.10 | 0.09 | -- | -- | -- | -- | -- | -- | 0.01 | 0.08 | 0.14 | 0.48 |
| EFR-19 | 0.54 | 2.80 | 1.89 | 0.49 | 1.95 | 1.63 | 1.44 | 0.88 | 0.65 | 0.42 | 0.90 | 1.26 | 1.68 |
| EFR-20 | 0.40 | 0.34 | 0.95 | 0.47 | 0.27 | -- | -- | 0.04 | 0.24 | 0.37 | 0.65 | 0.63 | 0.79 |
| EFR-21 | 2.36 | 2.40 | 2.71 | 2.74 | 2.74 | 4.14 | 3.97 | 4.23 | 3.98 | 3.29 | 1.97 | 1.87 | 1.86 |
| EFR-22 | 3.78 | 4.10 | 0.05 | 4.81 | 3.40 | 4.69 | 3.42 | 1.82 | 1.22 | 0.96 | 2.86 | 2.87 | 2.97 |
| EFR-23 | 0.00 | 0.06 | 0.06 | -- | 0.02 | -- | -- | -- | -- | 0.05 | 0.11 | 0.08 | 0.27 |
| EFR-24 | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | - | -- | 0.00 |
| EFR-25 | 2.95 | 3.00 | 3.55 | 0.26 | 4.15 | 3.11 | 0.72 | 0.82 | 0.79 | 0.78 | 0.60 | 0.41 | 0.29 |
| EFR-26 | 2.20 | 2.05 | 2.66 | 0.29 | 2.30 | 2.12 | 1.43 | 1.32 | 1.95 | 1.21 | 2.06 | 1.58 | 1.17 |
| EFR-27 | 0.15 | 0.02 | 2.71 | 0.02 | 0.74 | -- | -- | 0.03 | -- | 0.02 | 0.33 | 0.45 | 1.49 |
| EFR-28 | 2.20 | 2.30 | 1.78 | 0.48 | 2.60 | 3.20 | 3.48 | 4.40 | 3.16 | 2.61 | 1.47 | 1.73 | 1.69 |
| MIN (ft) | 0.00 | 0.00 | 0.00 | 0.02 | 0.02 | 0.08 | 0.03 | 0.03 | 0.02 | 0.01 | 0.02 | 0.03 | 0.03 |
| MAX (ft) | 5.20 | 5.80 | 6.42 | 5.64 | 7.47 | 7.06 | 6.05 | 6.71 | 5.73 | 6.08 | 4.94 | 4.52 | 4.34 |
| Average (ft) | 1.20 | 1.44 | 1.55 | 1.17 | 1.92 | 2.79 | 2.21 | 2.01 | 1.94 | 1.25 | 1.22 | 1.23 | 1.36 |
| Total Free Product (ft) | 33.69 | 40.30 | 43.36 | 19.94 | 44.05 | 44.68 | 33.10 | 36.24 | 31.07 | 31.16 | 30.38 | 30.73 | 33.90 |
| Total Standing Free Product Volume (gal) | 21.60 | 25.83 | 27.79 | 12.78 | 28.24 | 28.64 | 21.22 | 23.23 | 19.92 | 19.97 | 19.47 | 19.70 | 22.04 |
| Estimated Total Free Product Removed (gal)[1] *(Liquid and Vapor Phase Free Product Volume)* | 315.00 | 250.00 | 210.00 | 80.00 | 120.00 | 130.00 | 100.00 | 110.00 | 95.00 | 105.00 | 76.00 | 55.00 | 60.00 |
| Estimated Total Fluids Removed (gal) *(Liquid Phase Free Product Volume plus Groundwater Extraction Volume) as of Jan 2000* | | | | | | | | | | | | | |
| Vapor Phase Free Product Extraction Volume (gal) *as of Jan 2000* | | | | | | | | | | | | | |
| Liquid Phase Free Product Extraction Volume (gal) *as of Jan 2000* | | | | | | | | | | | | | |
| Groundwater Extraction Volume (gal) per each EFR Event[7] *as of Jan 2000* | | | | | | | | | | | | | |
| Total EFR Extraction Volume (gal) ( Total Volume: *free product + groundwater + product vapor)* | 2350.00 | 1410.00 | 376.00 | 256.00 | 314.00 | 300.00 | 339.00 | 403.00 | 390.00 | 561.00 | 211.00 | 220.00 | 329.00 |
| Estimated Volume Removed Resulting from Drum Purging (GW purge water) *if applicable* [6] | - | - | - | - | - | 338 | 150 | 600 | 70 | 110 | 71 | - | 110 |
| Total Volume Removed from Site (gal) *(Manifested volume)* [8] | 2,350 | 1,410 | 376 | 256 | 314 | 638 | 489 | 1,003 | 460 | 671 | 282 | 220 | 439 |
| Cumulative Total Free Product Removed (gal) | 315 | 565 | 775 | 855 | 975 | 1,105 | 1,205 | 1,315 | 1,410 | 1,515 | 1,591 | 1,646 | 1,706 |
| Extraction, Transportation & Disposal Cost[2] | $ 3,976.37 | $ 2,742.62 | $ 1,130.50 | $ 1,130.50 | $ 1,219.12 | $ 1,431.87 | $ 1,541.31 | $ 2,038.43 | $ 1,240.75 | $ 1,347.68 | $ 1,324.62 | $ 1,838.93 | $ 1,383.18 |
| Unit Cost per gal[3] | $ 1.69 | $ 1.95 | $ 3.01 | $ 4.42 | $ 3.88 | $ 2.24 | $ 3.15 | $ 2.03 | $ 2.70 | $ 2.01 | $ 6.70 | $ 8.36 | $ 3.15 |

Notes:
Product thickness was determined prior to the EFR event.
gal = gallon
All EFR Wells are 4 inch in diameter
EFR events 13 and 14 product removal was low due to significant quantities of product remaining emulsified

as the result of a short vac truck standing time prior to gauging

Product removal estimate does not take into account a % of product remaining emulsified do to high agitation
[redacted] Indicates that this data will be known once the next EFR waste T&D event is performed

(1) Estimated free product (gal) based on Vacuum Truck gauging (interface probe) directly after each EFR Event and vapor monitoring during extraction (See Table 3)
(2) Total invoiced disposal cost for EFR event (product and groundwater) and monitoring well purge water from 1/dly well development and monitoring activities *(if applicable)*
(3) Total Cost per gallon includes product transportation & disposal, manifest prep, & regulatory admin. fee for combined EFR and GW purge water volumes *(if applicable)*
(4) EFR # 11 free product volume was 55 gal and contained PCBs (approx. weight 450lbs total @ specific gravity of 8.18 lbs/gal). Disposal costs were significantly higher due to PCB content
(5) EFR # 23 cost and unit cost higher than normal due to additional vac truck trans and mob time. As the vac truck was broken when it reached the site, a 3 hour credit
will be applied to next months EFR T&D bill.
(6) Free product stored in an on-site 550-gallon AST equipped with secondary containment. AST contents, along with groundwater resulting from well purge activities
are drained and transported by CycleChem/CleanVenture every 90 days.
(7) Volume of ground water collected during each EFR event. Volume estimated using an oil/water interface probe on the 55-gal extraction drum. On-Site measurement began 1st quarter of 2000.
(8) Those volumes that are totaled over a specific period (beginning 1st quarter 2000) is that volume specific to each of the EFR event it represents.
(9) Estimated by subtracting the free product aqueous volume and extracted groundwater volume for each of the representative EFR event from the total removal volume manifested for a specific disposal event
(10) EFR events did not take place in January or February 2001 due to access issues caused by inclement weather.

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04/11/2002
File: FreeProduct.xls EFR EVENT DATA

# L.E. CARPENTER - Wharton, New Jersey

## Free Product Recovery - EFR Well # 1 - 28

| EFR Event Date<br>Well No. | EFR #13<br>October 22, 1998<br>Feet of Product | EFR #14<br>November 20, 1998<br>Feet of Product | EFR #15<br>December 18, 1998<br>Feet of Product | EFR #16<br>January 13, 1999<br>Feet of Product | EFR #17<br>February 18, 1999<br>Feet of Product | EFR #18<br>March 24, 1999<br>Feet of Product | EFR #19<br>April 19, 1999<br>Feet of Product | EFR #20<br>May 18, 1999<br>Feet of Product | EFR #21<br>June 22, 1999<br>Feet of Product | EFR #22<br>July 28, 1999<br>Feet of Product | EFR #23 [08]<br>August 27, 1999<br>Feet of Product | EFR #24<br>September 22, 1999<br>Feet of Product | EFR #25<br>October 27, 1999<br>Feet of Product |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EFR-1 | 1.59 | 1.71 | 1.57 | 0.53 | 1.79 | 3.68 | 1.13 | 1.09 | 1.15 | 1.49 | 1.27 | 1.94 | 1.63 |
| EFR-2 | 1.29 | 1.51 | 1.41 | 0.95 | 1.40 | 2.42 | 1.46 | 1.22 | 0.92 | 1.21 | 1.00 | 0.63 | 1.35 |
| EFR-3 | 1.01 | 1.19 | 1.18 | 1.14 | 1.01 | 1.63 | 0.36 | 0.25 | 0.86 | 0.88 | 1.03 | 0.74 | 0.69 |
| EFR-4 | 2.17 | 1.75 | 1.79 | 0.73 | 0.10 | 0.14 | 0.08 | 0.05 | 0.03 | 0.44 | 0.99 | 0.51 | 0.11 |
| EFR-5 | 2.52 | 2.19 | 2.28 | 2.68 | 3.47 | 6.15 | 2.65 | 2.61 | 2.66 | 2.66 | 1.57 | 1.77 | 3.23 |
| EFR-6 | 1.25 | 1.29 | 1.38 | 0.49 | 0.84 | 0.88 | 0.61 | 1.07 | 1.16 | 1.51 | 0.91 | 0.15 | 0.86 |
| EFR-7 | 0.05 | 0.20 | 0.16 | 0.02 | 0.04 | 0.04 | 0.07 | 0.02 | 0.08 | 0.28 | 0.05 | 0.01 | 0.07 |
| EFR-8 | 0.09 | 0.07 | 0.03 | 0.12 | 0.00 | 0.03 | 0.03 | 0.03 | 0.09 | 0.39 | 0.27 | 0.09 | 0.13 |
| EFR-9 | 1.31 | 1.26 | 1.86 | 0.74 | 0.49 | 0.06 | 0.11 | 0.32 | 0.49 | 1.16 | 0.56 | 0.41 | 0.28 |
| EFR-10 | 4.38 | 3.98 | 3.99 | 3.68 | 5.79 | 5.52 | 4.97 | 4.23 | 3.71 | 3.63 | 2.47 | 3.02 | 5.18 |
| EFR-11 | 4.06 | 3.65 | 3.52 | 2.42 | 4.69 | 2.84 | 2.02 | 2.48 | 3.28 | 2.78 | 1.57 | 1.93 | 3.20 |
| EFR-12 | 0.15 | 0.29 | 0.17 | 0.04 | 0.11 | 0.05 | 0.02 | 0.02 | 0.10 | 0.30 | 0.20 | 0.03 | 0.09 |
| EFR-13 | 0.82 | 1.13 | 1.30 | 0.22 | 1.19 | 0.15 | 0.49 | 0.50 | 0.44 | 1.33 | 1.01 | 0.74 | 0.78 |
| EFR-14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EFR-15 | 0.12 | 0.12 | 0.32 | 0.11 | 0.07 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.13 | 0.04 | 0.02 |
| EFR-16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EFR-17 | 0.56 | 0.71 | 0.53 | 0.26 | 0.08 | 0.06 | 0.06 | 0.08 | 0.12 | 0.39 | 0.36 | 0.10 | 0.06 |
| EFR-18 | 0.68 | 0.98 | 1.08 | 0.56 | 0.11 | - | 0.06 | 0.16 | 0.46 | 0.96 | 1.37 | 0.61 | 0.36 |
| EFR-19 | 1.95 | 2.31 | 2.44 | 1.83 | 1.68 | 0.52 | 0.44 | 0.52 | 1.10 | 2.05 | 2.02 | 0.51 | 1.54 |
| EFR-20 | 1.24 | 1.85 | 2.11 | 0.65 | 1.33 | 0.88 | 0.43 | 0.89 | 0.87 | 1.59 | 1.86 | 0.47 | 1.92 |
| EFR-21 | 1.77 | 1.67 | 1.62 | 1.21 | 1.43 | 2.62 | 2.35 | 1.49 | 1.46 | 1.57 | 1.04 | 1.01 | 2.32 |
| EFR-22 | 2.83 | 2.58 | 2.27 | 2.06 | 0.84 | 0.34 | 0.95 | 1.39 | 1.93 | 1.47 | 1.41 | 0.17 | 2.32 |
| EFR-23 | 1.03 | 3.07 | 2.29 | 1.55 | 0.91 | 0.47 | 0.22 | 0.25 | 0.45 | 2.13 | 1.03 | 0.12 | 0.53 |
| EFR-24 | 0.03 | 0.12 | 0.14 | 0.38 | 0.06 | 0.00 | 0.00 | 0.00 | 0.08 | 0.08 | 0.05 | 0.00 | 0.00 |
| EFR-25 | 0.41 | 1.33 | 1.58 | 1.05 | 1.75 | 1.19 | 1.08 | 0.76 | 0.54 | 1.74 | 1.48 | 0.21 | 0.39 |
| EFR-26 | 1.24 | 1.08 | 1.09 | 0.73 | 0.55 | 0.45 | 0.75 | 1.29 | 1.28 | 1.23 | 0.72 | 0.29 | 0.52 |
| EFR-27 | 0.54 | 0.47 | 0.51 | 0.09 | 0.12 | 0.00 | 0.00 | 0.02 | 0.03 | 0.17 | 0.21 | 0.06 | 0.01 |
| EFR-28 | 1.83 | 1.79 | 1.74 | 1.03 | 1.29 | 1.71 | 1.65 | 1.46 | 1.25 | 1.67 | 1.78 | 0.38 | 2.19 |
| MIN (ft) | 0.03 | 0.07 | 0.03 | 0.02 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MAX (ft) | 4.38 | 3.98 | 3.99 | 3.68 | 5.79 | 6.15 | 4.97 | 4.23 | 3.71 | 3.63 | 2.47 | 3.02 | 5.18 |
| Average (ft) | 1.34 | 1.47 | 1.48 | 0.97 | 1.25 | 1.22 | 0.79 | 0.79 | 0.88 | 1.18 | 0.94 | 0.57 | 1.06 |
| Total Free Product (ft) | 34.92 | 38.30 | 38.36 | 25.27 | 31.14 | 31.84 | 22.00 | 22.20 | 24.54 | 33.11 | 26.36 | 15.94 | 29.68 |
| Total Standing Free Product Volume (gal) | 22.70 | 24.90 | 24.93 | 16.43 | 20.24 | 20.70 | 14.30 | 14.43 | 15.95 | 21.52 | 17.13 | 10.36 | 19.29 |
| Estimated Total Free Product Removed (gal) [12] *(Liquid and Vapor Phase Free Product Volume)* | 15.00 | 25.00 | 51.00 | 23.00 | 74.00 | 40.00 | 59.24 | 47.20 | 38.51 | 54.48 | 36.00 | 44.00 | 54.73 |
| Estimated Total Fluids Removed (gal) *(Liquid Phase Free Product Volume plus Groundwater Extraction Volume) as of Jan 2000* | | | | | | | | | | | | | |
| Vapor Phase Free Product Extraction Volume (gal) *as of Jan 2000* | | | | | | | | | | | | | |
| Liquid Phase Free Product Extraction Volume (gal) *as of Jan 2000* | | | | | | | | | | | | | |
| Groundwater Extraction Volume (gal) per each EFR Event [07] *as of Jan 2000* | | | | | | | | | | | | | |
| Total EFR Extraction Volume (gal) ( Total Volume: *free product + groundwater + product vapor)* | 212.00 | 120.00 | 256.00 | 234.00 | 498.00 | 683.00 | 904.76 | 360.00 | 564.26 | 725.54 | 298.00 | 239.00 | 265.00 |
| Estimated Volume Removed Resulting from Drum Purging (GW purge water) *if applicable* [09] | - | - | 110 | - | 235 | - | 139 | - | - | 374 | - | - | 199 |
| Total Volume Removed from Site (gal) *(Manifested volume)* [10] | 212 | 120 | 256 | 234 | 733 | 683 | 1,044 | 360 | 564 | 1,100 | 298 | 239 | 464 |
| Cumulative Total Free Product Removed (gal) | 1,721 | 1,746 | 1,797 | 1,820 | 1,894 | 1,934 | 1,993 | 2,040 | 2,079 | 2,133 | 2,169 | 2,213 | 2,268 |
| Extraction, Transportation & Disposal Cost [13] | $ 915.25 | $ 915.00 | $ 973.00 | $ 1,156.62 | $ 1,641.56 | $ 1,703.44 | $ 2,049.75 | $ 930.31 | $ 1,598.13 | $ 2,165.75 | $ 2,162.12 | $ 995.81 | $ 1,288.50 |
| Unit Cost per gal [14] | $ 4.32 | $ 7.63 | $ 3.80 | $ 4.94 | $ 2.24 | $ 2.49 | $ 1.96 | $ 2.58 | $ 2.83 | $ 1.97 | $ 7.26 | $ 4.17 | $ 2.78 |

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File: FreeProduct.xls EFR EVENT DATA

# Table 1
## L.E. CARPENTER - Wharton, New Jersey
### Free Product Recovery - EFR Well # 1 - 28

| EFR Event Date / Well No. | EFR #26 November 30, 1999 Feet of Product | EFR #27 December 14, 1999 Feet of Product | EFR #28 January 28, 2000 Feet of Product | EFR #29 February 18, 2000 Feet of Product | EFR #30 March 24, 2000 Feet of Product | EFR #31 April 19, 2000 Feet of Product | EFR #32 May 18, 2000 Feet of Product | EFR #33 June 16, 2000 Feet of Product | EFR #34 July 18, 2000 Feet of Product | EFR #35 August 17, 2000 Feet of Product | EFR #36 September 18, 2000 Feet of Product | EFR #37 October 25, 2000 Feet of Product | EFR #38 November 17, 2000 Feet of Product |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EFR-1 | 1.47 | 1.20 | 1.22 | 0.85 | 1.86 | 1.59 | 1.54 | 2.10 | 1.51 | 1.26 | 1.53 | 1.00 | 1.07 |
| EFR-2 | 1.28 | 1.40 | 0.06 | 1.04 | 2.25 | 2.00 | 1.64 | 1.89 | 1.40 | 0.36 | 1.08 | 0.97 | 1.09 |
| EFR-3 | 0.47 | 0.02 | 0.51 | 0.07 | 0.08 | 0.09 | 0.62 | 1.02 | 0.25 | 0.02 | 0.08 | 0.44 | 0.43 |
| EFR-4 | 0.03 | 0.58 | 0.51 | 0.48 | 0.11 | 0.11 | 0.41 | 0.22 | 0.05 | 0.02 | 0.02 | 0.02 | 0.05 |
| EFR-5 | 2.99 | 1.27 | 2.95 | 2.46 | 2.91 | 2.54 | 1.84 | 2.34 | 1.99 | 1.69 | 1.57 | 2.74 | 2.47 |
| EFR-6 | 0.63 | 0.33 | 1.07 | 0.77 | 0.29 | 0.31 | 0.49 | 0.27 | 0.54 | 0.29 | 0.55 | 0.83 | 0.79 |
| EFR-7 | 0.04 | 0.47 | 0.15 | 0.02 | 0.35 | 0.01 | 0.02 | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 0.01 |
| EFR-8 | 0.05 | 0.11 | 0.05 | 0.06 | 0.08 | 0.03 | 0.05 | 0.03 | 0.02 | 0.01 | 0.01 | 4.26 | 0.02 |
| EFR-9 | 0.10 | 0.15 | 0.13 | 0.08 | 0.19 | 0.02 | 0.06 | 0.06 | 0.13 | 0.16 | 0.08 | 0.02 | 0.50 |
| EFR-10 | 3.95 | 3.07 | 4.50 | 3.55 | 3.50 | 4.50 | 1.36 | 2.50 | 3.09 | 0.75 | 2.76 | 3.88 | 3.27 |
| EFR-11 | 3.11 | 1.07 | 3.44 | 4.95 | 2.41 | 2.95 | 2.93 | 2.49 | 4.12 | 0.79 | 4.73 | 0.16 | 4.00 |
| EFR-12 | 0.67 | 0.01 | 0.03 | 0.49 | 0.46 | 0.10 | 0.19 | 0.01 | 0.01 | 0.00 | 0.03 | 0.11 | 0.04 |
| EFR-13 | 0.57 | 0.26 | 0.36 | 0.34 | 0.48 | 0.47 | 0.69 | 0.55 | 0.73 | 0.49 | 0.22 | 0.25 | 0.09 |
| EFR-14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EFR-15 | 0.08 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EFR-16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EFR-17 | 0.24 | 0.25 | 0.11 | 0.32 | 0.04 | 0.16 | 0.65 | 0.04 | 0.01 | 0.02 | 0.09 | 0.06 | 0.36 |
| EFR-18 | 0.77 | 0.05 | 0.20 | 0.05 | 0.12 | 0.04 | 0.32 | 0.01 | 0.06 | 0.16 | 0.08 | 0.31 | 0.31 |
| EFR-19 | 0.84 | 0.69 | 1.67 | 1.73 | 0.25 | 0.60 | 0.98 | 0.17 | 0.63 | 0.34 | 0.22 | 0.87 | 0.59 |
| EFR-20 | 1.36 | 0.75 | 1.08 | 2.58 | 0.64 | 0.42 | 0.54 | 0.33 | 0.30 | 0.39 | 0.45 | 0.54 | 0.11 |
| EFR-21 | 1.40 | 1.70 | 1.92 | 1.34 | 3.04 | 2.86 | 2.47 | 3.02 | 2.09 | 1.62 | 2.75 | 1.79 | 1.65 |
| EFR-22 | 1.76 | 0.53 | 0.82 | 0.58 | 0.09 | 0.16 | 0.05 | 0.05 | 0.01 | 0.18 | 0.06 | 0.53 | 2.14 |
| EFR-23 | 0.64 | 0.24 | 0.23 | 0.31 | 0.46 | 0.06 | 0.06 | 0.01 | 0.13 | 0.03 | 0.07 | 0.07 | 0.08 |
| EFR-24 | 0.04 | 0.13 | 0.11 | 0.07 | 0.58 | 0.02 | 0.03 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 |
| EFR-25 | 0.19 | 0.05 | 0.31 | 0.39 | 0.58 | 0.21 | 0.10 | 0.03 | 0.10 | 0.03 | 0.10 | 0.19 | 0.12 |
| EFR-26 | 0.94 | 0.59 | 1.54 | 1.10 | 1.33 | 1.68 | 2.02 | 1.44 | 2.25 | 1.38 | 2.01 | 2.05 | 1.78 |
| EFR-27 | 0.01 | 0.01 | 0.02 | 0.14 | 0.20 | 0.01 | 0.03 | 0.04 | 0.01 | 0.01 | 0.15 | 0.01 | 0.01 |
| EFR-28 | 0.96 | 1.42 | 1.33 | 1.00 | 2.30 | 2.42 | 1.81 | 2.68 | 1.72 | 2.48 | 2.02 | 1.39 | 1.36 |
| MIN (ft) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MAX (ft) | 3.95 | 3.07 | 4.50 | 4.95 | 3.50 | 4.50 | 2.93 | 3.02 | 4.12 | 2.48 | 4.73 | 4.26 | 4.00 |
| Average (ft) | 0.88 | 0.58 | 0.87 | 0.89 | 0.88 | 0.84 | 0.75 | 0.76 | 0.76 | 0.45 | 0.74 | 0.80 | 0.80 |
| Total Free Product (ft) | 24.59 | 16.37 | 24.34 | 24.79 | 24.62 | 23.38 | 20.91 | 21.30 | 21.14 | 12.49 | 20.67 | 22.51 | 22.35 |
| Total Standing Free Product Volume (gal) | 15.98 | 10.64 | 15.82 | 16.11 | 16.00 | 15.20 | 13.59 | 13.85 | 13.74 | 8.12 | 13.44 | 14.63 | 14.53 |
| Estimated Total Free Product Removed (gal) [1] *(Liquid and Vapor Phase Free Product Volume)* | 44.79 | 49.34 | 43.52 | 51.66 | 48.14 | 45.46 | 45.50 | 43.66 | 46.38 | 22.05 | 25.07 | 44.12 | 38.36 |
| Estimated Total Fluids Removed (gal) *(Liquid Phase Free Product Volume plus Groundwater Extraction Volume) as of Jan 2000* | | | 40.93 | 46.21 | 52.80 | 41.26 | 40.18 | 39.44 | 40.43 | 20.13 | 21.05 | 38.78 | 31.36 |
| Vapor Phase Free Product Extraction Volume (gal) *as of Jan 2000* | | | 6.55 | 7.93 | 10.19 | 5.85 | 6.31 | 5.05 | 7.60 | 5.22 | 5.26 | 6.58 | 5.65 |
| Liquid Phase Free Product Extraction Volume (gal) *as of Jan 2000* | | | 36.97 | 43.73 | 37.95 | 39.61 | 39.19 | 38.61 | 38.78 | 16.83 | 19.81 | 37.54 | 29.71 |
| Groundwater Extraction Volume (gal) per each EFR Event [2] *as of Jan 2000* | | | 3.96 | 2.48 | 14.85 | 1.65 | 0.99 | 0.83 | 1.65 | 3.30 | 1.24 | 1.24 | 1.65 |
| Total EFR Extraction Volume (gal) *(Total Volume: free product + groundwater + product vapor)* | 249.07 | 350.00 | 47.48 | 54.14 | 62.99 | 47.11 | 46.49 | 44.49 | 48.03 | 25.35 | 26.31 | 45.36 | 37.01 |
| Estimated Volume Removed Resulting from Drum Purging (GW purge water) *if applicable* [3] | 82 | - | 357 | | | | 110 | | | | 134 | | |
| Total Volume Removed from Site (gal) *(Manifested volume)* [4] | 331 | 350 | 538 | | | | 250 | | | | 225 | | |
| Cumulative Total Free Product Removed (gal) | 2,313 | 2,362 | 2,406 | 2,457 | 2,506 | 2,551 | 2,597 | 2,640 | 2,687 | 2,709 | 2,734 | 2,778 | 2,813 |
| Extraction, Transportation & Disposal Cost [5] | $ 1,028.93 | $ 968.87 | $ 1,045.62 | | | | $ 795.13 | | | | $ 762.31 | | |
| Unit Cost per gal [5] | $ 3.11 | $ 2.77 | $ 1.94 | | | | $ 3.18 | | | | $ 3.39 | | |

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File: FreeProduct.xls EFR EVENT DATA

# Table 1
## L.E. CARPENTER - Wharton, New Jersey
### Free Product Recovery - EFR Well # 1 - 28

| EFR Event Date / Well No. | EFR #39 December 15, 2000 Feet of Product | EFR #40[(1)] March 15, 2001 Feet of Product | EFR #41 April 23, 2001 Feet of Product | EFR #42 May 25, 2001 Feet of Product | EFR #43 June 13, 2001 Feet of Product | EFR #44 July 27, 2001 Feet of Product | EFR #45 August 24, 2001 Feet of Product | EFR #46 September 25, 2001 Feet of Product | EFR #47 October 25, 2001 Feet of Product | EFR #48 November 20, 2001 Feet of Product |
|---|---|---|---|---|---|---|---|---|---|---|
| EFR-1 | 1.14 | 2.91 | 1.25 | 1.02 | 1.14 | 0.57 | 0.80 | 1.29 | 1.60 | 1.51 |
| EFR-2 | 0.76 | 2.92 | 2.66 | 1.75 | 2.26 | 1.22 | 1.17 | 1.22 | 1.14 | 1.15 |
| EFR-3 | 0.46 | 0.33 | 0.29 | 0.49 | 0.70 | 0.40 | 0.66 | 0.51 | 0.81 | 0.76 |
| EFR-4 | 0.21 | 0.59 | 1.65 | 0.01 | 0.44 | 0.02 | 1.86 | 0.11 | 0.57 | 0.68 |
| EFR-5 | 2.76 | 5.95 | 1.75 | 1.90 | 0.62 | 2.24 | 2.05 | 2.25 | 2.55 | 2.10 |
| EFR-6 | 0.96 | 2.05 | 0.32 | 0.43 | 0.16 | 0.46 | 0.49 | 0.37 | 1.13 | 1.56 |
| EFR-7 | 0.01 | 0.28 | 0.02 | 0.02 | 0.00 | 0.00 | 0.16 | 0.00 | 0.05 | 0.08 |
| EFR-8 | 0.06 | 0.03 | 0.05 | 0.04 | 0.03 | 0.01 | 0.18 | 0.00 | 0.18 | 0.16 |
| EFR-9 | 0.77 | 0.57 | 0.07 | 0.56 | 0.07 | 0.14 | 0.27 | 0.39 | 0.56 | 0.85 |
| EFR-10 | 4.05 | 5.64 | 3.17 | 3.52 | 3.32 | 3.75 | 2.30 | 2.62 | 2.70 | 2.61 |
| EFR-11 | 3.73 | 2.82 | 2.41 | 3.56 | 2.60 | 3.91 | 2.37 | 3.86 | 3.22 | 2.44 |
| EFR-12 | 0.02 | 0.07 | 0.02 | 0.25 | 0.01 | 0.01 | 0.23 | 0.00 | 0.00 | 0.34 |
| EFR-13 | 0.15 | 1.14 | 0.27 | 0.78 | 0.26 | 0.39 | 0.47 | 0.38 | 0.46 | 0.88 |
| EFR-14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EFR-15 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 |
| EFR-16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EFR-17 | 0.01 | 0.41 | 0.31 | 0.51 | 0.28 | 0.02 | 0.49 | 0.34 | 0.85 | 0.97 |
| EFR-18 | 0.20 | 3.27 | 1.35 | 0.43 | 0.31 | 0.01 | 0.13 | 0.41 | 0.69 | 0.75 |
| EFR-19 | 1.42 | 2.32 | 0.65 | 1.98 | 1.01 | 0.44 | 1.19 | 0.54 | 2.15 | 2.36 |
| EFR-20 | 0.37 | 0.24 | 0.97 | 0.52 | 0.31 | 0.08 | 0.32 | 0.24 | 0.73 | 1.10 |
| EFR-21 | 1.37 | 4.09 | 3.51 | 2.96 | 2.61 | 1.98 | 1.61 | 1.87 | 1.58 | 1.38 |
| EFR-22 | 1.50 | 0.81 | 0.06 | 0.43 | 0.00 | 0.00 | 0.47 | 0.57 | 1.22 | 1.53 |
| EFR-23 | 0.39 | 0.07 | 0.03 | 0.88 | 0.28 | 0.05 | 0.34 | 0.07 | 0.85 | 2.67 |
| EFR-24 | 0.04 | 2.27 | 0.05 | 0.34 | 0.01 | 0.01 | 0.27 | 0.14 | 0.35 | 0.38 |
| EFR-25 | 0.10 | 0.04 | 0.39 | 0.28 | 0.14 | 0.03 | 0.47 | 0.09 | 0.43 | 0.63 |
| EFR-26 | 1.10 | 2.64 | 2.56 | 2.68 | 1.48 | 2.24 | 1.07 | 1.20 | 1.45 | 1.22 |
| EFR-27 | 0.01 | 0.48 | 0.05 | 0.04 | 0.00 | 0.01 | 0.04 | 0.00 | 0.52 | 0.49 |
| EFR-28 | 0.64 | 2.81 | 2.75 | 1.86 | 2.34 | 1.36 | 1.67 | 1.05 | 1.50 | 1.38 |
| MIN (ft) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MAX (ft) | 4.05 | 5.95 | 3.51 | 3.56 | 3.32 | 3.91 | 2.37 | 3.86 | 3.22 | 2.67 |
| Average (ft) | 0.79 | 1.60 | 0.95 | 0.97 | 0.73 | 0.69 | 0.75 | 0.70 | 0.97 | 19.51 |
| Total Free Product (ft) | 22.23 | 44.76 | 26.62 | 27.24 | 20.38 | 19.33 | 21.08 | 19.52 | 27.29 | 30.01 |
| Total Standing Free Product Volume (gal) | 14.45 | 29.09 | 17.30 | 17.71 | 13.25 | 12.56 | 13.70 | 12.69 | 17.74 | 19.51 |
| Estimated Total Free Product Removed (gal) [(2)] *(Liquid and Vapor Phase Free Product Volume)* | 49.32 | 79.06 | 46.44 | 56.75 | 37.50 | 40.36 | 37.70 | 27.86 | 28.54 | 31.09 |
| Estimated Total Fluids Removed (gal) *(Liquid Phase Free Product Volume plus Groundwater Extraction Volume) as of Jan 2000* | 43.73 | 74.01 | 40.01 | 51.15 | 31.23 | 36.30 | 33.00 | 25.58 | 25.16 | 26.40 |
| Vapor Phase Free Product Extraction Volume (gal) *as of Jan 2000* | 6.42 | 11.06 | 8.49 | 8.90 | 7.50 | 6.53 | 6.35 | 4.76 | 6.26 | 7.99 |
| Liquid Phase Free Product Extraction Volume (gal) *as of Jan 2000* | 42.90 | 68.00 | 37.95 | 47.85 | 30.00 | 33.83 | 31.35 | 23.10 | 22.28 | 23.10 |
| Groundwater Extraction Volume (gal) per each EFR Event [(3)] *as of Jan 2000* | 0.83 | 6.01 | 2.06 | 3.30 | 1.24 | 2.48 | 1.65 | 2.48 | 2.89 | 3.30 |
| Total EFR Extraction Volume (gal) ( Total Volume: *free product + groundwater + product vapor)* | 50.15 | 85.07 | 48.50 | 60.05 | 38.73 | 42.84 | 39.35 | 30.34 | 31.42 | 34.39 |
| Estimated Volume Removed Resulting from Drum Purging (GW purge water) *if applicable* [(4)] | 148 | | | 296 | | | 90 | | | |
| Total Volume Removed from Site (gal) *(Manifested volume)* [(5)] | 306 | | | 415 | | | 200 | | | |
| Cumulative Total Free Product Removed (gal) | 2,863 | 2,942 | 2,988 | 3,045 | 3,082 | 3,123 | 3,160 | 3,188 | 3,217 | 3,248 |
| Extraction, Transportation & Disposal Cost[(2)] | $ 996.13 | | | $ 1,175.19 | | | $ 1,069.50 | | | |
| Unit Cost per gal[(2)] | $ 3.26 | | | $ 2.83 | | | $ 5.35 | | | |

Prepared By: Nicholas J. Clevett
RMT, Inc.
04/11/2002

Table 1

# L.E. CARPENTER - Wharton, New Jersey

## Free Product Recovery - EFR Well # 1 - 28

| EFR Event Date<br>Well No. | EFR #49<br>December 31, 2001<br>Feet of Product | EFR #50<br>January 29, 2002<br>Feet of Product | EFR #51<br>February 20, 2002<br>Feet of Product | EFR #52<br>March 26, 2002<br>Feet of Product | EFR AVERAGES | EFR TOTALS |
|---|---|---|---|---|---|---|
| EFR-1 | 1.57 | 2.07 | 1.93 | 0.90 | | |
| EFR-2 | 1.19 | 1.37 | 1.33 | 1.40 | | |
| EFR-3 | 0.80 | 0.70 | 0.78 | 1.05 | | |
| EFR-4 | 0.54 | 0.26 | 1.13 | 0.37 | | |
| EFR-5 | 2.67 | 2.66 | 2.68 | 3.50 | | |
| EFR-6 | 1.23 | 0.71 | 2.21 | 2.30 | | |
| EFR-7 | 0.24 | 0.00 | 0.00 | 0.00 | | |
| EFR-8 | 0.22 | 0.01 | 0.04 | 0.07 | | |
| EFR-9 | 0.32 | 0.29 | 0.45 | 0.32 | | |
| EFR-10 | 2.91 | 2.02 | 3.32 | 3.48 | | |
| EFR-11 | 2.90 | 2.89 | 2.58 | 2.12 | | |
| EFR-12 | 0.21 | 0.26 | 0.11 | 0.10 | | |
| EFR-13 | 0.44 | 0.84 | 0.44 | 0.87 | | |
| EFR-14 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| EFR-15 | 0.00 | 0.00 | 0.00 | 0.05 | | |
| EFR-16 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| EFR-17 | 1.57 | 1.43 | 2.23 | 1.90 | | |
| EFR-18 | 1.22 | 1.90 | 1.00 | 1.07 | | |
| EFR-19 | 2.38 | 2.26 | 3.22 | 2.90 | | |
| EFR-20 | 1.29 | 1.78 | 0.46 | 1.24 | | |
| EFR-21 | 1.54 | 1.51 | 1.50 | 2.25 | | |
| EFR-22 | 1.93 | 0.98 | 0.63 | 0.80 | | |
| EFR-23 | 0.75 | 0.98 | 1.13 | 0.01 | | |
| EFR-24 | 0.34 | 0.47 | 2.65 | 0.60 | | |
| EFR-25 | 0.64 | 0.82 | 0.99 | 0.75 | | |
| EFR-26 | 1.13 | 1.14 | 0.87 | 1.55 | | |
| EFR-27 | 0.13 | 0.53 | 0.32 | 0.00 | | |
| EFR-28 | 1.51 | 1.67 | 1.86 | 0.21 | | |
| MIN (ft) | 0.00 | 0.00 | 0.00 | 0.00 | | |
| MAX (ft) | 2.91 | 2.89 | 3.32 | 3.50 | | |
| Average (ft) | 19.29 | 19.21 | 22.01 | 19.38 | | |
| Total Free Product (ft) | 29.67 | 29.55 | 33.86 | 29.81 | | |
| Total Standing Free Product Volume (gal) | 19.29 | 19.21 | 22.01 | 19.38 | | |
| Estimated Total Free Product Removed (gal) [1] *(Liquid and Vapor Phase Free Product Volume)* | 29.36 | 32.48 | 33.28 | 29.73 | 64 | 3,373 |
| Estimated Total Fluids Removed (gal) *(Liquid Phase Free Product Volume plus Groundwater Extraction Volume) as of Jan 2000* | 23.93 | 24.75 | 26.40 | 25.16 | 36 | 899 |
| Vapor Phase Free Product Extraction Volume (gal) *as of Jan 2000* | 7.91 | 9.38 | 8.53 | 6.63 | 7 | 179 |
| Liquid Phase Free Product Extraction Volume (gal) *as of Jan 2000* | 21.65 | 23.10 | 24.75 | 23.10 | 33 | 831 |
| Groundwater Extraction Volume (gal) per each EFR Event [2] *as of Jan 2000* | 2.48 | 1.65 | 1.65 | 2.06 | 3 | 68 |
| Total EFR Extraction Volume (gal) ( Total Volume: *free product + groundwater + product vapor)* | 31.84 | 34.13 | 34.93 | 31.79 | 274 | 14,496 |
| Estimated Volume Removed Resulting from Drum Purging (GW purge water) *if applicable* [3] | 0 | | | | 186 | 3,723 |
| Total Volume Removed from Site (gal) *(Manifested volume)* [3] | 100 | | | | 512 | 17,930 |
| Cumulative Total Free Product Removed (gal) | 3,277 | 3,310 | 3,343 | 3,373 | N/A | 3,373 |
| Extraction, Transportation & Disposal Cost[3] | $ 768.25 | | | | $ 1,412.89 | $ 49,451.05 |
| Unit Cost per gal[3] | $ 7.68 | | | | $ 3.59 | N/A |

Prepared By: Nicholas J. Clevett
RMT, Inc.
04/11/2002
File: FreeProduct.xls EFR EVENT DATA

# TABLE 2

THROUGH 1ST QUARTER 2002

## L.E. CARPENTER - WHARTON, NEW JERSEY

REGIONAL APPARENT FREE PRODUCT TRENDS

| | EFR Event Date | 21-Nov-97 | 09-Dec-97 | 07-Jan-98 | 16-Feb-98 | 16-Mar-98 | 27-Mar-98 | 24-Apr-98 | 29-May-98 | 30-Jun-98 | 31-Jul-98 | 24-Aug-98 | 17-Sep-98 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Western Region of Free Product | EFR-1 | 1.64 | 1.53 | 1.94 | 2.48 | 0.93 | 0.94 | 1.42 | 1.55 | 2.11 | 1.28 | 1.22 | 1.71 |
| | EFR-2 | 1.55 | 1.50 | 1.86 | 2.20 | 2.96 | 2.92 | 2.65 | 2.44 | 1.78 | 1.12 | 1.09 | 1.21 |
| | EFR-3 | 0.85 | 1.02 | 1.27 | 1.58 | 1.19 | 0.03 | 0.24 | 0.19 | 0.77 | 0.72 | 0.93 | 1.03 |
| | EFR-17 | 0.04 | 0.17 | 1.56 | 0.17 | 0.08 | 0.00 | 0.09 | 0.00 | 0.02 | 0.37 | 0.29 | 0.46 |
| | EFR-18 | 0.10 | 0.10 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.08 | 0.14 | 0.48 |
| | EFR-20 | 0.40 | 0.34 | 0.95 | 0.27 | 0.00 | 0.00 | 0.04 | 0.24 | 0.37 | 0.65 | 0.63 | 0.79 |
| | EFR-21 | 2.36 | 2.40 | 2.71 | 2.74 | 4.14 | 3.97 | 4.23 | 3.98 | 3.29 | 1.97 | 1.87 | 1.86 |
| | EFR-28 | 2.20 | 2.30 | 1.78 | 2.60 | 3.20 | 3.48 | 4.40 | 3.16 | 2.61 | 1.47 | 1.73 | 1.69 |
| | Total Free Product (ft) | 9.14 | 9.36 | 12.16 | 12.04 | 12.50 | 11.34 | 13.07 | 11.56 | 10.96 | 7.66 | 7.90 | 9.23 |
| | Total Free Product (gal) | 5.86 | 6.00 | 7.79 | 7.72 | 8.01 | 7.27 | 8.38 | 7.41 | 7.03 | 4.91 | 5.06 | 6.00 |
| West-Central Region of Free Product | EFR-4 | 1.03 | 2.27 | 0.54 | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.38 | 1.23 | 2.40 |
| | EFR-5 | 4.03 | 3.74 | 4.25 | 3.29 | 3.39 | 1.71 | 2.71 | 2.02 | 1.86 | 2.38 | 2.52 | 2.33 |
| | EFR-6 | 0.72 | 1.00 | 1.24 | 2.27 | 1.71 | 1.17 | 2.23 | 1.55 | 1.56 | 1.96 | 1.56 | 1.42 |
| | EFR-7 | 0.17 | 0.09 | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.02 | 0.03 | 0.07 |
| | EFR-19 | 0.54 | 2.80 | 1.89 | 1.95 | 1.63 | 1.44 | 0.88 | 0.65 | 0.42 | 0.90 | 1.26 | 1.68 |
| | EFR-22 | 3.78 | 4.10 | 0.05 | 3.40 | 4.69 | 3.42 | 1.82 | 1.22 | 0.96 | 2.86 | 2.87 | 2.97 |
| | EFR-23 | 0.00 | 0.06 | 0.06 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.11 | 0.08 | 0.27 |
| | EFR-24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 |
| | EFR-25 | 2.95 | 3.00 | 3.55 | 4.15 | 3.11 | 0.72 | 0.82 | 0.79 | 0.78 | 0.60 | 0.41 | 0.29 |
| | EFR-26 | 2.20 | 2.05 | 2.66 | 2.30 | 2.12 | 1.43 | 1.32 | 1.95 | 1.21 | 2.06 | 1.58 | 1.17 |
| | EFR-27 | 0.15 | 0.02 | 2.71 | 0.74 | 0.00 | 0.00 | 0.03 | 0.00 | 0.02 | 0.33 | 0.45 | 1.49 |
| | Total Free Product (ft) | 15.57 | 19.13 | 17.11 | 18.42 | 16.65 | 9.89 | 9.81 | 8.18 | 6.91 | 11.60 | 11.99 | 14.09 |
| | Total Free Product (gal) | 9.98 | 12.26 | 10.97 | 11.81 | 10.67 | 6.34 | 6.29 | 5.24 | 4.43 | 7.44 | 7.69 | 9.16 |
| East-Central Region of Free Product | EFR-8 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.04 | 0.08 | 0.13 |
| | EFR-9 | 0.00 | 1.10 | 1.79 | 0.16 | 3.08 | 0.08 | 0.07 | 0.11 | 0.29 | 0.61 | 0.98 | 1.23 |
| | EFR-10 | 5.20 | 5.80 | 6.42 | 7.47 | 7.06 | 6.05 | 6.71 | 5.47 | 5.68 | 4.94 | 4.52 | 4.34 |
| | EFR-11 | 3.07 | 4.04 | 4.28 | 4.47 | 4.32 | 4.67 | 5.91 | 5.73 | 6.08 | 4.73 | 4.47 | 3.95 |
| | EFR-12 | 0.04 | 0.03 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.02 | 0.28 | 0.22 | 0.28 | 0.24 |
| | EFR-13 | 0.48 | 0.56 | 1.33 | 1.28 | 1.07 | 1.07 | 0.67 | 0.00 | 0.90 | 0.56 | 0.48 | 0.66 |
| | Total Free Product (ft) | 8.79 | 11.53 | 13.82 | 13.53 | 15.53 | 11.87 | 13.36 | 11.33 | 13.26 | 11.10 | 10.81 | 10.55 |
| | Total Free Product (gal) | 5.63 | 7.39 | 8.86 | 8.67 | 9.95 | 7.61 | 8.56 | 7.26 | 8.50 | 7.12 | 6.93 | 6.86 |
| Eastern Region of Free Product | EFR-14 | 0.10 | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | EFR-15 | 0.09 | 0.12 | 0.27 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.02 | 0.03 | 0.03 |
| | EFR-16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Total Free Product (ft) | 0.19 | 0.28 | 0.27 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.02 | 0.03 | 0.03 |
| | Total Free Product (gal) | 0.12 | 0.18 | 0.17 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.02 | 0.02 |
| TOTAL APPARENT FREE PRODUCT VOLUME (GAL) | | 21.60 | 25.83 | 27.79 | 28.24 | 28.64 | 21.22 | 23.23 | 19.92 | 19.97 | 19.47 | 19.70 | 22.03 |

# TABLE 2

## L.E. CARPENTER - WHARTON, NEW JERSEY

REGIONAL APPARENT FREE PRODUCT TRENDS

THROUGH 1ST QUARTER 2002

| | EFR Event Date | 22-Oct-98 | 20-Nov-98 | 18-Dec-98 | 13-Jan-99 | 17-Feb-99 | 23-Mar-99 | 19-Apr-99 | 18-May-99 | 22-Jun-99 | 28-Jul-99 | 27-Aug-99 | 22-Sep-99 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Western Region of Free Product | EFR-1 | 1.59 | 1.71 | 1.57 | 0.53 | 1.79 | 3.68 | 1.13 | 1.09 | 1.15 | 1.49 | 1.27 | 1.94 |
| | EFR-2 | 1.29 | 1.51 | 1.41 | 0.95 | 1.40 | 2.42 | 1.46 | 1.22 | 0.92 | 1.21 | 1.00 | 0.63 |
| | EFR-3 | 1.01 | 1.19 | 1.18 | 1.14 | 1.01 | 1.63 | 0.36 | 0.25 | 0.86 | 0.88 | 1.03 | 0.74 |
| | EFR-17 | 0.56 | 0.71 | 0.53 | 0.26 | 0.08 | 0.06 | 0.06 | 0.08 | 0.12 | 0.39 | 0.36 | 0.10 |
| | EFR-18 | 0.68 | 0.98 | 1.08 | 0.56 | 0.11 | 0.00 | 0.06 | 0.16 | 0.46 | 0.96 | 1.37 | 0.61 |
| | EFR-20 | 1.24 | 1.85 | 2.11 | 0.65 | 1.33 | 0.88 | 0.43 | 0.89 | 0.87 | 1.59 | 1.86 | 0.47 |
| | EFR-21 | 1.77 | 1.67 | 1.62 | 1.21 | 1.43 | 2.62 | 2.35 | 1.49 | 1.46 | 1.57 | 1.04 | 1.01 |
| | EFR-28 | 1.83 | 1.79 | 1.74 | 1.03 | 1.29 | 1.71 | 1.65 | 1.46 | 1.25 | 1.67 | 1.78 | 0.38 |
| | Total Free Product (ft) | 9.97 | 11.41 | 11.24 | 6.33 | 8.44 | 13.00 | 7.50 | 6.64 | 7.09 | 9.76 | 9.71 | 5.88 |
| | Total Free Product (gal) | 6.48 | 7.42 | 7.31 | 4.11 | 5.49 | 8.45 | 4.88 | 4.32 | 4.61 | 6.34 | 6.31 | 3.82 |
| West-Central Region of Free Product | EFR-4 | 2.17 | 1.75 | 1.79 | 0.73 | 0.10 | 0.14 | 0.08 | 0.05 | 0.03 | 0.44 | 0.99 | 0.51 |
| | EFR-5 | 2.52 | 2.19 | 2.28 | 2.68 | 3.47 | 6.15 | 2.65 | 2.61 | 2.66 | 2.66 | 1.57 | 1.77 |
| | EFR-6 | 1.25 | 1.29 | 1.38 | 0.49 | 0.84 | 0.88 | 0.61 | 1.07 | 1.16 | 1.51 | 0.91 | 0.15 |
| | EFR-7 | 0.05 | 0.20 | 0.16 | 0.02 | 0.04 | 0.04 | 0.07 | 0.02 | 0.08 | 0.28 | 0.05 | 0.01 |
| | EFR-19 | 1.95 | 2.31 | 2.44 | 1.83 | 1.68 | 0.52 | 0.44 | 0.52 | 1.10 | 2.05 | 2.02 | 0.51 |
| | EFR-22 | 2.83 | 2.58 | 2.27 | 2.06 | 0.84 | 0.34 | 0.95 | 1.39 | 1.93 | 1.47 | 1.41 | 0.17 |
| | EFR-23 | 1.03 | 3.07 | 2.29 | 1.55 | 0.91 | 0.47 | 0.22 | 0.25 | 0.45 | 2.13 | 1.03 | 0.12 |
| | EFR-24 | 0.03 | 0.12 | 0.14 | 0.38 | 0.06 | 0.00 | 0.00 | 0.00 | 0.08 | 0.08 | 0.05 | 0.00 |
| | EFR-25 | 0.41 | 1.33 | 1.58 | 1.05 | 1.75 | 1.19 | 1.08 | 0.76 | 0.54 | 1.74 | 1.48 | 0.21 |
| | EFR-26 | 1.24 | 1.08 | 1.09 | 0.73 | 0.55 | 0.45 | 0.75 | 1.29 | 1.28 | 1.23 | 0.72 | 0.29 |
| | EFR-27 | 0.54 | 0.47 | 0.51 | 0.09 | 0.12 | 0.00 | 0.00 | 0.02 | 0.03 | 0.17 | 0.21 | 0.06 |
| | Total Free Product (ft) | 14.02 | 16.39 | 15.93 | 11.61 | 10.36 | 10.18 | 6.85 | 7.98 | 9.34 | 13.76 | 10.44 | 3.80 |
| | Total Free Product (gal) | 9.11 | 10.65 | 10.35 | 7.55 | 6.73 | 6.62 | 4.45 | 5.19 | 6.07 | 8.94 | 6.79 | 2.47 |
| East-Central Region of Free Product | EFR-8 | 0.09 | 0.07 | 0.03 | 0.12 | 0.00 | 0.03 | 0.03 | 0.03 | 0.09 | 0.39 | 0.27 | 0.09 |
| | EFR-9 | 1.31 | 1.26 | 1.86 | 0.74 | 0.49 | 0.06 | 0.11 | 0.32 | 0.49 | 1.16 | 0.56 | 0.41 |
| | EFR-10 | 4.38 | 3.98 | 3.99 | 3.68 | 5.79 | 5.52 | 4.97 | 4.23 | 3.71 | 3.63 | 2.47 | 3.02 |
| | EFR-11 | 4.06 | 3.65 | 3.52 | 2.42 | 4.69 | 2.84 | 2.02 | 2.48 | 3.28 | 2.78 | 1.57 | 1.93 |
| | EFR-12 | 0.15 | 0.29 | 0.17 | 0.04 | 0.11 | 0.05 | 0.02 | 0.02 | 0.10 | 0.30 | 0.20 | 0.03 |
| | EFR-13 | 0.82 | 1.13 | 1.30 | 0.22 | 1.19 | 0.15 | 0.49 | 0.50 | 0.44 | 1.33 | 1.01 | 0.74 |
| | Total Free Product (ft) | 10.81 | 10.38 | 10.87 | 7.22 | 12.27 | 8.65 | 7.64 | 7.58 | 8.11 | 9.59 | 6.08 | 6.22 |
| | Total Free Product (gal) | 7.03 | 6.75 | 7.07 | 4.69 | 7.98 | 5.62 | 4.97 | 4.93 | 5.27 | 6.23 | 3.95 | 4.04 |
| Eastern Region of Free Product | EFR-14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | EFR-15 | 0.12 | 0.12 | 0.32 | 0.11 | 0.07 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.13 | 0.04 |
| | EFR-16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Total Free Product (ft) | 0.12 | 0.12 | 0.32 | 0.11 | 0.07 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.13 | 0.04 |
| | Total Free Product (gal) | 0.08 | 0.08 | 0.21 | 0.07 | 0.04 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.08 | 0.03 |
| TOTAL APPARENT FREE PRODUCT VOLUME (GAL) | | 22.70 | 24.89 | 24.93 | 16.42 | 20.24 | 20.70 | 14.30 | 14.43 | 15.95 | 21.52 | 17.13 | 10.36 |

# TABLE 2
## L.E. CARPENTER - WHARTON, NEW JERSEY
### REGIONAL APPARENT FREE PRODUCT TRENDS

| | EFR Event Date | 27-Oct-99 | 30-Nov-99 | 16-Dec-99 | 28-Jan-00 | 18-Feb-00 | 24-Mar-00 | 19-Apr-00 | 18-May-00 | 16-Jun-00 | 18-Jul-00 | 17-Aug-00 | 18-Sep-00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Western Region of Free Product | EFR-1 | 1.63 | 1.47 | 1.20 | 1.22 | 0.85 | 1.86 | 1.59 | 1.54 | 2.10 | 1.51 | 1.26 | 1.53 |
| | EFR-2 | 1.35 | 1.28 | 1.40 | 0.06 | 1.04 | 2.25 | 2.00 | 1.64 | 1.89 | 1.40 | 0.36 | 1.08 |
| | EFR-3 | 0.69 | 0.47 | 0.02 | 0.51 | 0.07 | 0.08 | 0.09 | 0.62 | 1.02 | 0.25 | 0.02 | 0.08 |
| | EFR-17 | 0.06 | 0.24 | 0.25 | 0.11 | 0.32 | 0.04 | 0.16 | 0.65 | 0.04 | 0.01 | 0.02 | 0.09 |
| | EFR-18 | 0.36 | 0.77 | 0.05 | 0.20 | 0.05 | 0.12 | 0.04 | 0.32 | 0.01 | 0.06 | 0.16 | 0.08 |
| | EFR-20 | 1.92 | 1.36 | 0.75 | 1.08 | 2.58 | 0.64 | 0.42 | 0.54 | 0.33 | 0.30 | 0.39 | 0.45 |
| | EFR-21 | 2.32 | 1.40 | 1.70 | 1.92 | 1.34 | 3.04 | 2.86 | 2.47 | 3.02 | 2.09 | 1.62 | 2.75 |
| | EFR-28 | 2.19 | 0.96 | 1.42 | 1.33 | 1.00 | 2.30 | 2.42 | 1.81 | 2.68 | 1.72 | 2.48 | 2.02 |
| | Total Free Product (ft) | 10.52 | 7.95 | 6.79 | 6.43 | 7.25 | 10.33 | 9.58 | 9.59 | 11.09 | 7.34 | 6.31 | 8.08 |
| | Total Free Product (gal) | 6.84 | 5.17 | 4.41 | 4.18 | 4.71 | 6.71 | 6.23 | 6.23 | 7.21 | 4.77 | 4.10 | 5.25 |
| West-Central Region of Free Product | EFR-4 | 0.11 | 0.03 | 0.58 | 0.51 | 0.48 | 0.11 | 0.11 | 0.41 | 0.22 | 0.05 | 0.02 | 0.02 |
| | EFR-5 | 3.23 | 2.99 | 1.27 | 2.95 | 2.46 | 2.91 | 2.54 | 1.84 | 2.34 | 1.99 | 1.69 | 1.57 |
| | EFR-6 | 0.86 | 0.63 | 0.33 | 1.07 | 0.77 | 0.29 | 0.31 | 0.49 | 0.27 | 0.54 | 0.29 | 0.55 |
| | EFR-7 | 0.07 | 0.04 | 0.47 | 0.15 | 0.02 | 0.35 | 0.01 | 0.02 | - | - | 0.01 | - |
| | EFR-19 | 1.54 | 0.84 | 0.69 | 1.67 | 1.73 | 0.25 | 0.60 | 0.98 | 0.17 | 0.63 | 0.34 | 0.22 |
| | EFR-22 | 2.22 | 1.76 | 0.53 | 0.82 | 0.58 | 0.09 | 0.16 | 0.05 | 0.05 | 0.01 | 0.18 | 0.06 |
| | EFR-23 | 0.53 | 0.64 | 0.24 | 0.23 | 0.31 | 0.46 | 0.06 | 0.06 | 0.01 | 0.13 | 0.03 | 0.07 |
| | EFR-24 | 0.00 | 0.04 | 0.13 | 0.11 | 0.07 | 0.58 | 0.02 | 0.03 | - | - | - | 0.01 |
| | EFR-25 | 0.39 | 0.19 | 0.05 | 0.31 | 0.39 | 0.58 | 0.21 | 0.10 | 0.03 | 0.10 | 0.03 | 0.10 |
| | EFR-26 | 0.52 | 0.94 | 0.59 | 1.54 | 1.10 | 1.33 | 1.68 | 2.02 | 1.44 | 2.25 | 1.38 | 2.01 |
| | EFR-27 | 0.01 | 0.01 | 0.01 | 0.02 | 0.14 | 0.20 | 0.01 | 0.03 | 0.04 | 0.01 | 0.01 | 0.15 |
| | Total Free Product (ft) | 9.48 | 8.11 | 4.89 | 9.38 | 8.05 | 7.15 | 5.71 | 6.03 | 4.57 | 5.71 | 3.98 | 4.76 |
| | Total Free Product (gal) | 6.16 | 5.27 | 3.18 | 6.10 | 5.23 | 4.65 | 3.71 | 3.92 | 2.97 | 3.71 | 2.59 | 3.09 |
| East-Central Region of Free Product | EFR-8 | 0.13 | 0.05 | 0.11 | 0.05 | 0.06 | 0.08 | 0.03 | 0.05 | 0.03 | 0.02 | 0.01 | 0.01 |
| | EFR-9 | 0.28 | 0.10 | 0.15 | 0.13 | 0.08 | 0.19 | 0.02 | 0.06 | 0.06 | 0.12 | 0.16 | 0.08 |
| | EFR-10 | 5.18 | 3.95 | 3.07 | 4.50 | 3.55 | 3.50 | 4.50 | 1.36 | 2.50 | 3.09 | 0.75 | 2.76 |
| | EFR-11 | 3.20 | 3.11 | 1.07 | 3.44 | 4.95 | 2.41 | 2.95 | 2.93 | 2.49 | 4.12 | 0.79 | 4.73 |
| | EFR-12 | 0.09 | 0.67 | 0.01 | 0.03 | 0.49 | 0.46 | 0.10 | 0.19 | 0.01 | 0.01 | 0.00 | 0.03 |
| | EFR-13 | 0.78 | 0.57 | 0.26 | 0.36 | 0.34 | 0.48 | 0.47 | 0.69 | 0.55 | 0.73 | 0.49 | 0.22 |
| | Total Free Product (ft) | 9.66 | 8.45 | 4.67 | 8.51 | 9.47 | 7.12 | 8.07 | 5.28 | 5.64 | 8.09 | 2.20 | 7.83 |
| | Total Free Product (gal) | 6.28 | 5.49 | 3.04 | 5.53 | 6.16 | 4.63 | 5.25 | 3.43 | 3.67 | 5.26 | 1.43 | 5.09 |
| Eastern Region of Free Product | EFR-14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | EFR-15 | 0.02 | 0.08 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| | EFR-16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Total Free Product (ft) | 0.02 | 0.08 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Total Free Product (gal) | 0.01 | 0.05 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| TOTAL APPARENT FREE PRODUCT VOLUME (GAL) | | 19.29 | 15.98 | 10.64 | 15.82 | 16.11 | 16.00 | 15.20 | 13.59 | 13.85 | 13.74 | 8.12 | 13.44 |

# TABLE 2
## L.E. CARPENTER - WHARTON, NEW JERSEY
### REGIONAL APPARENT FREE PRODUCT TRENDS

| | EFR Event Date | 25-Oct-00 | 17-Nov-00 | 15-Dec-00 | 15-Mar-01 | 23-Apr-01 | 25-May-01 | 13-Jun-01 | 27-Jul-01 | 24-Aug-01 | 25-Sep-01 | 25-Oct-01 | 20-Nov-01 | 31-Dec-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Western Region of Free Product | EFR-1 | 1.00 | 1.07 | 1.14 | 2.91 | 1.25 | 1.02 | 1.14 | 0.57 | 0.80 | 1.29 | 1.60 | 1.51 | 1.57 |
| | EFR-2 | 0.97 | 1.09 | 0.76 | 2.92 | 2.66 | 1.75 | 2.26 | 1.22 | 1.17 | 1.22 | 1.14 | 1.15 | 1.19 |
| | EFR-3 | 0.44 | 0.43 | 0.46 | 0.33 | 0.29 | 0.49 | 0.70 | 0.40 | 0.66 | 0.51 | 0.81 | 0.76 | 0.80 |
| | EFR-17 | 0.06 | 0.36 | 0.01 | 0.41 | 0.31 | 0.51 | 0.28 | 0.02 | 0.49 | 0.34 | 0.85 | 0.97 | 1.57 |
| | EFR-18 | 0.31 | 0.31 | 0.20 | 3.27 | 1.35 | 0.43 | 0.31 | 0.01 | 0.13 | 0.41 | 0.69 | 0.75 | 1.22 |
| | EFR-20 | 0.54 | 0.11 | 0.37 | 0.24 | 0.97 | 0.52 | 0.31 | 0.08 | 0.32 | 0.24 | 0.73 | 1.10 | 1.29 |
| | EFR-21 | 1.79 | 1.65 | 1.37 | 4.09 | 3.51 | 2.96 | 2.61 | 1.98 | 1.61 | 1.87 | 1.58 | 1.38 | 1.54 |
| | EFR-28 | 1.39 | 1.36 | 0.64 | 2.81 | 2.75 | 1.86 | 2.34 | 1.36 | 1.67 | 1.05 | 1.50 | 1.38 | 1.51 |
| | Total Free Product (ft) | 6.50 | 6.38 | 4.95 | 16.98 | 13.09 | 9.54 | 9.95 | 5.64 | 6.85 | 6.93 | 8.90 | 9.00 | 10.69 |
| | Total Free Product (gal) | 4.23 | 4.15 | 3.22 | 11.04 | 8.51 | 6.20 | 6.47 | 3.67 | 4.45 | 4.50 | 5.79 | 5.85 | 6.95 |
| West-Central Region of Free Product | EFR-4 | 0.02 | 0.05 | 0.21 | 0.59 | 1.65 | 0.01 | 0.44 | 0.02 | 1.86 | 0.11 | 0.57 | 0.68 | 0.54 |
| | EFR-5 | 2.74 | 2.47 | 2.76 | 5.95 | 1.75 | 1.90 | 0.62 | 2.24 | 2.05 | 2.25 | 2.55 | 2.10 | 2.67 |
| | EFR-6 | 0.83 | 0.79 | 0.96 | 2.05 | 0.32 | 0.43 | 0.16 | 0.46 | 0.49 | 0.37 | 1.13 | 1.56 | 1.23 |
| | EFR-7 | 0.01 | 0.01 | 0.01 | 0.28 | 0.02 | 0.02 | 0.00 | 0.00 | 0.16 | 0.00 | 0.05 | 0.08 | 0.24 |
| | EFR-19 | 0.87 | 0.59 | 1.42 | 2.32 | 0.65 | 1.98 | 1.01 | 0.44 | 1.19 | 0.54 | 2.15 | 2.36 | 2.38 |
| | EFR-22 | 0.53 | 2.14 | 1.50 | 0.81 | 0.06 | 0.43 | 0.00 | 0.00 | 0.47 | 0.57 | 1.22 | 1.53 | 1.93 |
| | EFR-23 | 0.07 | 0.08 | 0.39 | 0.07 | 0.03 | 0.88 | 0.28 | 0.05 | 0.34 | 0.07 | 0.85 | 2.67 | 0.75 |
| | EFR-24 | 0.01 | 0.01 | 0.04 | 2.27 | 0.05 | 0.34 | 0.01 | 0.01 | 0.27 | 0.14 | 0.35 | 0.38 | 0.34 |
| | EFR-25 | 0.19 | 0.12 | 0.10 | 0.04 | 0.39 | 0.28 | 0.14 | 0.03 | 0.47 | 0.09 | 0.43 | 0.63 | 0.64 |
| | EFR-26 | 2.05 | 1.78 | 1.10 | 2.64 | 2.56 | 2.68 | 1.48 | 2.24 | 1.07 | 1.20 | 1.45 | 1.22 | 1.13 |
| | EFR-27 | 0.01 | 0.01 | 0.01 | 0.48 | 0.05 | 0.04 | 0.00 | 0.01 | 0.04 | 0.00 | 0.52 | 0.49 | 0.13 |
| | Total Free Product (ft) | 7.33 | 8.05 | 8.50 | 17.50 | 7.53 | 8.99 | 4.14 | 5.50 | 8.41 | 5.34 | 11.27 | 13.70 | 11.98 |
| | Total Free Product (gal) | 4.76 | 5.23 | 5.53 | 11.38 | 4.89 | 5.84 | 2.69 | 3.58 | 5.47 | 3.47 | 7.33 | 8.91 | 7.79 |
| East-Central Region of Free Product | EFR-8 | 0.16 | 0.02 | 0.06 | 0.03 | 0.05 | 0.04 | 0.03 | 0.01 | 0.18 | 0.00 | 0.18 | 0.16 | 0.22 |
| | EFR-9 | 0.02 | 0.50 | 0.77 | 0.57 | 0.07 | 0.56 | 0.07 | 0.14 | 0.27 | 0.39 | 0.56 | 0.85 | 0.32 |
| | EFR-10 | 3.88 | 3.27 | 4.05 | 5.64 | 3.17 | 3.52 | 3.32 | 3.73 | 2.30 | 2.62 | 2.70 | 2.61 | 2.91 |
| | EFR-11 | 4.26 | 4.00 | 3.73 | 2.82 | 2.41 | 3.56 | 2.60 | 3.91 | 2.37 | 3.86 | 3.22 | 2.44 | 2.90 |
| | EFR-12 | 0.11 | 0.04 | 0.02 | 0.07 | 0.02 | 0.25 | 0.01 | 0.01 | 0.23 | 0.00 | 0.00 | 0.34 | 0.21 |
| | EFR-13 | 0.25 | 0.09 | 0.15 | 1.14 | 0.27 | 0.78 | 0.26 | 0.39 | 0.47 | 0.38 | 0.46 | 0.88 | 0.44 |
| | Total Free Product (ft) | 8.68 | 7.92 | 8.78 | 10.27 | 5.99 | 8.71 | 6.29 | 8.19 | 5.82 | 7.25 | 7.12 | 7.28 | 7.00 |
| | Total Free Product (gal) | 5.64 | 5.15 | 5.71 | 6.68 | 3.89 | 5.66 | 4.09 | 5.32 | 3.78 | 4.71 | 4.63 | 4.73 | 4.55 |
| Eastern Region of Free Product | EFR-14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | EFR-15 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 |
| | EFR-16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Total Free Product (ft) | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 |
| | Total Free Product (gal) | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 |
| TOTAL APPARENT FREE PRODUCT VOLUME (GAL) | | 14.63 | 14.53 | 14.45 | 29.09 | 17.30 | 17.71 | 13.25 | 12.56 | 13.70 | 12.69 | 17.74 | 19.51 | 19.29 |

# TABLE 2
## L.E. CARPENTER - WHARTON, NEW JERSEY
### REGIONAL APPARENT FREE PRODUCT TRENDS

| | EFR Event Date | 29-Jan-02 | 20-Feb-02 | 26-Mar-02 |
|---|---|---|---|---|
| Western Region of Free Product | EFR-1 | 2.07 | 1.93 | 0.90 |
| | EFR-2 | 1.37 | 1.33 | 1.40 |
| | EFR-3 | 0.70 | 0.78 | 1.05 |
| | EFR-17 | 1.43 | 2.23 | 1.90 |
| | EFR-18 | 1.90 | 1.00 | 1.07 |
| | EFR-20 | 1.78 | 0.46 | 1.24 |
| | EFR-21 | 1.51 | 1.50 | 2.25 |
| | EFR-28 | 1.67 | 1.86 | 0.21 |
| | Total Free Product (ft) | 12.43 | 11.09 | 10.02 |
| | Total Free Product (gal) | 8.08 | 7.21 | 6.51 |
| West-Central Region of Free Product | EFR-4 | 0.26 | 1.13 | 0.37 |
| | EFR-5 | 2.66 | 2.68 | 3.50 |
| | EFR-6 | 0.71 | 2.21 | 2.30 |
| | EFR-7 | 0.00 | 0.00 | 0.00 |
| | EFR-19 | 2.26 | 3.22 | 2.90 |
| | EFR-22 | 0.98 | 0.63 | 0.80 |
| | EFR-23 | 0.98 | 1.13 | 0.01 |
| | EFR-24 | 0.47 | 2.65 | 0.60 |
| | EFR-25 | 0.82 | 0.99 | 0.75 |
| | EFR-26 | 1.14 | 0.87 | 1.55 |
| | EFR-27 | 0.53 | 0.32 | 0.00 |
| | Total Free Product (ft) | 10.81 | 15.83 | 12.78 |
| | Total Free Product (gal) | 7.03 | 10.29 | 8.31 |
| East-Central Region of Free Product | EFR-8 | 0.01 | 0.04 | 0.07 |
| | EFR-9 | 0.29 | 0.45 | 0.32 |
| | EFR-10 | 2.02 | 3.32 | 3.48 |
| | EFR-11 | 2.89 | 2.58 | 2.12 |
| | EFR-12 | 0.26 | 0.11 | 0.10 |
| | EFR-13 | 0.84 | 0.44 | 0.87 |
| | Total Free Product (ft) | 6.31 | 6.94 | 6.96 |
| | Total Free Product (gal) | 4.10 | 4.51 | 4.52 |
| Eastern Region of Free Product | EFR-14 | 0.00 | 0.00 | 0.00 |
| | EFR-15 | 0.00 | 0.00 | 0.05 |
| | EFR-16 | 0.00 | 0.00 | 0.00 |
| | Total Free Product (ft) | 0.00 | 0.00 | 0.05 |
| | Total Free Product (gal) | 0.00 | 0.00 | 0.03 |
| TOTAL APPARENT FREE PRODUCT VOLUME (GAL) | | 19.21 | 22.01 | 19.38 |

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR WELL GAUGING LOG

EFR #50 DATE 29-Jan-02

| WELL ID | DEPTH TO PRODUCT (ft) | DEPTH TO WATER (ft) | PRODUCT THICKNESS (ft) |
|---|---|---|---|
| EFR-1 | 11.99 | 14.06 | 2.07 |
| EFR-2 | 12.51 | 13.88 | 1.37 |
| EFR-3 | 12.5 | 13.2 | 0.70 |
| EFR-4 | 13.96 | 14.22 | 0.26 |
| EFR-5 | 12.22 | 14.88 | 2.66 |
| EFR-6 | 12.78 | 13.49 | 0.71 |
| EFR-7 | 6.72 | 6.72 | 0.00 |
| EFR-8 | 7.8 | 7.81 | 0.01 |
| EFR-9 | 8.04 | 8.33 | 0.29 |
| EFR-10 | 8.72 | 10.74 | 2.02 |
| EFR-11 | 8.32 | 11.21 | 2.89 |
| EFR-12 | 7.31 | 7.57 | 0.26 |
| EFR-13 | 6.43 | 7.27 | 0.84 |
| EFR-14 | 6.67 | 6.67 | 0.00 |
| EFR-15 | 5.98 | 5.98 | 0.00 |
| EFR-16 | 6.35 | 6.35 | 0.00 |
| EFR-17 | 11.38 | 12.81 | 1.43 |
| EFR-18 | 11.22 | 13.12 | 1.90 |
| EFR-19 | 14.14 | 16.4 | 2.26 |
| EFR-20 | 11.31 | 13.09 | 1.78 |
| EFR-21 | 10.83 | 12.34 | 1.51 |
| EFR-22 | 13.9 | 14.88 | 0.98 |
| EFR-23 | 10.03 | 11.01 | 0.98 |
| EFR-24 | 13.58 | 14.05 | 0.47 |
| EFR-25 | 13.29 | 14.11 | 0.82 |
| EFR-26 | 15 | 16.14 | 1.14 |
| EFR-27 | 13.55 | 14.08 | 0.53 |
| EFR-28 | 12.3 | 13.97 | 1.67 |

Total Volume Of Free Standing Product (gal) 19.21

CEMCO FIELD TECHNICIAN: Gary Pizzuti

# TABLE 3
# L. E. CARPENTER - WHARTON, NEW JERSEY

## MONTHLY EFR
## VAPOR AND LIQUID PHASE VOLUMETRIC CALCULATION LOG

**EFR #50** **29-Jan-02**

| WELL ID | EXTRACTION TIME | | VAPOR PHASE CONCENTRATION | | SYSTEM RECOVERY DATA | | | |
|---|---|---|---|---|---|---|---|---|
| | TOTAL TIME (min) | TOTAL TIME (hrs) | PPM | LEL (%) | VACUUM In Hg | CFM | lbs/hr | Total lbs |
| EFR-1 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-2 | 8.0 | 0.1333 | 6,560 | 100 | 17 | 100 | 32.01 | 4.2686 |
| EFR-3 | 7.0 | 0.1167 | 6,560 | 100 | 17 | 100 | 32.01 | 3.7350 |
| EFR-4 | 8.0 | 0.1333 | 6,560 | 100 | 17 | 100 | 32.01 | 4.2686 |
| EFR-5 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-6 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-7 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-8 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-9 | 2.0 | 0.0333 | 656 | 10 | 17 | 100 | 3.20 | 0.1067 |
| EFR-10 | 7.0 | 0.1167 | 6,560 | 100 | 17 | 100 | 32.01 | 3.7350 |
| EFR-11 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-12 | 3.0 | 0.0500 | 656 | 10 | 17 | 100 | 3.20 | 0.1601 |
| EFR-13 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-14 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-15 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-16 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-17 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-18 | 8.0 | 0.1333 | 6,560 | 100 | 17 | 100 | 32.01 | 4.2686 |
| EFR-19 | 9.0 | 0.1500 | 6,560 | 100 | 17 | 100 | 32.01 | 4.8021 |
| EFR-20 | 8.0 | 0.1333 | 6,560 | 100 | 17 | 100 | 32.01 | 4.2686 |
| EFR-21 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-22 | 6.0 | 0.1000 | 5,248 | 80 | 17 | 100 | 25.61 | 2.5611 |
| EFR-23 | 7.0 | 0.1167 | 6,560 | 100 | 17 | 100 | 32.01 | 3.7350 |
| EFR-24 | 5.0 | 0.0833 | 0 | 100 | 17 | 100 | 0.00 | 0.0000 |
| EFR-25 | 8.0 | 0.1333 | 6,560 | 100 | 17 | 100 | 32.01 | 4.2686 |
| EFR-26 | 7.0 | 0.1167 | 6,560 | 100 | 17 | 100 | 32.01 | 3.7350 |
| EFR-27 | 5.0 | 0.0833 | 6,560 | 100 | 17 | 100 | 32.01 | 2.6679 |
| EFR-28 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| Total EFR Time (hrs) | | 2.4667 | AVG ppm | 3982.86 | | | TOTAL (LBS) | 73.2593 |
| | | | | | | | TOTAL VAPOR PHASE VOLUME (GAL) | 9.3817 |

NOTE PPM = (% LEL on Meter) x (LEL of Product Mixture) x (1,000,000)
(1) Weighted LEL for analyte mixture @ 0.656% (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Analyte LELs: DEHP @ 0.3% ; Ethylbenzene @ 1%; Xylenes @ 1.1%

Where:

| | | | |
|---|---|---|---|
| $ppm_v$ = | Parts per Million by Volume | | |
| Flow = | Cubic feet per minute (CFM) | 350 | |
| Molar Mass (MM) = | Molecular Weight (lb/lb-mole) = | 292 | (2) |
| IGC = | Ideal Gas Constant (359 $ft^3$/lb-mole) = | 359 | |
| LEL = | Free Product Mixture = | 0.656 | (1) |
| SG = | Specific Gravity = | 0.9363 | (3) |

NOTE (2) Avg. Molar Mass @ 292 (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Individual Analyte Molar Mass: DEHP @ 390.54; Ethylbenzene @ 106.2; Total Xylenes @ 106.2
(3) Average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1R; EFR-11 & WP-A8)

$$\text{Pounds/Hr (lbs/hr)} = (ppm_v \times (60 \text{ min/hr}) \times (CFM) \times (MM)) / ((1 \times 10^6) \times (359 \text{ ft}^3/\text{lb-mole}))$$

| Free Product & Groundwater Gauging (55-Gal Drum) | |
|---|---|
| | |
| Product Thickness (in) | 14.00 |
| Groundwater Thickness (in) | 1.00 |
| Conversion @ 1.65 gal/inch | 1.65 |
| Total Product Volume (gal) | 23.10 |
| Total Groundwater Volume (gal) | 1.65 |
| Ratio Groundwater to Free Product (gal/gal) | 0.07 |

| | | Y (gal) |
|---|---|---|
| Total Recovered Groundwater Volume (gal) | | 1.65 |
| Total Recovered Free Product Volume (gal) | | 23.10 |
| Total Recovered Fluids Volume (gal) | | 24.75 |
| TOTAL EFR PRODUCT VOLUME | | 32.48 GAL |

| | |
|---|---|
| Date | 29-Jan-02 |
| Project # | 3868.30 |
| Subcontractor | CEMCO |
| Vac Head Utilized | NORTECH Corp. 551B |

CEMCO Field Technician Gary Pizzuti

RMT Project Manager Nick Clevett

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR WELL GAUGING LOG

EFR #51 DATE 20-Feb-02

| WELL ID | DEPTH TO PRODUCT (ft) | DEPTH TO WATER (ft) | PRODUCT THICKNESS (ft) |
|---|---|---|---|
| EFR-1 | 12.12 | 14.05 | 1.93 |
| EFR-2 | 12.71 | 14.04 | 1.33 |
| EFR-3 | 12.56 | 13.34 | 0.78 |
| EFR-4 | 14.17 | 15.3 | 1.13 |
| EFR-5 | 12.38 | 15.06 | 2.68 |
| EFR-6 | 12 | 14.21 | 2.21 |
| EFR-7 | 8.12 | 8.12 | 0.00 |
| EFR-8 | 8.02 | 8.06 | 0.04 |
| EFR-9 | 8.3 | 8.75 | 0.45 |
| EFR-10 | 8.95 | 12.27 | 3.32 |
| EFR-11 | 8.58 | 11.16 | 2.58 |
| EFR-12 | 7.55 | 7.66 | 0.11 |
| EFR-13 | 6.63 | 7.07 | 0.44 |
| EFR-14 | 6.86 | 6.86 | 0.00 |
| EFR-15 | 6.22 | 6.22 | 0.00 |
| EFR-16 | 6.7 | 6.7 | 0.00 |
| EFR-17 | 11.48 | 13.71 | 2.23 |
| EFR-18 | 11.47 | 12.47 | 1.00 |
| EFR-19 | 14.31 | 17.53 | 3.22 |
| EFR-20 | 12.59 | 13.05 | 0.46 |
| EFR-21 | 11.21 | 12.71 | 1.50 |
| EFR-22 | 14.31 | 14.94 | 0.63 |
| EFR-23 | 10.57 | 11.7 | 1.13 |
| EFR-24 | 11.8 | 14.45 | 2.65 |
| EFR-25 | 13.58 | 14.57 | 0.99 |
| EFR-26 | 13.85 | 14.72 | 0.87 |
| EFR-27 | 15.22 | 15.54 | 0.32 |
| EFR-28 | 11.52 | 13.38 | 1.86 |

Total Volume Of Free Standing Product (gal) 22.01

CEMCO FIELD TECHNICIAN: Gary Pizzuti

04/12/2002 1:09 PM
Prepared By: Nicholas J. Clevett
RMT Project Manager

# TABLE 3
# L. E. CARPENTER - WHARTON, NEW JERSEY

## MONTHLY EFR
## VAPOR AND LIQUID PHASE VOLUMETRIC CALCULATION LOG

**EFR #51** **20-Feb-02**

| WELL ID | EXTRACTION TIME | | VAPOR PHASE CONCENTRATION | | SYSTEM RECOVERY DATA | | | |
|---|---|---|---|---|---|---|---|---|
| | TOTAL TIME (min) | TOTAL TIME (hrs) | PPM | LEL (%) | VACUUM In Hg | CFM | lbs/hr | Total lbs |
| EFR-1 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-2 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-3 | 8.0 | 0.1333 | 6,560 | 100 | 17 | 100 | 32.01 | 4.2686 |
| EFR-4 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-5 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-6 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-7 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-8 | 2.0 | 0.0333 | 656 | 10 | 17 | 100 | 3.20 | 0.1067 |
| EFR-9 | 4.0 | 0.0667 | 3,280 | 50 | 17 | 100 | 16.01 | 1.0671 |
| EFR-10 | 8.0 | 0.1333 | 6,560 | 100 | 17 | 100 | 32.01 | 4.2686 |
| EFR-11 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-12 | 2.0 | 0.0333 | 656 | 10 | 17 | 100 | 3.20 | 0.1067 |
| EFR-13 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-14 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-15 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-16 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-17 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-18 | 6.0 | 0.1000 | 6,560 | 100 | 17 | 100 | 32.01 | 3.2014 |
| EFR-19 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-20 | 8.0 | 0.1333 | 5,248 | 80 | 17 | 100 | 25.61 | 3.4149 |
| EFR-21 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-22 | 5.0 | 0.0833 | 5,904 | 90 | 17 | 100 | 28.81 | 2.4011 |
| EFR-23 | 6.0 | 0.1000 | 6,560 | 100 | 17 | 100 | 32.01 | 3.2014 |
| EFR-24 | 9.0 | 0.1500 | 0 | 100 | 17 | 100 | 0.00 | 0.0000 |
| EFR-25 | 7.0 | 0.1167 | 6,560 | 100 | 17 | 100 | 32.01 | 3.7350 |
| EFR-26 | 5.0 | 0.0833 | 6,560 | 100 | 17 | 100 | 32.01 | 2.6679 |
| EFR-27 | 4.0 | 0.0667 | 2,624 | 40 | 17 | 100 | 12.81 | 0.8537 |
| EFR-28 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| Total EFR Time (hrs) | | 2.4000 | AVG ppm | 4562.18 | | | TOTAL (LBS) | 66.6430 |
| | | | | | | | TOTAL VAPOR PHASE VOLUME (GAL) | 8.5344 |

NOTE PPM = (% LEL on Meter) x (LEL of Product Mixture) x (1,000,000)
(1) Weighted LEL for analyte mixture @ 0.656% (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Analyte LELs: DEHP @ 0.3% ; Ethylbenzene @ 1%; Xylenes @ 1.1%

Where:

| | | | |
|---|---|---|---|
| ppm, = | Parts per Million by Volume | | |
| Flow = | Cubic feet per minute (CFM) | 350 | |
| Molar Mass (MM) = | Molecular Weight (lb/lb-mole) = | 292 | (2) |
| IGC = | Ideal Gas Constant (359 $ft^3$/lb-mole) = | 359 | |
| LEL = | Free Product Mixture = | 0.656 | (1) |
| SG = | Specific Gravity = | 0.9363 | (3) |

NOTE (2) Avg. Molar Mass @ 292 (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Individual Analyte Molar Mass: DEHP @ 390.54; Ethylbenzene @ 106.2; Total Xylenes @ 106.2
(3) Average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1R; EFR-11 & WP-A8)

$$\text{Pounds/Hr (lbs/hr)} = (\text{ppm}_v \times (60\ \text{min/hr}) \times (\text{CFM}) \times (\text{MM})) / ((1 \times 10^6) \times (359\ ft^3/\text{lb-mole}))$$

| Free Product & Groundwater Gauging (55-Gal Drum) | |
|---|---|
| Product Thickness (in) | 15.00 |
| Groundwater Thickness (in) | 1.00 |
| Conversion @ 1.65 gal/inch | 1.65 |
| Total Product Volume (gal) | 24.75 |
| Total Groundwater Volume (gal) | 1.65 |
| Ratio Groundwater to Free Product (gal/gal) | 0.07 |

| | Y (gal) |
|---|---|
| Total Recovered Groundwater Volume (gal) | 1.65 |
| Total Recovered Free Product Volume (gal) | 24.75 |
| Total Recovered Fluids Volume (gal) | 26.40 |
| TOTAL EFR PRODUCT VOLUME | 33.28 GAL |

| | |
|---|---|
| Date | 20-Feb-02 |
| Project # | 3868.30 |
| Subcontractor | CEMCO |
| Vac Head Utilized | NORTECH Corp. 551B |

CEMCO Field Technician Gary Pizzuti

RMT Project Manager Nick Clevett

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR WELL GAUGING LOG

EFR #52 DATE 26-Mar-02

| WELL ID | DEPTH TO PRODUCT (ft) | DEPTH TO WATER (ft) | PRODUCT THICKNESS (ft) |
|---|---|---|---|
| EFR-1 | 11.4 | 12.3 | 0.90 |
| EFR-2 | 11.9 | 13.3 | 1.40 |
| EFR-3 | 11.75 | 12.8 | 1.05 |
| EFR-4 | 12.9 | 13.27 | 0.37 |
| EFR-5 | 11.7 | 15.2 | 3.50 |
| EFR-6 | 11.18 | 13.48 | 2.30 |
| EFR-7 | 6.32 | 6.32 | 0.00 |
| EFR-8 | 7.21 | 7.28 | 0.07 |
| EFR-9 | 7.51 | 7.83 | 0.32 |
| EFR-10 | 8.13 | 11.61 | 3.48 |
| EFR-11 | 7.78 | 9.9 | 2.12 |
| EFR-12 | 6.75 | 6.85 | 0.10 |
| EFR-13 | 5.7 | 6.57 | 0.87 |
| EFR-14 | 6.1 | 6.1 | 0.00 |
| EFR-15 | 5.28 | 5.33 | 0.05 |
| EFR-16 | 5.9 | 5.9 | 0.00 |
| EFR-17 | 10.7 | 12.6 | 1.90 |
| EFR-18 | 10.68 | 11.75 | 1.07 |
| EFR-19 | 13.5 | 16.4 | 2.90 |
| EFR-20 | 10.76 | 12 | 1.24 |
| EFR-21 | 10.2 | 12.45 | 2.25 |
| EFR-22 | 13.3 | 14.1 | 0.80 |
| EFR-23 | 9.57 | 9.58 | 0.01 |
| EFR-24 | 13 | 13.6 | 0.60 |
| EFR-25 | 12.2 | 12.95 | 0.75 |
| EFR-26 | 14.4 | 15.95 | 1.55 |
| EFR-27 | 12.85 | 12.85 | 0.00 |
| EFR-28 | 11.74 | 11.95 | 0.21 |

Total Volume Of Free Standing Product (gal) 19.38

CEMCO FIELD TECHNICIAN: Gary Pizzuti

04/12/2002 1:09 PM
Prepared By: Nicholas J. Clevett
RMT Project Manager

# TABLE 3
# L. E. CARPENTER - WHARTON, NEW JERSEY

## MONTHLY EFR
## VAPOR AND LIQUID PHASE VOLUMETRIC CALCULATION LOG

**EFR #52** **26-Mar-02**

| WELL ID | EXTRACTION TIME | | VAPOR PHASE CONCENTRATION | | SYSTEM RECOVERY DATA | | | |
|---|---|---|---|---|---|---|---|---|
| | TOTAL TIME (min) | TOTAL TIME (hrs) | PPM | LEL (%) | VACUUM In Hg | CFM | lbs/hr | Total lbs |
| EFR-1 | 0.5 | 0.0083 | 6,560 | 100 | 17 | 100 | 32.01 | 0.2668 |
| EFR-2 | 5.0 | 0.0833 | 6,560 | 100 | 17 | 100 | 32.01 | 2.6679 |
| EFR-3 | 1.0 | 0.0167 | 6,560 | 100 | 17 | 100 | 32.01 | 0.5336 |
| EFR-4 | 1.0 | 0.0167 | 6,560 | 100 | 17 | 100 | 32.01 | 0.5336 |
| EFR-5 | 12.0 | 0.2000 | 6,560 | 100 | 17 | 100 | 32.01 | 6.4029 |
| EFR-6 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-7 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-8 | 0.5 | 0.0083 | 853 | 13 | 17 | 100 | 4.16 | 0.0347 |
| EFR-9 | 0.5 | 0.0083 | 918 | 14 | 17 | 100 | 4.48 | 0.0373 |
| EFR-10 | 10.0 | 0.1667 | 6,298 | 96 | 17 | 100 | 30.73 | 5.1223 |
| EFR-11 | 8.0 | 0.1333 | 6,560 | 100 | 17 | 100 | 32.01 | 4.2686 |
| EFR-12 | 0.5 | 0.0083 | 6,560 | 100 | 17 | 100 | 32.01 | 0.2668 |
| EFR-13 | 4.0 | 0.0667 | 590 | 9 | 17 | 100 | 2.88 | 0.1921 |
| EFR-14 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-15 | 0.5 | 0.0083 | 66 | 1 | 17 | 100 | 0.32 | 0.0027 |
| EFR-16 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-17 | 5.0 | 0.0833 | 6,560 | 100 | 17 | 100 | 32.01 | 2.6679 |
| EFR-18 | 3.0 | 0.0500 | 6,560 | 100 | 17 | 100 | 32.01 | 1.6007 |
| EFR-19 | 12.0 | 0.2000 | 6,560 | 100 | 17 | 100 | 32.01 | 6.4029 |
| EFR-20 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-21 | 10.0 | 0.1667 | 6,560 | 100 | 17 | 100 | 32.01 | 5.3357 |
| EFR-22 | 5.0 | 0.0833 | 6,560 | 100 | 17 | 100 | 32.01 | 2.6679 |
| EFR-23 | 0.5 | 0.0083 | 6,560 | 100 | 17 | 100 | 32.01 | 0.2668 |
| EFR-24 | 1.0 | 0.0167 | 0 | 100 | 17 | 100 | 0.00 | 0.0000 |
| EFR-25 | 1.0 | 0.0167 | 6,560 | 100 | 17 | 100 | 32.01 | 0.5336 |
| EFR-26 | 2.0 | 0.0333 | 6,560 | 100 | 17 | 100 | 32.01 | 1.0671 |
| EFR-27 | 0.0 | 0.0000 | 0 | 0 | 17 | 100 | 0.00 | 0.0000 |
| EFR-28 | 0.5 | 0.0083 | 6,560 | 100 | 17 | 100 | 32.01 | 0.2668 |
| Total EFR Time (hrs) | | 1.7250 | AVG ppm | 5462.69 | | | TOTAL (LBS) | 51.8097 |
| | | | | | | | TOTAL VAPOR PHASE VOLUME (GAL) | 6.6348 |

NOTE PPM = (% LEL on Meter) x (LEL of Product Mixture) x (1,000,000)
(1) Weighted LEL for analyte mixture @ 0.656% (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Analyte LELs: DEHP @ 0.3% ; Ethylbenzene @ 1%; Xylenes @ 1.1%

Where:

| | | | |
|---|---|---|---|
| $ppm_v$ = | Parts per Million by Volume | | |
| Flow = | Cubic feet per minute (CFM) | 350 | |
| Molar Mass (MM) = | Molecular Weight (lb/lb-mole) = | 292 | (2) |
| IGC = | Ideal Gas Constant (359 $ft^3$/lb-mole) = | 359 | |
| LEL = | Free Product Mixture = | 0.656 | (1) |
| SG = | Specific Gravity = | 0.9363 | (3) |

NOTE (2) Avg. Molar Mass @ 292 (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Individual Analyte Molar Mass: DEHP @ 390.54; Ethylbenzene @ 106.2; Total Xylenes @ 106.2
(3) Average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1R; EFR-11 & WP-A8)

$$\text{Pounds/Hr (lbs/hr)} = (ppm_v \times (60\ \text{min/hr}) \times (\text{CFM}) \times (\text{MM})) / ((1 \times 10^6) \times (359\ ft^3/\text{lb-mole}))$$

| Free Product & Groundwater Gauging (55-Gal Drum) | |
|---|---|
| Product Thickness (in) | 14.00 |
| Groundwater Thickness (in) | 1.25 |
| Conversion @ 1.65 gal/inch | 1.65 |
| Total Product Volume (gal) | 23.10 |
| Total Groundwater Volume (gal) | 2.06 |
| Ratio Groundwater to Free Product (gal/gal) | 0.09 |

| | Y (gal) |
|---|---|
| Total Recovered Groundwater Volume (gal) | 2.06 |
| Total Recovered Free Product Volume (gal) | 23.10 |
| Total Recovered Fluids Volume (gal) | 25.16 |
| TOTAL EFR PRODUCT VOLUME | 29.73 GAL |

| | |
|---|---|
| Date | 26-Mar-02 |
| Project # | 3868.30 |
| Subcontractor | CEMCO |
| Vac Head Utilized | NORTECH Corp. 551B |

CEMCO Field Technician Gary Pizzuti

RMT Project Manager Nick Clevett

# TABLE 4

## L.E. CARPENTER - WHARTON, NEW JERSEY

*QUARTERLY MONITORING PROTOCOL*

| Monitoring Well | Analytical Parameters(3)(4) | Rational | Comments |
|---|---|---|---|
| MW-14S | BTEX(1) DEHP(1) | Analytical results will identify the migration of the dissolved groundwater plume in the Shallow Aquifer Zone downgradient of the site (Wharton Enterprise property) | Monitoring Well added to quarterly sampling protocol beginning 1st Quarter 2002 the further assess groundwater quality and flow within the Wharton Enterprise property. |
| MW-14I | BTEX(1) DEHP(1) | Analytical results will identify the migration of the dissolved groundwater plume in the Intermediate Aquifer Zone downgradient of the site (Wharton Enterprise property) | Original Monitoring Well |
| MW-15S | BTEX(1) DEHP(1) | Analytical results will identify if the dissolved groundwater plume is migrating through this portion of the shallow aquifer zone (on the rail spur right-of-way) | Original Monitoring Well |
| MW-15I | BTEX(1) DEHP(1) | Analytical results will identify the migration of the dissolved groundwater plume through the Intermediate Aquifer Zone in the is area (on rail spur right-of-way) | Original Monitoring Well |
| MW-22R | BTEX(1) DEHP(1) | Analytical results will identify the movement of the dissolved groundwater plume in the shallow aquifer zone downgradient of the site (Wharton Enterprise property). | Original Monitoring Well. Beginning in 2nd quarter 2001, well will be analyzed for DEHP quarterly vs. semiannually |
| MW-25R | BTEX(1) DEHP(1) | Analytical results will identify the movement of the dissolved groundwater plume in the shallow aquifer zone downgradient of the site. East of MW-22R (Wharton Enterprise property). | DEHP sampling required quarterly as opposed to semi annually per Nov 23, 1998 NJDEP Letter. |
| MW-17S(2) | BTEX DEHP | Analytical results from this well will also identify "background" conditions at the site in the shallow aquifer zone. | Original Monitoring Well |
| MW-4 | BTEX(1) DEHP(1) | Analytical results from this well will also identify "background" conditions at the site in the shallow aquifer zone (south portion of subject site, bordering on the Rockaway River) | Original Monitoring Well |
| MW-11D(R) | DEHP(1) | Analytical results from this well identify potential contamination of deep aquifer. This well lies in the center of the free product plume. | New well added to monitoring protocol as of May 21, 1999 NJDEP Letter (review of 1st quarter 1999 monitoring report). Well exhibited DEHP contamination potentially as the result of draw down during well installation. Well will be sampled for both monitoring program parameters (BTEX & DEHP) per NJDEP letter dated Aug 17, 1999. As of 4th Quarter 2000 (1 year of BTEX and DEHP sampling), approval was requested from NJDEP and USEPA to remove this well from the quarterly sampling program. NJDEP response letter dated April 5, 2001 following review of the 4th Quarter 2000 monitoring report requested that MW-11D(R) be sampled quarterly for DEHP ONLY. |
| MW-21 | BTEX(1) DEHP(1) | Analytical results from this well will also identify "background" conditions at the site in the shallow aquifer zone. Additionally, data from this well is used to track the potential migratory trend from MW-25 (Eastern most portion of the subject site) | New well added to monitoring protocol as of Nov 23, 1998 NJDEP Letter. |

NOTES
(1) Parameter analyzed every quarter
(2) Well sampled 2nd and 4th quarter ONLY.
(3) Low flow sampling initiated 1st Quarter 2002
(4) Beginning 1st Quarter 2002, both BTEX and DEHP will be analyzed every quarter

S: Shallow Hydrogeologic Unit
I: Intermediate Hydrogeologic
D: Deep Hydrogeologic Unit
R: Replacement well

QA/QC PROTOCOL
QA/QC procedures outlined in the Quality Assurance Project Plan (QAPP) included as Appendix A in the report entitled Workplan for Supplemental Investigation of Natural Attenuation of Dissolved Constituents in Groundwater (RMT, May 2001), and amended in the October 23, 2001 responses to agency comments regarding the "Workplan", will be followed during each sampling event.

FIELD ANALYSIS
All quarterly monitoring wells will be field tested for pH, temperature, specific conductivity, dissolved oxygen, and redox potential

# TABLE 5

## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS (5) | | | | | ABOVE NJGWQS 7 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| MW-4 | 1995 | 1 | ND | 26 | ND | 32 | 25,000 | NO | NO | NO | NO | YES |
| | | 2 | ND | 16 | ND | 13 | 46,000 | NO | NO | NO | NO | YES |
| | | 3 | ND | 9.7 | ND | 8.7 | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | 8.8 | ND | 11 | 17,000 | NO | NO | NO | NO | YES |
| | 1996 | 1 | ND | 24 | ND | 47 | NS | NO | NO | NO | YES | -- |
| | | 2 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 3 | ND | 6.8 | ND | 4.3 | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | 2.3 | ND | ND | 11,000 | NO | NO | NO | NO | YES |
| | 1997 | 1 | ND | 3.5 | ND | 1.8 | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | 1.2 | ND | 4.2 | 120 | NO | NO | NO | NO | YES |
| | | 3 | ND | 2.2 | ND | 12.6 | NS | NO | NO | NO | NO | -- |
| | | 4 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | 1998 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | 1.0 | ND | 1.4 | 710 | NO | NO | NO | NO | YES |
| | | 3 | ND | 1.9 | ND | 1.2 | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | 9.3 | ND | 3.3 | 650 | NO | NO | NO | NO | YES |
| | 1999 | 1 | ND | 1.1 | ND | 2.5 | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | 0.66 | ND | ND | 3,000 | NO | NO | NO | NO | YES |
| | | 2 duplicate | ND | 0.43 | ND | ND | 4,400 | NO | NO | NO | NO | YES |
| | | 3 | ND | 3.10 | ND | 2.9 | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | 0.51 | ND | ND | 4,000 | NO | NO | NO | NO | YES |
| | 2000 | 1 | ND | 0.54 | ND | 1.6 | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | 0.3 | ND | ND | 480 | NO | NO | NO | NO | YES |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | 0.41 | 210 | NO | NO | NO | NO | YES |
| | | 4 duplicate | ND | ND | ND | 0.33 | NS | NO | NO | NO | NO | -- |
| | 2001 | 1 | ND | 1 | ND | 3.7 | NS | NO | NO | NO | NO | -- |
| DEHP found in lab blank | | 2 | ND | 0.31 | ND | 0.41 | 300 | NO | NO | NO | NO | YES |
| | | 3 | ND | 0.52 | ND | 2.5 | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | 0.33 | ND | 0.77 | 3300 | NO | NO | NO | NO | YES |
| | 2002 | 1 | ND | ND | ND | ND | 150 | NO | NO | NO | NO | YES |



Prepared By: RMT, Inc - Chicago
Nicholas J. Clevett
Project Manager

# TABLE 5

## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS [1] | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| MW-11(DR) [2][3] | 1999 | 1 | ND | ND | ND | ND | 64 | NO | NO | NO | NO | YES |
| | | 1 duplicate | ND | ND | ND | ND | 20 | NO | NO | NO | NO | NO |
| | | 2 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 3[3] | NS | NS | NS | NS | 59 | -- | -- | -- | -- | YES |
| | | 3 duplicate | NS | NS | NS | NS | 13 | -- | -- | -- | -- | NO |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2000 | 1 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| Field ID: MW-11DD | | 2 duplicate | ND | ND | ND | ND | NR | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | 3.4 | NO | NO | NO | NO | NO |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| DEHP found in lab blank | 2001 | 1 | ND | ND | ND | ND | 0.8 | NO | NO | NO | NO | NO |
| DEHP found in lab blank | d ID: MW-11DD | 1 duplicate | NS | NS | NS | NS | 0.9 | -- | -- | -- | -- | NO |
| DEHP found in lab blank | | 2 | NS | NS | NS | NS | 1.5 | -- | -- | -- | -- | NO |
| | | 3 | NS | NS | NS | NS | ND | -- | -- | -- | -- | NO |
| | | 4 | NS | NS | NS | NS | 0.6 | -- | -- | -- | -- | NO |
| | 2002 | 1 | ND | ND | ND | ND | 2.8 | NO | NO | NO | NO | NO |



Prepared By: RMT, Inc - Chicago
Nicholas J. Clevett
Project Manager

# TABLE 5

## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS [5] | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| MW-14S | 2002 | 1 | ND | ND | ND | ND | 1.2 | NO | NO | NO | NO | NO |



Prepared By: RMT, Inc - Chicago
Nicholas J. Clevett
Project Manager

# TABLE 5

## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS (5) | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| MW-14I | 1995 | 1 | ND | 0.4 | ND | 1.2 | 140 | NO | NO | NO | NO | YES |
| | | 2 | ND | ND | ND | ND | 1.6 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | 2.6 | NO | NO | NO | NO | NO |
| | 1996 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | 2.7 | NO | NO | NO | NO | NO |
| | 1997 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | 1.6 | NO | NO | NO | NO | NO |
| | | 3 | 1.2 | 22.1 | ND | 176 | NS | YES | NO | NO | YES | -- |
| | | 4 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | 1998 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | 0.34 | ND | 2 | 24 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 1999 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2000 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2001 | 1 | ND | ND | ND | ND | 2.4 | NO | NO | NO | NO | NO |
| DEHP found in lab blank | | 2 | ND | ND | ND | ND | 3.5 | NO | NO | NO | NO | NO |
| Field ID: MW-14Id | | 2 duplicate | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | 2.2 | NO | NO | NO | NO | NO |
| | 2002 | 1 | ND | ND | ND | ND | 3.4 | NO | NO | NO | NO | NO |

# TABLE 5

## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS [3] | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| MW-15S | 1995 | 1 | ND | ND | ND | ND | 2.4 | NO | NO | NO | NO | NO |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 1996 | 1 | ND | 33 | ND | 83 | NS | NO | NO | NO | YES | -- |
| | | 2 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | 0.21 | ND | 1.7 | ND | NO | NO | NO | NO | NO |
| | 1997 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | 1.2 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | 1998 | 1 | ND | ND | 1.4 | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | 1.3 | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 1999 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2000 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2001 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| DEHP found in lab blank | | 2 | ND | ND | ND | ND | 0.8 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2002 | 1 | ND | ND | ND | ND | 1.0 | NO | NO | NO | NO | NO |



Prepared By: RMT, Inc - Chicago
Nicholas J. Clevett
Project Manager

# TABLE 5

## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS [9] | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| MW-15I | 1995 | 1 | ND | ND | ND | ND | 250 | NO | NO | NO | NO | YES |
| | | 2 | ND | ND | ND | ND | 7.2 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | 2.8 | NO | NO | NO | NO | NO |
| | 1996 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | 1.7 | NO | NO | NO | NO | NO |
| | | 4 duplicate | ND | ND | ND | ND | 1.9 | NO | NO | NO | NO | NO |
| | 1997 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | 2.2 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | 1998 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | 1.9 | NO | NO | NO | NO | NO |
| | | 2 duplicate | ND | ND | ND | ND | 3.8 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | 0.53 | 11 | NO | NO | NO | NO | NO |
| | | 4 duplicate | ND | 0.2 | ND | 0.8 | 9.8 | NO | NO | NO | NO | NO |
| | 1999 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | 4.8 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2000 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2001 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| DEHP found in lab blank | | 2 | ND | ND | ND | ND | 1.2 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2002 | 1 | ND | ND | ND | ND | 1.0 | NO | NO | NO | NO | NO |



Prepared By: RMT, Inc - Chicago
Nicholas J. Clevett
Project Manager

# TABLE 5
## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS [5] | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| MW-17S [4] | 1995 | 1 | ND | 0.6 | 0.3 | 1.9 | 11 | NO | NO | NO | NO | NO |
| | | 2 | 0.2 | ND | 0.18 | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 4 | ND | ND | ND | 0.63 | ND | NO | NO | NO | NO | NO |
| | 1996 | 1 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 2 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 3 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 4 | ND | ND | ND | ND | 1.5 | NO | NO | NO | NO | NO |
| | 1997 | 1 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 2 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 3 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 4 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | 1998 | 1 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 2 | ND | ND | ND | 1.2 | 6.1 | NO | NO | NO | NO | NO |
| | | 3 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 4 | ND | ND | ND | ND | 6 | NO | NO | NO | NO | NO |
| | 1999 | 1 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 4 | ND | ND | ND | ND | 40 | NO | NO | NO | NO | YES |
| | 2000 | 1 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| DEHP found in lab blank | 2001 | 2 | ND | ND | ND | ND | 1.8 | NO | NO | NO | NO | NO |
| | | 4 | ND | ND | ND | ND | 9.6 | NO | NO | NO | NO | NO |
| | 2002 | 1 | ND | ND | ND | ND | 1.0 | NO | NO | NO | NO | NO |
| Sample designation DUP01 | | 1 duplicate | ND | ND | ND | ND | 1.6 | NO | NO | NO | NO | NO |

# TABLE 5

## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS [5] | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| MW-21 [1] | 1999 | 1 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2000 | 1 | ND | ND | ND | ND | 6 | NO | NO | NO | NO | NO |
| | | 1 duplicate | NS | NS | NS | NS | ND | -- | -- | -- | -- | NO |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| DEHP found in lab blank | 2001 | 1 | ND | ND | ND | ND | 2.7 | NO | NO | NO | NO | NO |
| DEHP found in lab blank | | 2 | ND | ND | ND | ND | 0.9 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | 0.9 | NO | NO | NO | NO | NO |
| | | 4 | ND | ND | ND | ND | 0.6 | NO | NO | NO | NO | NO |
| | 2002 | 1 | ND | ND | ND | ND | 1.3 | NO | NO | NO | NO | NO |

# TABLE 5

## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS (5) | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| MW-22(R) | 1995 | 1 | ND | 57 | ND | 260 | 6,500 | NO | NO | NO | YES | YES |
| | | 2 | ND | 311 | ND | 955 | 380 | NO | NO | NO | YES | YES |
| | | 3 | ND | 171 | ND | 693 | NS | NO | NO | NO | YES | -- |
| | | 4 | ND | 123 | ND | 494 | 320 | NO | NO | NO | YES | YES |
| | 1996 | 1 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 2 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 3 | ND | 359 | ND | 1,320 | NS | NO | NO | NO | YES | -- |
| | | 4 | ND | 320 | ND | 1,330 | ND | NO | NO | NO | YES | NO |
| | 1997 | 1 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 2 | ND | 5,730 | ND | 32,900 | 7,500 | NO | YES | NO | YES | YES |
| | | 3 | ND | 11,400 | 348 | 66,000 | NS | NO | YES | NO | YES | -- |
| | | 4 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | 1998 | 1 | ND | 4,070 | 348 | 20,600 | NS | NO | YES | NO | YES | -- |
| | | 2 | ND | 2,260 | ND | 11,300 | 5,800 | NO | YES | NO | YES | YES |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 3 duplicate | ND | 2,510 | ND | 11,000 | NS | NO | YES | NO | YES | -- |
| | | 4 | ND | 1,650 | ND | 7,230 | 1,100 | NO | YES | NO | YES | YES |
| | 1999 | 1 | ND | 18 | ND | 84 | NS | NO | NO | NO | YES | -- |
| | | 2 | ND | 1,600 | ND | 7,600 | 670 | NO | YES | NO | YES | YES |
| | | 3 | ND | 1,200 | 42 | 5,200 | NS | NO | YES | NO | YES | -- |
| | | 4 | ND | 810 | ND | 3,300 | 1200 | NO | YES | NO | YES | YES |
| | | 4 duplicate | ND | 840 | ND | 3,400 | 1600 | NO | YES | NO | YES | YES |
| | 2000 | 1 | ND | 360 | ND | 1,400 | NS | NO | NO | NO | YES | -- |
| Dilution Factor 50 | | 2 | ND | 820 | ND | 3,600 | 92 | NO | YES | NO | YES | YES |
| Dilution Factor 200 | | 3 | ND | 1,000 | ND | 4,800 | NS | NO | YES | NO | YES | -- |
| Dilution Factor 50 and 250 for DEHP and BTEX respectively | | 4 | ND | 1,200 | ND | 6,200 | 5,100 | NO | YES | NO | YES | YES |
| Dilution Factor 200 | 2001 | 1 | ND | 1,900 | ND | 9,000 | NS | NO | YES | NO | YES | -- |
| Dilution Factor 20 and 100 for DEHP and BTEX respectively. DEHP found in lab blank | | 2 | ND | 910 | ND | 4,100 | 2,400 | NO | YES | NO | YES | YES |
| Dilution factor 100 for BTEX, 50 for DEHP. DEHP detected in field blank | | 3 | ND | 1,100 | ND | 5,300 | 8,200 | NO | YES | NO | YES | YES |
| | | 4 | ND | 980 | ND | 4,700 | 15,000 | NO | YES | NO | YES | YES |
| | | 4 duplicate | ND | 1,000 | ND | 4,900 | NS | NO | YES | NO | YES | -- |
| Dilution factors - 10 for BTEX, 2 for DEHP. | 2002 | 1 | ND | 140 | ND | 420 | 18 | NO | NO | NO | YES | NO |



Prepared By: RMT, Inc - Chicago
Nicholas J. Clevett
Project Manager

# TABLE 5
## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS [5] | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| MW-25(R) | 1995 | 1 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 2 | ND | ND | ND | ND | 1.6 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | 68 | NO | NO | NO | NO | YES |
| | 1996 | 1 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 2 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 3 | ND | 0.34 | ND | 2.2 | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 1997 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | 13.5 | ND | 89 | 63 | NO | NO | NO | YES | YES |
| | | 3 | ND | 4.1 | ND | 30.7 | NS | NO | NO | NO | NO | -- |
| | | 4 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | 1998 | 1 | ND | 0.33 | ND | 1.5 | NS | NO | NO | NO | NO | -- |
| | | 1 duplicate | ND | 0.39 | ND | 0.94 | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | 5.3 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | 1.9 | NO | NO | NO | NO | NO |
| | 1999 | 1 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 2 | ND | ND | ND | 14 | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | 0.39 | ND | 1.4 | 9.6 | NO | NO | NO | NO | NO |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2000 | 1 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| Field ID: MW-25RD | | 3 duplicate | NS | NS | NS | NS | ND | -- | -- | -- | -- | NO |
| | | 4 | ND | 0.33 | ND | 1.1 | 3.4 | NO | NO | NO | NO | NO |
| DEHP found in lab blank | 2001 | 1 | ND | ND | ND | ND | 1.9 | NO | NO | NO | NO | NO |
| DEHP found in lab blank | | 2 | ND | ND | ND | ND | 1.4 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | 0.5 | NO | NO | NO | NO | NO |
| Field ID: MW-25D | | 3 duplicate | NS | NS | NS | NS | 1.2 | -- | -- | -- | -- | NO |
| | | 4 | ND | ND | ND | ND | 0.7 | NO | NO | NO | NO | NO |
| | 2002 | 1 | ND | ND | ND | ND | 0.5 | NO | NO | NO | NO | NO |

# TABLE 5

## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS [5] | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| Trip Blank | 1995 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | 1996 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | 1997 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | 1998 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | NS | 1.3 | NO | NO | NO | -- | NO |
| | 1999 | 1 | ND | ND | ND | NS | ND | NO | NO | NO | -- | NO |
| | | 2 | ND | ND | ND | NS | ND | NO | NO | NO | -- | NO |
| | | 3 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 4 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | 2000 | 1 | NS | NS | NS | NS | ND | -- | -- | -- | -- | NO |
| | | 1 | NS | NS | NS | NS | ND | -- | -- | -- | -- | NO |
| | | 2 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 3 | NS | NS | NS | NS | ND | -- | -- | -- | -- | NO |
| | | 4 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| DEHP found in lab blank | 2001 | 1 | NS | NS | NS | NS | 0.6 | -- | -- | -- | -- | NO |
| | | 2 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| Performed for Lab No. N067 (MW22R DEHP sample). STL forgot to sample DEHP at this well on first round | | 3 | NS | NS | NS | NS | ND | -- | -- | -- | -- | NO |
| | | 3 | NS | NS | NS | NS | ND | -- | -- | -- | -- | NO |
| | | 4 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | 2002 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |

# TABLE 5

## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS (5) | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| Rinsate Sample | 2002 | 1 | ND | ND | 0.7 | ND | 2.5 | NO | NO | NO | NO | NO |

# TABLE 5

## L.E. CARPENTER - Wharton, New Jersey
## Quarterly Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS (5) | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | YEAR | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| Field Blank | 1995 | 1 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 2 | ND | 0.73 | ND | ND | 1.3 | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 1996 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 1997 | 1 | ND | ND | 0.2 | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | NS | NS | NS | NS | NS | -- | -- | -- | -- | -- |
| | 1998 | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 2 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 3 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 4 | ND | ND | ND | ND | 1.3 | NO | NO | NO | NO | NO |
| | 1999 | 1 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2000 | 1 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 1 | ND | ND | ND | ND | NS | NO | NO | NO | NO | -- |
| | | 1 | NS | NS | NS | NS | 3.2 | -- | -- | -- | -- | NO |
| | | 2 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 3 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| DEHP found in lab blank | 2001 | 1 | ND | ND | ND | ND | 1.3 | NO | NO | NO | NO | NO |
| DEHP found in lab blank | | 2 | ND | ND | ND | ND | 2 | NO | NO | NO | NO | NO |
| Performed for Lab No. N067 (MW22R DEHP sample). STL forgot to sample DEHP at this well on first round | | 3 | NS | NS | NS | NS | 1.2 | -- | -- | -- | -- | NO |
| | | 3 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 2002 | 1 | ND | ND | ND | ND | 16 | NO | NO | NO | NO | NO |

LEGEND
ug/L = micrograms per liter
NJGWQS = New Jersey Groundwater Quality Standards
ROD Record of Decision
NA = Not Applicable
NS = Not Sampled
ND No Detection
dupicate = Duplicate sample
NR = Not Run

15,000 Values in BOLD FONT are above BOTH the NJDEP NJGWQS and the ROD Discharge Criteria
-- Used when comparison against known standards does not apply as the well was not sampled (NS) for a specific analyte

Sampling Notes:
(1) MW-21 Quarterly sampling required for both DEHP and BTEX as of NJDEP letter dated Nov 23, 1998
(2) MW-11(IR) & MW-11(DR) sampled for both DEHP and BTEX per NJDEP letter dated Nov 23, 1998 (one time sample round- baseline concentration)
(3) MW-11D required to be sampled quarterly per NJDEP letter dated August 17, 1999 Third quarter 1999 sampling was performed prior to receiving the NJDEP letter Subsequently, the well was only sampled for DEHP. Starting 4th quarter 1999, MW-11D will be sampled for both DEHP and BTEX Based on NJDEP letter dated April 5, 2001, this well will be sampled for DEHP only (starting 2nd qtr 2001)
(4) Well initially sampled Biannually - 2nd and 4th Quarter as of the beginning of 1998 1st quarter 2002, well sampled quarterly for both DEHP and BTEX
(5) Low flow sampling initiated 1st quarter 2002



Prepared By: RMT, Inc - Chicago
Nicholas J. Clevett
Project Manager

# TABLE 6
## L.E. CARPENTER - Wharton, New Jersey
## MW19/Hot Spot 1 Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS [1] | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DATE | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| **MW19** | | | | | | | | | | | | |
| Dilution factor for BTEX 2000 | 24-Feb-95 | 1 | ND | 1,700 | 110,000 | 10,000 | NS | NO | YES | YES | YES | -- |
| Dilution factor for BTEX 100 | 14-Jun-95 | 2 | ND | 3,400 | 140,000 | 17,000 | NS | NO | YES | YES | YES | -- |
| Dilution factor 5000 for BTEX & 2 for DEHP; MDL for Benzene 1000 ug/l | 23-Apr-98 | 2 | ND | 2,850 | 76,700 | 14,900 | 6.6 | NO | YES | YES | YES | NO |
| Dilution factor for BTEX 500 | 02-Aug-01 | 3 | ND | 3,000 | 62,000 | 17,000 | 2.9 | NO | YES | YES | YES | NO |
| | | | | | | | | | | | | |
| **MW19-1** | | | | | | | | | | | | |
| Dilution factor for BTEX 200 | 12-Mar-98 | 1 | ND | 219 | 4270 | 1160 | 190 | NO | NO | YES | YES | YES |
| | 02-Aug-01 | 3 | ND | 1.2 | ND | ND | 85 | NO | NO | NO | NO | YES |
| | | | | | | | | | | | | |
| **MW19-2** | | | | | | | | | | | | |
| Dilution factor for BTEX 250 | 12-Mar-98 | 1 | ND | 1130 | 9830 | 6010 | 8.8 | NO | YES | YES | YES | NO |
| Dilution factor for BTEX 2 | 01-Aug-01 | 3 | ND | 21 | 160 | 82 | 16 | NO | NO | NO | YES | NO |
| | | | | | | | | | | | | |
| **MW19-3** | | | | | | | | | | | | |
| | 12-Mar-98 | 1 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 02-Aug-01 | 3 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | | | | | | | | | | | |
| **MW19-4** | | | | | | | | | | | | |
| | 12-Mar-98 | 1 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | 02-Aug-01 | 3 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | | | | | | | | | | | |
| **MW19-5** | | | | | | | | | | | | |
| Dilution factor for BTEX 5000 | 12-Mar-98 | 1 | ND | 1,920 | 123,000 | 10,100 | 42 | NO | YES | YES | YES | YES |
| Dilution factor for BTEX 1000 | 02-Aug-01 | 3 | ND | 870 | 79,000 | 5,200 | 3.2 | NO | YES | YES | YES | NO |
| Dilution factor for BTEX 500 | 07-Mar-02 | 1 | ND | 300 | 10,000 | 1,700 | 1.3 | NO | NO | YES | YES | NO |



Prepared By: RMT, Inc - Chicago
Nicholas J. Clevett
Project Manager

# TABLE 6
## L.E. CARPENTER - Wharton, New Jersey
## MW19/Hot Spot 1 Groundwater Monitoring Data

| MONITORING WELLS | SAMPLING DATE | | CHEMICAL ANALYSIS RESULTS (1) | | | | | ABOVE NJGWQS ? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DATE | QUARTER | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) | Benzene | Ethylbenzene | Toluene | Total Xylenes | bis-2-Ethylhexylphthalate (DEHP) |
| | | | ug/l | ug/l | ug/l | ug/l | ug/l | | | | | |
| NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS) | | | 1 | 700 | 1,000 | 40 | 30 | | | | | |
| **MW19-6** | | | | | | | | | | | | |
| Dilution factor for BTEX 200 | 15-Nov-99 | 4 | ND | 94 | 3,400 | 500 | 32 | NO | NO | YES | YES | YES |
| Dilution factor for BTEX 2 | 01-Aug-01 | 3 | ND | 14 | 390 | 47 | 28 | NO | NO | NO | YES | NO |
| | | | | | | | | | | | | |
| **MW19-7** | | | | | | | | | | | | |
| Dilution factor for BTEX 50 | 15-Nov-99 | 4 | ND | 100 | 51 | 1,400 | ND | NO | NO | NO | YES | NO |
| Dilution factor for BTEX 2 | 01-Aug-01 | 3 | 6.7 | 7 | 13 | 680 | ND | YES | NO | NO | YES | NO |
| Dilution factor for BTEX 5 | 07-Mar-02 | 1 | 3.0 | ND | ND | 250 | 1.6 | YES | NO | NO | YES | NO |
| | | | | | | | | | | | | |
| **MW19-8** | | | | | | | | | | | | |
| Dilution factor for BTEX 50 | 15-Nov-99 | 4 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| Dilution factor for BTEX 2 | 01-Aug-01 | 3 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |
| | | | | | | | | | | | | |
| **MW19-9D** | | | | | | | | | | | | |
| Dilution factor for BTEX 2 | 01-Aug-01 | 3 | ND | ND | ND | ND | ND | NO | NO | NO | NO | NO |

LEGEND
ug/L = micrograms per liter
NJGWQS = New Jersey Groundwater Quality Standards
ROD: Record of Decision
NA = Not Applicable
NS = Not Sampled
ND: No Detection
duplicate = Duplicate sample
NR = Not Run
660 Concentration exceeds NJGWQS

NOTES
(1) Low flow sampling initiated 1st quarter 2002



Prepared By: RMT, Inc - Chicago
Nicholas J. Clevett
Project Manager

# TABLE 7
## L.E. Carpenter and Company, Wharton, New Jersey
### Groundwater Elevations

| WELL LOCATION | WELL TYPE | WELL INSTALLATION AND CONSTRUCTION INFORMATION [3] | | | | | | | | | | PROFESSIONAL SURVEY INFORMATION | | | | ELEVATIONS (FT. MSL) | | | QUARTERLY MEASUREMENT INFORMATION [4] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MANAGING CONSULTANT | INSTALLATION DATE | TOTAL WELL DEPTH (FT) | WELL DIAMETER (IN) | SCREEN MATERIAL | SLOT SIZE (IN) | TOP OF SCREEN (FT) | BOTTOM OF SCREEN (FT) | SCREENED INTERVAL (FT) | AQUIFER SYSTEM | BASELINE LOCATION (feet) [5] (Y) North | (X) East | GEODETIC LOCATION LATITUDE | LONGITUDE | GROUND | OUTER CASING | INNER WELL | MEAS. DATE | PRODUCT DEPTH | WATER DEPTH | PRODUCT ELEVATION | WATER ELEVATION | PRODUCT THICKNESS (ft) | CORRECTED WATER LEVEL ELEVATIONS [2] |
| CW-1 | Caisson Well | ROY F. WESTON | - | - | - | - | - | - | - | - | - | 754247.22 | 471142.06 | 40° 54' 14.2" | 74° 34' 34.7" | 630.83 | 634.35 | | 05-Mar-02 | - | 7.96 | - | 622.87 | - | - |
| CW-3 | Caisson Well | ROY F. WESTON | - | - | - | - | - | - | - | - | - | 754203.93 | 471309.9 | 40° 54' 13.8" | 74° 34' 32.5" | 628.63 | 633.30 | | 05-Mar-02 | - | 8.43 | - | 620.20 | - | - |
| GEI-1I | Piezometer | ROY F. WESTON | April to October 1989 | 44.34 | 2.00 | PVC | 0.02 | 31.62 | 41.62 | 10.00 | I | 754767.14 | 471095.56 | 40° 54' 19.3" | 74° 34' 35.3" | 628.44 | 630.93 | 630.78 | 05-Mar-02 | - | 6.01 | - | 624.77 | - | - |
| GEI-2I | Piezometer | ROY F. WESTON | April to October 1989 | 46.28 | 2.00 | PVC | 0.02 | 31.50 | 41.50 | 10.00 | I | 754573.99 | 470499.76 | 40° 54' 17.4" | 74° 34' 43.1" | 635.92 | 638.35 | 638.20 | 05-Mar-02 | - | 12.72 | - | 625.48 | - | - |
| GEI-2S | Piezometer | ROY F. WESTON | April to October 1989 | 22.21 | 2.00 | PVC | 0.02 | 10.00 | 20.00 | 10.00 | S | 754566 | 470506.18 | 40° 54' 17.3" | 74° 34' 43.0" | 635.46 | 637.87 | 637.67 | 05-Mar-02 | - | 12.48 | - | 625.19 | - | - |
| GEI-3I | Piezometer | ROY F. WESTON | April to October 1989 | 53.29 | 2.00 | PVC | 0.02 | 30.00 | 40.00 | 10.00 | I | 754311.79 | 470453.7 | 40° 54' 14.8" | 74° 34' 43.7" | 637.56 | 639.99 | 639.85 | 05-Mar-02 | - | 14.81 | - | 625.04 | - | - |
| MW-1(R) | Monitoring Well | ROY F. WESTON | February 3, 1995 | 22.50 | 4.00 | STEEL | 0.01 | 7.00 | 22.50 | 15.50 | S | 754207.21 | 470825.97 | 40° 54' 13.8" | 74° 34' 38.8" | 635.79 | 635.78 | 635.47 | 05-Mar-02 | 10.96 | 11.82 | 624.51 | 623.65 | 0.86 | 624.46 |
| MW-2(R) | Monitoring Well | ROY F. WESTON | January 30, 1995 | 13.00 | 2.00 | PVC | 0.01 | 2.00 | 12.00 | 10.00 | S | 754272.74 | 471267.56 | 40° 54' 14.4" | 74° 34' 33.1" | 629.06 | 632.28 | 632.14 | 05-Mar-02 | - | 7.90 | - | 624.24 | - | - |
| MW-3 | Monitoring Well | WEHRAN ENG. | May 15, 1980 | 27.00 | 2.00 | STEEL | 0.01 | 1.50 | 27.00 | 25.50 | S | 754227.41 | 471302.62 | 40° 54' 14.0" | 74° 34' 32.6" | 628.64 | 632.27 | 632.56 | 05-Mar-02 | 7.86 | 9.91 | 624.70 | 622.65 | 2.05 | 624.57 |
| MW-4 [3] | Monitoring Well | WEHRAN ENG. | May 20, 1980 | 27.00 | 2.00 | STEEL | 0.01 | 1.50 | 27.00 | 25.50 | S | 754070.52 | 471162.53 | 40° 54' 12.4" | 74° 34' 34.4" | 628.86 | 632.31 | 632.50 | 05-Mar-02 | - | 7.41 | - | 625.09 | - | - |
| MW-6(R) | Monitoring Well | ROY F. WESTON | January 25, 1995 | 10.98 | 2.00 | PVC | 0.02 | 0.98 | 10.98 | 10.00 | S | 754210.83 | 471191.61 | 40° 54' 13.8" | 74° 34' 34.1" | 629.82 | 632.64 | 632.42 | 05-Mar-02 | 6.88 | 6.89 | 625.54 | 625.53 | 0.01 | 625.54 |
| MW-8 [3] | Monitoring Well | GROUNDWATER TECHNOLOGIES | 1983 | 19.00 | 2.00 | STEEL | 0.02 | 0.00 | 19.00 | 19.00 | S | 754099.29 | 471251.06 | 40° 54' 12.7" | 74° 34' 33.3" | 627.99 | 630.56 | 628.79 | 05-Mar-02 | - | 4.96 | - | 623.83 | - | - |
| MW-9 [3] | Monitoring Well | GROUNDWATER TECHNOLOGIES | 1983 | 20.50 | 2.00 | STEEL | 0.02 | 0.50 | 20.00 | 19.50 | S | 754075.94 | 471111.03 | 40° 54' 12.5" | 74° 34' 35.1" | 629.21 | 631.69 | 630.18 | 05-Mar-02 | - | 4.47 | - | 625.71 | - | - |
| MW-11S | Monitoring Well | ROY F. WESTON | April to October 1989 | 14.73 | 4.00 | STEEL | 0.02 | 4.37 | 14.41 | 10.00 | S | 754226.73 | 471126.83 | 40° 54' 14.0" | 74° 34' 34.9" | 631.23 | 633.26 | 632.96 | 05-Mar-02 | 8.78 | 13.20 | 624.18 | 619.76 | 4.42 | 623.90 |
| MW-11I(R) | Monitoring Well | RMT, INC. | February 20, 1998 | 52.00 | 2.00 | STEEL | 0.01 | 42.00 | 52.00 | 10.00 | I | 754237.94 | 471128.05 | 40° 54' 14.1" | 74° 34' 34.9" | 630.89 | 633.67 | 633.33 | 05-Mar-02 | - | 8.97 | - | 624.36 | - | - |
| MW-11D(R) [3] | Monitoring Well | RMT, INC. | February 20, 1998 | 157.00 | 2.00 | STEEL | 0.01 | 147.00 | 157.00 | 10.00 | D | 754244.62 | 471124.66 | 40° 54' 14.2" | 74° 34' 34.9" | 630.66 | 633.35 | 633.09 | 05-Mar-02 | - | 7.44 | - | 625.65 | - | - |
| MW-12S(R) | Monitoring Well | ROY F. WESTON | May 7, 1996 | 14.45 | 4.00 | PVC | 0.02 | 2.45 | 14.45 | 12.00 | S | 754053.97 | 471042.34 | 40° 54' 12.3" | 74° 34' 35.9" | 632.17 | 634.86 | 634.33 | 05-Mar-02 | - | 6.69 | - | 627.64 | - | - |
| MW-13S | Monitoring Well | ROY F. WESTON | April to October 1989 | 16.39 | 4.00 | STEEL | 0.02 | 5.37 | 15.14 | 10.00 | S | 754353.97 | 471370.04 | 40° 54' 15.3" | 74° 34' 31.7" | 628.34 | 631.40 | 631.23 | 05-Mar-02 | - | 6.75 | - | 624.48 | - | - |
| MW-13S(R) | Monitoring Well | ROY F. WESTON | January 27, 1995 | 17.00 | 2.00 | PVC | 0.01 | 2.00 | 12.00 | 10.00 | S | 754333.07 | 471365.71 | 40° 54' 15.0" | 74° 34' 31.8" | 628.26 | 630.96 | 630.59 | 05-Mar-02 | - | 6.43 | - | 624.16 | - | - |
| MW-13I | Monitoring Well | ROY F. WESTON | July 31, 1989 | 46.30 | 2.00 | STEEL | 0.02 | 35.22 | 45.26 | 10.00 | I | 754337.8 | 471360.31 | 40° 54' 15.1" | 74° 34' 31.9" | 628.36 | 630.88 | 630.66 | 05-Mar-02 | - | 6.44 | - | 624.22 | - | - |
| MW-14S | Monitoring Well | ROY F. WESTON | April to October 1989 | 15.46 | 4.00 | STEEL | 0.02 | 3.42 | 13.46 | 10.00 | S | 754255.02 | 471423.66 | 40° 54' 14.3" | 74° 34' 31.0" | 625.78 | 628.63 | 628.41 | 05-Mar-02 | - | 4.50 | - | 623.91 | - | - |
| MW-14I [3] | Monitoring Well | ROY F. WESTON | April to October 1989 | 44.30 | 2.00 | STEEL | 0.02 | 33.22 | 43.26 | 10.00 | I | 754250.22 | 471409.52 | 40° 54' 14.2" | 74° 34' 31.2" | 625.93 | 628.32 | 628.23 | 05-Mar-02 | - | 4.12 | - | 624.11 | - | - |
| MW-15S [3] | Monitoring Well | ROY F. WESTON | April to October 1989 | 25.94 | 4.00 | STEEL | 0.02 | 9.37 | 19.41 | 10.00 | S | 754326.58 | 470891.83 | 40° 54' 15.0" | 74° 34' 38.0" | 634.83 | 637.03 | 636.77 | 05-Mar-02 | - | 12.17 | - | 624.60 | - | - |
| MW-15I [3] | Monitoring Well | ROY F. WESTON | July 17, 1989 | 43.92 | 2.00 | STEEL | 0.02 | 30.55 | 40.26 | 10.00 | I | 754325.8 | 470901.47 | 40° 54' 15.0" | 74° 34' 37.9" | 634.74 | 636.88 | 636.66 | 05-Mar-02 | - | 12.19 | - | 624.47 | - | - |
| MW-16S | Monitoring Well | ROY F. WESTON | April to October 1989 | 23.90 | 4.00 | STEEL | 0.02 | 7.37 | 17.41 | 10.00 | S | 754424.11 | 470704.1 | 40° 54' 15.9" | 74° 34' 40.4" | 632.57 | 634.69 | 634.47 | 05-Mar-02 | - | 9.43 | - | 625.04 | - | - |
| MW-16I | Monitoring Well | ROY F. WESTON | April to October 1989 | 46.53 | 2.00 | STEEL | 0.02 | 32.22 | 42.26 | 10.00 | I | 754435.1 | 470710.17 | 40° 54' 16.0" | 74° 34' 40.3" | 632.43 | 635.08 | 634.96 | 05-Mar-02 | - | 10.06 | - | 624.90 | - | - |
| MW-17S [3] | Monitoring Well | ROY F. WESTON | April to October 1989 | 15.04 | 4.00 | STEEL | 0.02 | 5.20 | 15.24 | 10.00 | S | 754109.68 | 470759.85 | 40° 54' 12.8" | 74° 34' 39.7" | 632.95 | 634.92 | 634.79 | 05-Mar-02 | - | 10.06 | - | 624.73 | - | - |
| MW-18S | Monitoring Well | ROY F. WESTON | April to October 1989 | 15.04 | 2.00 | STEEL | 0.02 | 4.37 | 14.41 | 10.00 | S | 754677.95 | 471117.26 | 40° 54' 18.4" | 74° 34' 35.0" | 628.22 | 631.48 | 631.26 | 05-Mar-02 | - | 6.32 | - | 624.94 | - | - |
| MW-18I | Monitoring Well | ROY F. WESTON | April to October 1989 | 44.69 | 2.00 | STEEL | 0.02 | 34.22 | 44.26 | 10.00 | I | 754675.11 | 471106.07 | 40° 54' 18.4" | 74° 34' 35.2" | 628.35 | 631.19 | 631.04 | 05-Mar-02 | - | 6.35 | - | 624.69 | - | - |
| MW-19 [6] | Monitoring Well | ROY F. WESTON | May 20, 1991 | 17.00 | 4.00 | STEEL | 0.02 | 7.00 | 17.00 | 10.00 | S | 754537.15 | 470454.45 | 40° 54' 17.1" | 74° 34' 43.7" | 636.82 | 636.83 | 636.50 | 05-Mar-02 | - | 11.29 | - | 625.21 | - | - |
| MW-19-1 [6] | Monitoring Well | RMT, INC. | February 17, 1998 | 17.00 | 4.00 | STEEL | 0.01 | 6.00 | 15.50 | 9.50 | S | 754534.52 | 470427.63 | 40° 54' 17.0" | 74° 34' 44.0" | 636.53 | 636.56 | 636.24 | 05-Mar-02 | - | 10.94 | - | 625.30 | - | - |
| MW-19-2 [6] | Monitoring Well | RMT, INC. | February 17, 1998 | 16.00 | 4.00 | STEEL | 0.01 | 6.00 | 16.00 | 10.00 | S | 754551.81 | 470429.56 | 40° 54' 17.2" | 74° 34' 44.0" | 637.06 | 637.10 | 636.90 | 05-Mar-02 | - | 11.63 | - | 625.27 | - | - |
| MW-19-3 [6] | Monitoring Well | RMT, INC. | February 18, 1998 | 16.00 | 4.00 | STEEL | 0.01 | 6.00 | 15.50 | 9.50 | S | 754539.4 | 470394.2 | 40° 54' 17.1" | 74° 34' 44.5" | 637.57 | 637.66 | 637.30 | 05-Mar-02 | - | 11.96 | - | 625.34 | - | - |
| MW-19-4 [6] | Monitoring Well | RMT, INC. | February 18, 1998 | 16.00 | 4.00 | STEEL | 0.01 | 6.00 | 15.50 | 9.50 | S | 754505.39 | 470432.08 | 40° 54' 16.7" | 74° 34' 44.0" | 636.29 | 636.36 | 636.03 | 05-Mar-02 | - | 10.61 | - | 625.42 | - | - |
| MW-19-5 [6] | Monitoring Well | RMT, INC. | February 18, 1998 | 16.00 | 2.00 | PVC | 0.01 | 6.00 | 15.50 | 9.50 | S | 754565.53 | 470470.75 | 40° 54' 17.3" | 74° 34' 43.5" | 636.53 | 636.53 | 636.16 | 05-Mar-02 | - | 10.96 | - | 625.20 | - | - |
| MW-19-6 [6][8] | Monitoring Well | RMT, INC. | October 28, 1999 | 20.00 | 2.00 | STEEL | 0.02 | 10.00 | 20.00 | 10.00 | S | 754578.87 | 470443.1 | 40° 54' 17.5" | 74° 34' 43.8" | 636.77 | 636.76 | 636.42 | 05-Mar-02 | - | 11.22 | - | 625.20 | - | - |
| MW-19-7 [6][8] | Monitoring Well | RMT, INC. | October 29, 1999 | 20.00 | 2.00 | STEEL | 0.02 | 10.00 | 20.00 | 10.00 | S | 754595.66 | 470501.7 | 40° 54' 17.6" | 74° 34' 43.1" | 635.91 | 635.96 | 635.60 | 05-Mar-02 | - | 10.48 | - | 625.12 | - | - |
| MW-19-8 [6][8] | Monitoring Well | RMT, INC. | October 28, 1999 | 20.00 | 2.00 | STEEL | 0.02 | 11.00 | 20.00 | 9.00 | S | 754617.42 | 470493.65 | 40° 54' 17.8" | 74° 34' 43.2" | 636.42 | 636.42 | 635.96 | 05-Mar-02 | - | 10.98 | - | 624.98 | - | - |
| MW-19-9D [6][8] | Monitoring Well | RMT, INC. | July 10, 2001 | 35.00 | 2.00 | STEEL | 0.02 | 25.00 | 35.00 | 10.00 | S | 754590 | 470442 | 40° 54' 17.9" | 74° 34' 42.4" | 636.99 | 637.01 | 636.70 | 05-Mar-02 | - | - | - | #VALUE! | - | - |
| MW-20 | Monitoring Well | ROY F. WESTON | May 21, 1991 | 14.00 | 4.00 | STEEL | 0.02 | 4.00 | 14.00 | 10.00 | S | 754550.52 | 470647.25 | 40° 54' 17.2" | 74° 34' 41.2" | 634.82 | 637.03 | 636.77 | 05-Mar-02 | - | 10.93 | - | 625.84 | - | - |
| MW-21 [3] | Monitoring Well | ROY F. WESTON | May 22, 1991 | 15.00 | 4.00 | STEEL | 0.02 | 5.00 | 15.00 | 10.00 | S | 754240.97 | 471645.78 | 40° 54' 14.1" | 74° 34' 28.2" | 625.17 | 629.09 | 628.80 | 05-Mar-02 | - | 4.93 | - | 623.87 | - | - |
| MW-22(R) [3] | Monitoring Well | ROY F. WESTON | July 22, 1997 | 7.50 | 2.00 | STEEL | - | - | - | - | S | 754200.52 | 471409.13 | 40° 54' 13.7" | 74° 34' 31.2" | 625.94 | 628.31 | 628.13 | 05-Mar-02 | - | 4.17 | - | 623.96 | - | - |
| MW-23 | Monitoring Well | ROY F. WESTON | January 6, 1992 | 6.00 | 2.00 | STEEL | 0.02 | 1.00 | 6.00 | 5.00 | S | 754413.43 | 471469.4 | 40° 54' 15.8" | 74° 34' 30.5" | 628.70 | 630.95 | 630.64 | 05-Mar-02 | - | 4.47 | - | 626.17 | - | - |
| MW-25(R) [3] | Monitoring Well | ROY F. WESTON | July 22, 1997 | 10.00 | 2.00 | STEEL | - | - | - | - | S | 754201.83 | 471518.21 | 40° 54' 13.7" | 74° 34' 29.8" | 625.25 | 627.37 | 627.22 | 05-Mar-02 | - | 3.05 | - | 624.17 | - | - |
| MW-26 | Monitoring Well | ROY F. WESTON | May 8, 1996 | 11.80 | 4.00 | PVC | 0.02 | 1.80 | 11.80 | 10.00 | S | 754401.17 | 471174.36 | 40° 54' 15.7" | 74° 34' 34.3" | 630.84 | 634.39 | 633.26 | 05-Mar-02 | - | 8.86 | - | 624.40 | - | - |
| RW-1 | Recovery Well | ROY F. WESTON | June 17, 1991 | 30.00 | 8.00 | STEEL | 0.02 | 5.00 | 30.00 | 25.00 | S | 754163.96 | 470802.1 | 40° 54' 13.6" | 74° 34' 39.1" | 635.19 | 637.81 | 637.38 | 05-Mar-02 | 12.78 | 13.10 | 624.60 | 624.28 | 0.32 | 624.58 |
| RW-2 | Recovery Well | ROY F. WESTON | June 22, 1991 | 30.00 | 8.00 | STEEL | 0.02 | 3.00 | 30.00 | 27.00 | S | 754245.98 | 471289.8 | 40° 54' 14.7" | 74° 34' 32.8" | 629.80 | 631.78 | 631.68 | 05-Mar-02 | - | 7.39 | - | 624.29 | - | - |
| RW-3 | Recovery Well | ROY F. WESTON | June 21, 1991 | 28.00 | 8.00 | STEEL | 0.02 | 3.00 | 28.00 | 25.00 | S | 754315.59 | 471206.84 | 40° 54' 14.9" | 74° 34' 33.9" | 629.89 | 632.15 | 631.99 | 05-Mar-02 | - | 7.21 | - | 624.78 | - | - |
| SG-D1 [1] | Drainage Channel Staff Gauge | RMT, INC. | November-98 | NA | NA | NA | NA | NA | NA | NA | NA | 754428.57 | 471240.37 | - | - | 626.41 | - | - | 05-Mar-02 | - | 0.55 | - | 623.63 | - | - |
| SG-D2 [1] | Drainage Channel Staff Gauge | RMT, INC. | November-98 | NA | NA | NA | NA | NA | NA | NA | NA | 754285.43 | 471361.24 | - | - | 626.86 | - | - | 05-Mar-02 | - | 0.34 | - | 623.87 | - | - |
| SG-D3 [1] | Drainage Channel Staff Gauge | RMT, INC. | November-98 | NA | NA | NA | NA | NA | NA | NA | NA | 754381.47 | 471548.31 | - | - | 626.43 | - | - | 05-Mar-02 | - | 0.85 | - | 623.95 | - | - |
| SG-R1 [1] | Rockaway River Staff Gauge | RMT, INC. | November-98 | NA | NA | NA | NA | NA | NA | NA | NA | 754313.99 | 470408.70 | - | - | 641.52 | - | - | 05-Mar-02 | - | 1.55 | - | 639.74 | - | - |
| SG-R2 [1] | Rockaway River Staff Gauge | RMT, INC. | November-98 | NA | NA | NA | NA | NA | NA | NA | NA | 754056.10 | 470949.16 | - | - | 628.84 | - | - | 05-Mar-02 | - | Not measured | | | - | - |
| SG-R3 [1] | Rockaway River Staff Gauge | RMT, INC. | November-98 | NA | NA | NA | NA | NA | NA | NA | NA | 754113.47 | 471426.67 | - | - | 627.38 | - | - | 05-Mar-02 | - | 0.50 | | 624.55 | - | - |



Prepared By: Nicholas J. Clevett
RMT, Inc. Project Manager

# TABLE 7
## L.E. Carpenter and Company, Wharton, New Jersey
### Groundwater Elevations



| WELL LOCATION | WELL TYPE | WELL INSTALLATION AND CONSTRUCTION INFORMATION (7) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MANAGING CONSULTANT | INSTALLATION DATE | TOTAL WELL DEPTH (FT) | WELL DIAMETER (IN) | SCREEN MATERIAL | SLOT SIZE (IN) | TOP OF SCREEN (FT) | BOTTOM OF SCREEN (FT) | SCREENED INTERVAL (FT) | AQUIFER SYSTEM |
| WP-A1 | Area A Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-A2 | Area A Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-A3 | Area A Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-A4 | Area A Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-A5 | Area A Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-A6 | Area A Well Point | ROY F. WESTON | 1993 | 13.00 | 2.00 | PVC | - | 3.00 | 13.00 | 10.00 | S |
| WP-A7 | Area A Well Point | ROY F. WESTON | 1993 | 11.00 | 2.00 | PVC | - | 1.00 | 11.00 | 10.00 | S |
| WP-A8 | Area A Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-A9 | Area A Well Point | ROY F. WESTON | 1993 | 16.00 | 2.00 | PVC | - | 6.00 | 16.00 | 10.00 | S |
| WP-B1 | Area B Well Point | ROY F. WESTON | 1993 | 11.00 | 2.00 | PVC | - | 1.00 | 11.00 | 10.00 | S |
| WP-B2 | Area B Well Point | ROY F. WESTON | 1993 | 11.00 | 2.00 | PVC | - | 1.00 | 11.00 | 10.00 | S |
| WP-B3 | Area B Well Point | ROY F. WESTON | 1993 | 11.00 | 2.00 | PVC | - | 1.00 | 11.00 | 10.00 | S |
| WP-B4 | Area B Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-B5 | Area B Well Point | ROY F. WESTON | 1993 | 11.00 | 2.00 | PVC | - | 1.00 | 11.00 | 10.00 | S |
| WP-B6 | Area B Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-B7 | Area B Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-B10 | Area B Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-C1 | Area C Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-C2 | Area C Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-C3 | Area C Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |
| WP-C4 | Area C Well Point | ROY F. WESTON | 1993 | - | - | - | - | - | - | - | - |

| WELL LOCATION | PROFESSIONAL SURVEY INFORMATION | | | | ELEVATIONS (FT. MSL) | | | QUARTERLY MEASUREMENT INFORMATION (6) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | BASELINE LOCATION (feet) (8) | | GEODETIC LOCATION | | | | | | | | | | | |
| | (Y) North | (X) East | LATITUDE | LONGITUDE | GROUND | OUTER CASING | INNER WELL | MEAS. DATE | PRODUCT DEPTH | WATER DEPTH | PRODUCT ELEVATION | WATER ELEVATION | PRODUCT THICKNESS (ft) | CORRECTED WATER LEVEL ELEVATIONS (2) |
| WP-A1 | 754220.52 | 470825.71 | 40° 54' 13.9" | 74° 34' 38.8" | 636.29 | 636.32 | 635.81 | 05-Mar-02 | - | 12.10 | | 623.71 | - | - |
| WP-A2 | 754249.34 | 470813.05 | 40° 54' 14.2" | 74° 34' 39.0" | 637.31 | 639.62 | 639.19 | 05-Mar-02 | 14.62 | 15.28 | 624.57 | 623.91 | 0.66 | 624.53 |
| WP-A3 | 754195.42 | 470717.12 | 40° 54' 13.7" | 74° 34' 40.3" | 635.97 | 635.97 | 635.56 | 05-Mar-02 | | 11.35 | - | 624.21 | - | - |
| WP-A4 | 754229.46 | 470853.24 | 40° 54' 14.0" | 74° 34' 38.5" | 635.63 | 635.66 | 635.10 | 05-Mar-02 | | COVERED WITH DIRT PILE | | | | |
| WP-A5 | 754266.54 | 470886.02 | 40° 54' 14.4" | 74° 34' 38.1" | 635.70 | | 637.85 | 05-Mar-02 | | 12.95 | | 624.90 | - | - |
| WP-A6 | 754184.69 | 470888.45 | 40° 54' 13.6" | 74° 34' 38.0" | 634.95 | | 637.28 | 05-Mar-02 | 12.74 | 13.69 | 624.54 | 623.59 | 0.95 | 624.48 |
| WP-A7 | 754196.44 | 470999.43 | 40° 54' 13.7" | 74° 34' 36.6" | 632.94 | | 634.88 | 05-Mar-02 | 10.45 | 12.00 | 624.43 | 622.88 | 1.55 | 624.33 |
| WP-A8 | 754260.25 | 470998.97 | 40° 54' 14.3" | 74° 34' 36.6" | 634.70 | | 637.56 | 05-Mar-02 | 13.00 | 15.68 | 624.56 | 621.88 | 2.68 | 624.39 |
| WP-A9 | 754184.12 | 470935.26 | 40° 54' 13.6" | 74° 34' 37.4" | 637.22 | | 639.32 | 05-Mar-02 | 14.77 | 17.25 | 624.55 | 622.07 | 2.48 | 624.39 |
| WP-B1 | 754218.63 | 471068.54 | 40° 54' 13.9" | 74° 34' 35.7" | 631.85 | | 633.65 | 05-Mar-02 | 7.58 | 7.81 | 626.07 | 625.84 | 0.23 | 626.06 |
| WP-B2 | 754282.8 | 471115.71 | 40° 54' 14.5" | 74° 34' 35.1" | 630.48 | 632.58 | 632.25 | 05-Mar-02 | | 7.85 | | 624.40 | - | - |
| WP-B3 | 754243.43 | 471088.51 | 40° 54' 14.2" | 74° 34' 35.4" | 631.71 | | 633.33 | 05-Mar-02 | | 7.94 | | 625.39 | - | - |
| WP-B4 | 754275.31 | 471156.49 | 40° 54' 14.5" | 74° 34' 34.5" | 629.93 | | 632.56 | 05-Mar-02 | 8.18 | - | 624.38 | - | All Product | - |
| WP-B5 | 754296.93 | 471181.49 | 40° 54' 14.7" | 74° 34' 34.2" | 630.03 | | 632.11 | 05-Mar-02 | - | 6.56 | - | 625.55 | - | - |
| WP-B6 | 754171.56 | 471223.53 | 40° 54' 13.4" | 74° 34' 33.7" | 629.72 | | 631.86 | 05-Mar-02 | - | 6.59 | - | 625.27 | - | - |
| WP-B7 | 754179.91 | 471330.82 | 40° 54' 13.5" | 74° 34' 32.3" | 627.62 | | 629.49 | 05-Mar-02 | - | 4.97 | - | 624.52 | - | - |
| WP-B10 | 754319.10 | 471144.76 | 40° 54' 14.9" | 74° 34' 34.7" | 630.42 | 633.12 | 632.74 | 05-Mar-02 | - | 8.33 | - | 624.41 | - | - |
| WP-C1 | 754087.66 | 471038.32 | 40° 54' 12.6" | 74° 34' 36.1" | 632.81 | | 633.51 | 05-Mar-02 | - | 6.50 | - | 627.01 | - | - |
| WP-C2 | 754075.97 | 471074.74 | 40° 54' 12.5" | 74° 34' 35.6" | 633.02 | | 634.46 | 05-Mar-02 | - | 7.15 | - | 627.31 | - | - |
| WP-C3 | 754066.60 | 471009.58 | 40° 54' 12.4" | 74° 34' 36.4" | 631.00 | | 632.64 | 05-Mar-02 | - | 5.02 | - | 627.62 | - | - |
| WP-C4 | 754108.93 | 471050.74 | 40° 54' 12.8" | 74° 34' 35.9" | 632.44 | | 633.27 | 05-Mar-02 | - | 7.30 | - | 625.97 | - | - |

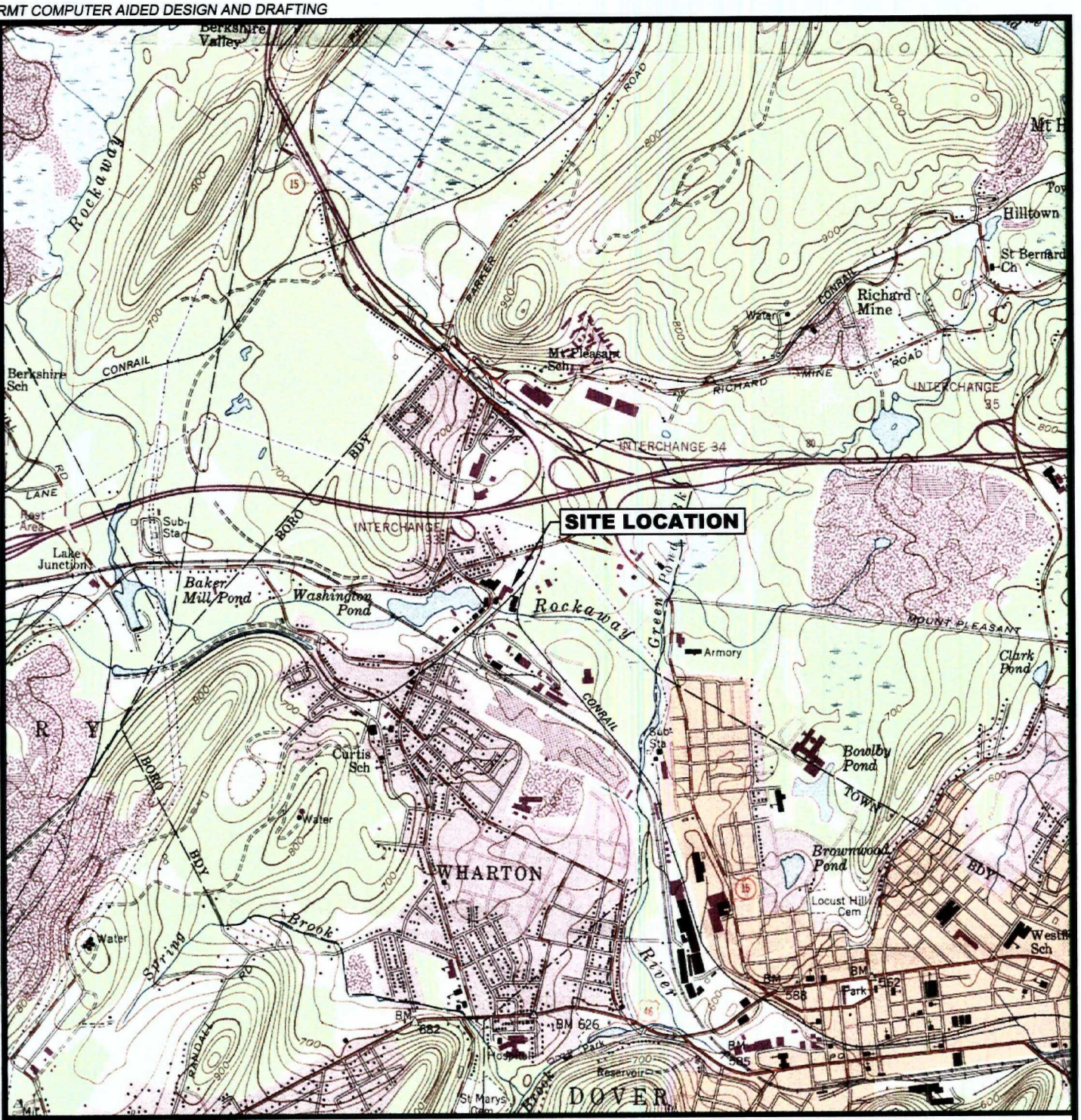
FOOTNOTES
(1) Elevation measured at the top of a 3.33 ft. Staff gauge. Water depth based on a visual observation of the water level on the Staff gauge.
(2) Corrected water level elevations utilize an average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999
@ MW-1(R); EFR-11 & WP-A8)
(3) Wells included in the quarterly sampling program. Depth to water recorded before purging
(4) Wells installed during new RI efforts per NJDEP and EPA request to further delineate MW19/Hot Spot 1 Area
(5) No boring log or well construction diagram available. Well specific information determined from Weston Geologic Cross Section
(6) "-" in the Quarterly Measurement Information section of this database indicates that the presence of free product was NOT detected at any measurable thickness and therefore did not generate a product elevation, product thickness nor require water level elevation to be corrected
(7) "-" in the Well Installation and Construction Information section indicates that well construction logs were not available for review
(8) Horizontal Datum: New Jersey State Plane Coordinate System NAD 83. Vertical Datum: NGVD 29
(9) All "19 series" wells were resurveyed August 8, 2001 at owners request. Wells MW19 through MW19-5 were converted to flush mount wells to allow for through traffic. Professional survey performed by James M. Stewart, Inc., Philadelphia, PA

GENERAL NOTES
All WP series wells finished elevation is 2 feet above nominal grade. Total depth of well only accounts for subsurface structure
Wells MW-1A, MW5, MW-7, MW-10, MW-11I, MW-11D, MW-14D, MW-17D, MW-18D, MW-22, MW-24, MW-25, WP-B8, Wp-D1, PZ-6A, PZ-2A(R), PZ-2AS, RW-1 have been abandoned
Wells MW-11I(R), MW11-D(R), MW-1(R), MW-2(R), MW-6(R), MW-22(R), and MW-25(R) are replacement wells

LEGEND
S: Shallow Aquifer System
I: Intermediate Aquifer System
D: Deep Aquifer System
R: Replacement Well
NAS: Not Assessable
REM: Removed
-' : Value of 0.00. Free Product not encountered at well



Prepared By: Nicholas J. Clevett
RMT, Inc. Project Manager




NEW JERSEY

QUADRANGLE LOCATION

N

0 2000' 4000'

APPROXIMATE SCALE IN FEET

**SOURCE**

1. BASE MAP DEVELOPED FROM THE DOVER, NEW JERSEY 7.5 MINUTE U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP, DATED 1954, PHOTOREVISED 1981.

RMT INC.

**LE CARPENTER**
**WHARTON, NEW JERSEY**

**SITE LOCATION MAP**

| | |
|---|---|
| DRAWN BY: | SJL |
| APPROVED BY: | NC |
| PROJECT NUMBER: | 3868.23 |
| FILE NUMBER: | 38682300.DWG |
| DATE: | APRIL 2001 |

**FIGURE 1**

RMT COMPUTER AIDED DESIGN AND DRAFTING

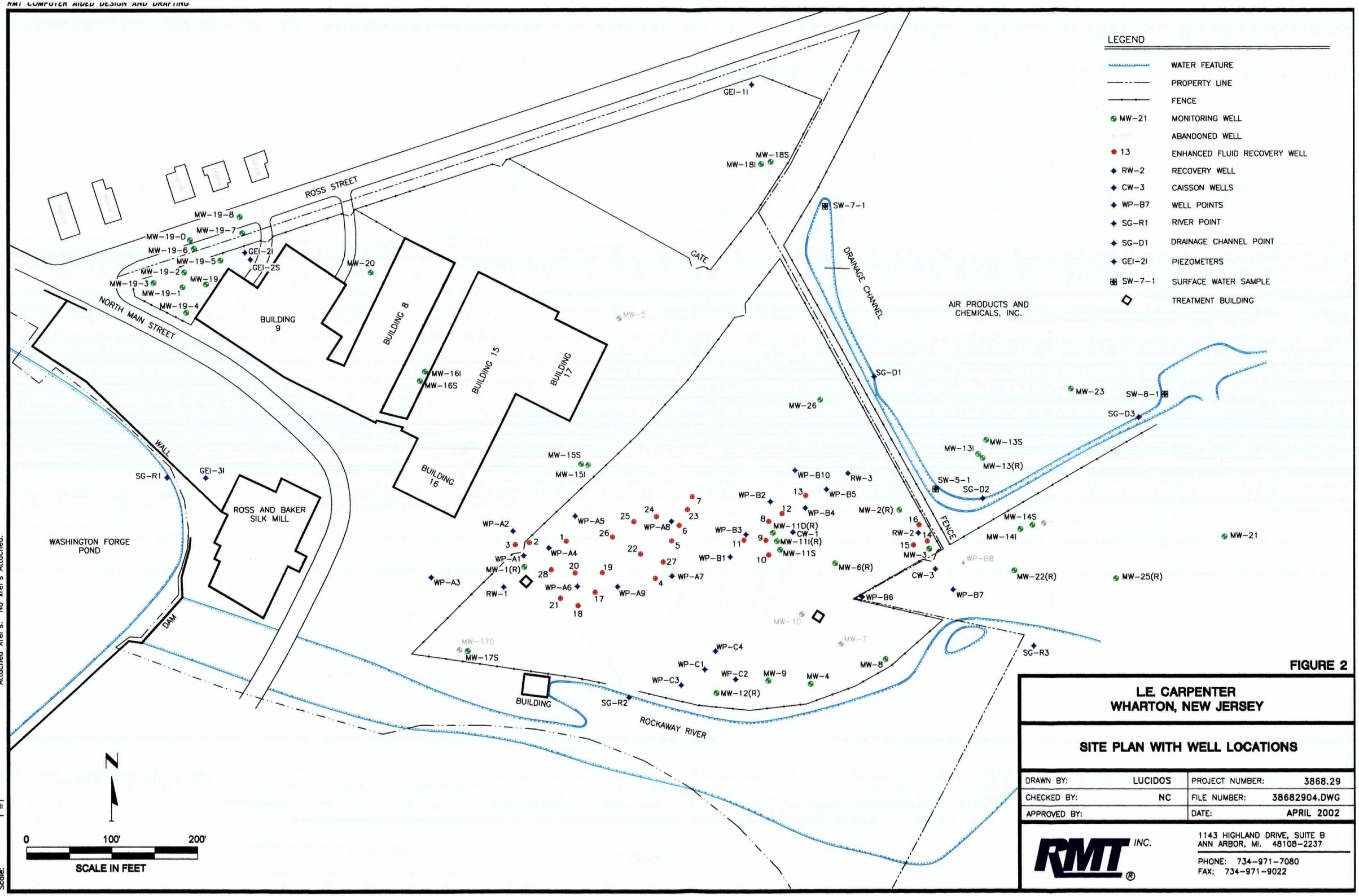



FIGURE 2

**LE. CARPENTER**
**WHARTON, NEW JERSEY**

**SITE PLAN WITH WELL LOCATIONS**

| | | | |
|---|---|---|---|
| DRAWN BY: | LUCIDOS | PROJECT NUMBER: | 3868.29 |
| CHECKED BY: | NC | FILE NUMBER: | 38682904.DWG |
| APPROVED BY: | | DATE: | APRIL 2002 |


RMT INC.
1143 HIGHLAND DRIVE, SUITE B
ANN ARBOR, MI. 48108-2237
PHONE: 734-971-7080
FAX: 734-971-9022


PLOT DATA
Drawing Name: [redacted]:\03868\29\3868290[redacted].dwg
Operator Name: lucidos
Scale: 1"=1'
Paper Size: [redacted]
Date: [redacted]
Plot Time: 2:28.5080 PM
Attached Xref's: No xref's Attached.

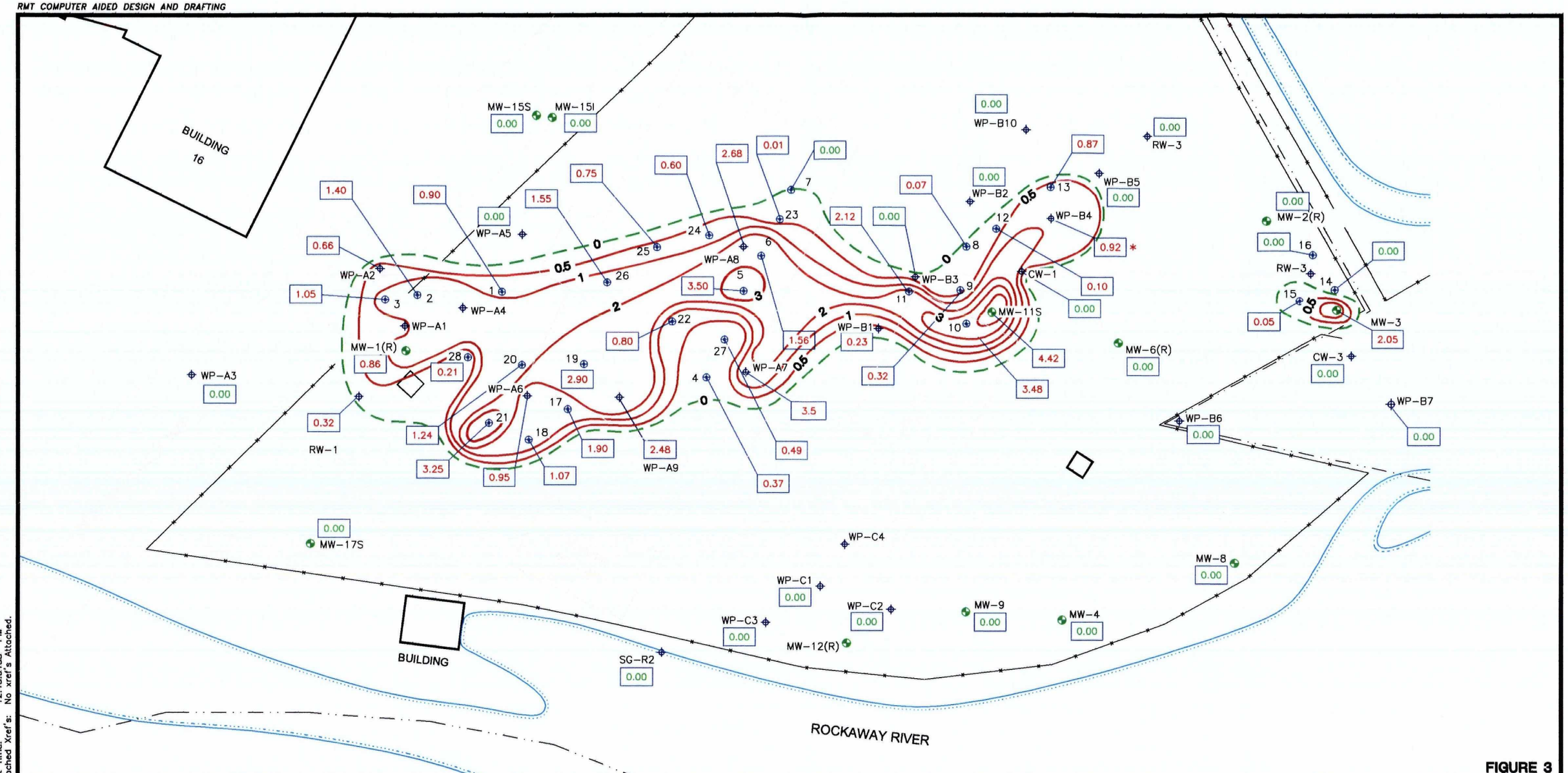



FIGURE 3

## LEGEND

- SURFACE WATER FEATURE
- PROPERTY LINE
- FENCE
- 1 APPARENT PRODUCT THICKNESS CONTOURS (FT)
- 0 APPROXIMATE OUTER LIMIT OF FREE PRODUCT
- 0.00 NO MEASURABLE PRODUCT
- 1.22 PRODUCT THICKNESS MEASURED IN WELL (FT) (Measurements collected at monitoring wells and well points) on March 5, 2002 by RMT, Inc.) (Measurements collected at EFR wells on March 26, 2002 by CEMCO)
- MW-13S MONITORING WELL
- ABANDONED WELL
- RW-2 RECOVERY WELL
- CW-3 CAISSON WELLS
- WP-B7 WELL POINTS WITH ELEVATION
- TREATMENT BUILDING
- 13 ENHANCED FLUID RECOVERY WELL (EFR)
- * PRODUCT EXTENDED BELOW BOTTOM OF WELL SCREEN AND IS ESTIMATED USING PREVIOUS DATA

N

0 50' 100'

SCALE IN FEET

**L.E. CARPENTER**
**WHARTON, NEW JERSEY**

**APPARENT FREE PRODUCT THICKNESS CONTOURS FOR 1st QUARTER 2002**

| | | | |
|---|---|---|---|
| DRAWN BY: | SJL | PROJECT NUMBER: | 3868.29 |
| CHECKED BY: | CT | FILE NUMBER: | 38682903.DWG |
| APPROVED BY: | JDD | DATE: | APRIL 2002 |

RMT INC.
1143 HIGHLAND DRIVE, SUITE B
ANN ARBOR, MI. 48108-2237
PHONE: 734-971-7080
FAX: 734-971-9022

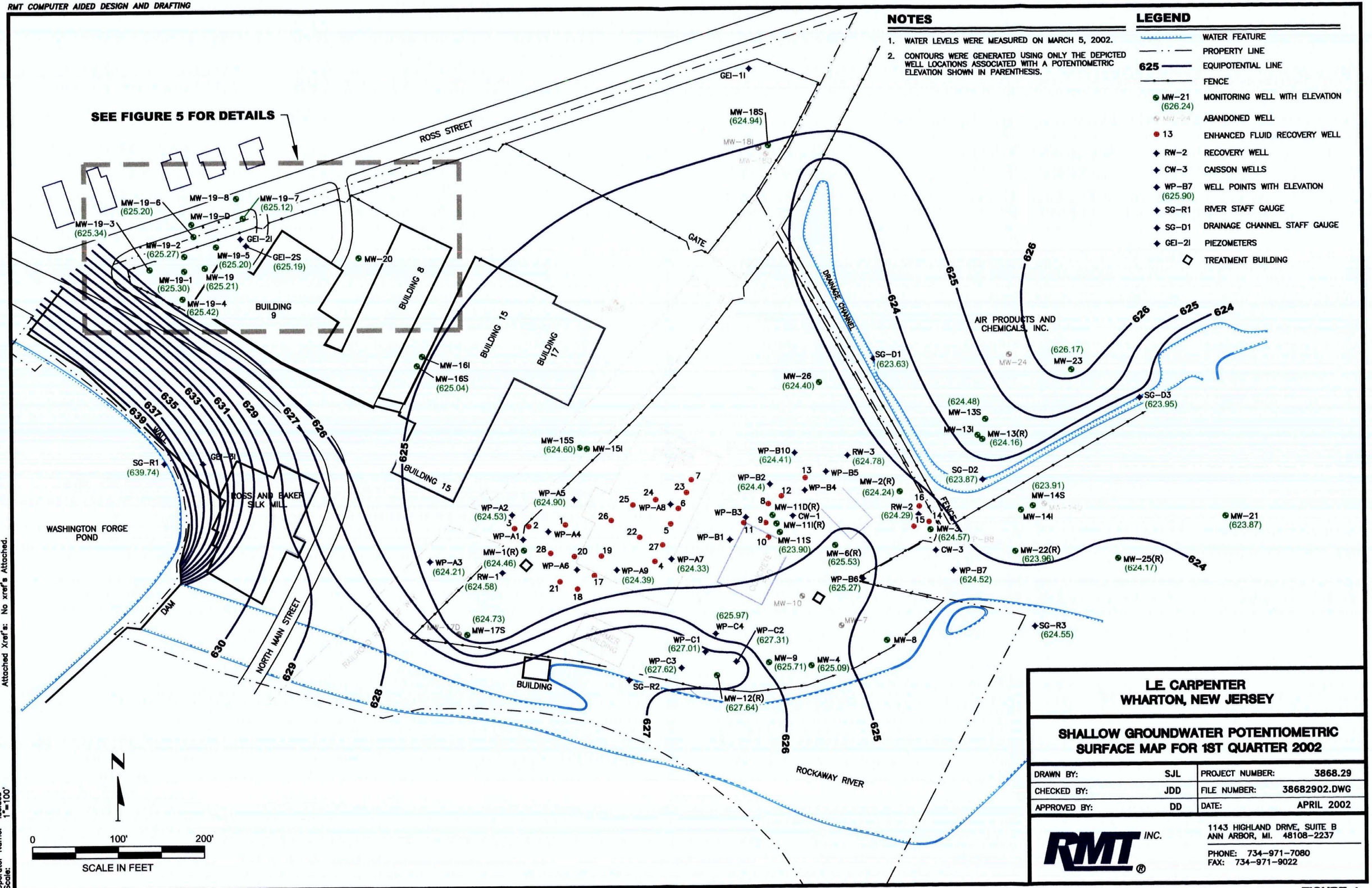
Dwg Name: [redacted]0386[redacted]wg
Operator Name: lucidos
Scale: 1"=50'
Dwg Size: [redacted]
Date: [redacted] Friday, [redacted] 12, [redacted]
Plot Time: 12:4[redacted] PM
Attached Xref's: No xref's Attached.

## NOTES

1. WATER LEVELS WERE MEASURED ON MARCH 5, 2002.
2. CONTOURS WERE GENERATED USING ONLY THE DEPICTED WELL LOCATIONS ASSOCIATED WITH A POTENTIOMETRIC ELEVATION SHOWN IN PARENTHESIS.

## LEGEND

- WATER FEATURE
- PROPERTY LINE
- 625 EQUIPOTENTIAL LINE
- FENCE
- MW-21 (626.24) MONITORING WELL WITH ELEVATION
- MW-24 ABANDONED WELL
- 13 ENHANCED FLUID RECOVERY WELL
- RW-2 RECOVERY WELL
- CW-3 CAISSON WELLS
- WP-B7 (625.90) WELL POINTS WITH ELEVATION
- SG-R1 RIVER STAFF GAUGE
- SG-D1 DRAINAGE CHANNEL STAFF GAUGE
- GEI-2I PIEZOMETERS
- TREATMENT BUILDING




**LE. CARPENTER**
**WHARTON, NEW JERSEY**

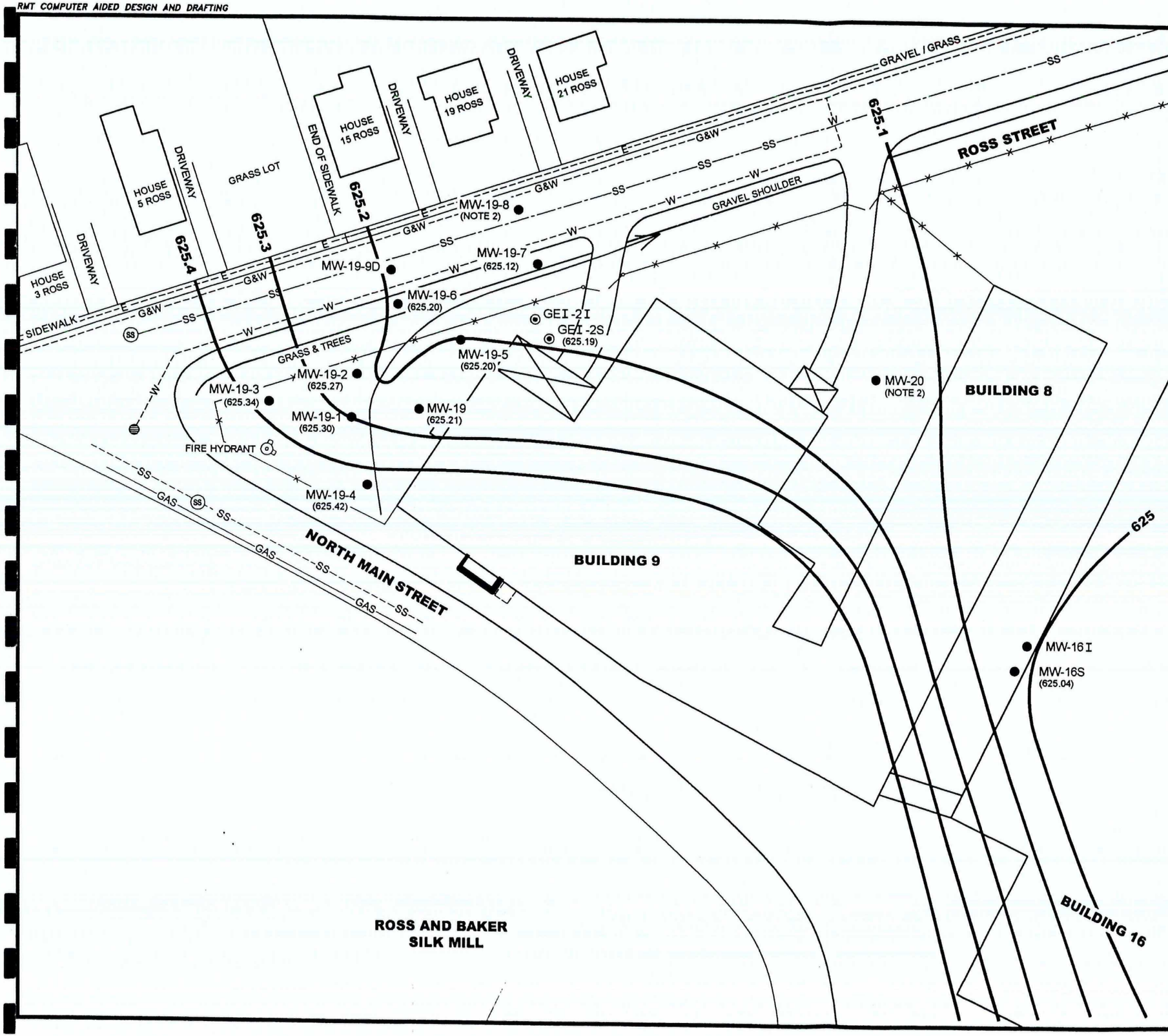
**SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE MAP FOR 1ST QUARTER 2002**

| | | | |
|---|---|---|---|
| DRAWN BY: | SJL | PROJECT NUMBER: | 3868.29 |
| CHECKED BY: | JDD | FILE NUMBER: | 38682902.DWG |
| APPROVED BY: | DD | DATE: | APRIL 2002 |

RMT INC.
1143 HIGHLAND DRIVE, SUITE B
ANN ARBOR, MI. 48108-2237
PHONE: 734-971-7080
FAX: 734-971-9022

**FIGURE 4**

PLOT DATA
Drawing Name: J:\03868\29\38682902.dwg
Operator Name: lucidos
Scale: 1"=100'
Dwg Size: 535546 Bytes
Plot Date: Tuesday, April 9, 2002
Plot Time: 08:37:42 AM
Attached Xref's: No xref's Attached.




## LEGEND

- FENCE LINE
- SS — APPROXIMATE LOCATION OF ROCKAWAY RIVER REGIONAL INTERCEPTOR SEWER
- 626 — GROUNDWATER ELEVATION CONTOUR
- MW-19-7 (626.33) — MONITORING WELL LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
- GEI-2S (626.36) — GEOPROBE INSTALLED PIEZOMETER LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
- SS — SANITARY SEWER
- G&W — GAS AND WATER
- E — ELECTRIC
- W — WATER
- APPROXIMATE GROUNDWATER FLOW DIRECTION

## NOTES

1. GROUNDWATER ELEVATIONS BASED ON LEVELS MEASURED ON MARCH 5, 2002.
2. ANOMALOUS ELEVATION

N

0 40' 80'

SCALE IN FEET

FIGURE 5

**L.E. CARPENTER**
**WHARTON, NEW JERSEY**

**MW-19 / HOT SPOT 1**
**GROUNDWATER ELEVATION CONTOURS**
**FOR MARCH 2002**

| | | | |
|---|---|---|---|
| DRAWN BY: | SJL | PROJECT NUMBER: | 3868.29 |
| CHECKED BY: | JDD | FILE NUMBER: | 38682901.DWG |
| APPROVED BY: | JDD | DATE: | APRIL 2002 |

RMT INC.
1143 HIGHLAND DRIVE, SUITE B
ANN ARBOR, MI. 48108-2237
PHONE: 734-971-7080
FAX: 734-971-9022

# Appendix A
# Report Certification

# REPORT CERTIFICATION
# PURSUANT TO N.J.A.C. 7:26E–1.5

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement, which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Mr. Cristopher R. Anderson

**PRINTED NAME**

Director, Environmental Services

**TITLE**

L.E. Carpenter & Company

**COMPANY**

Cristopher Anderson

**SIGNATURE**

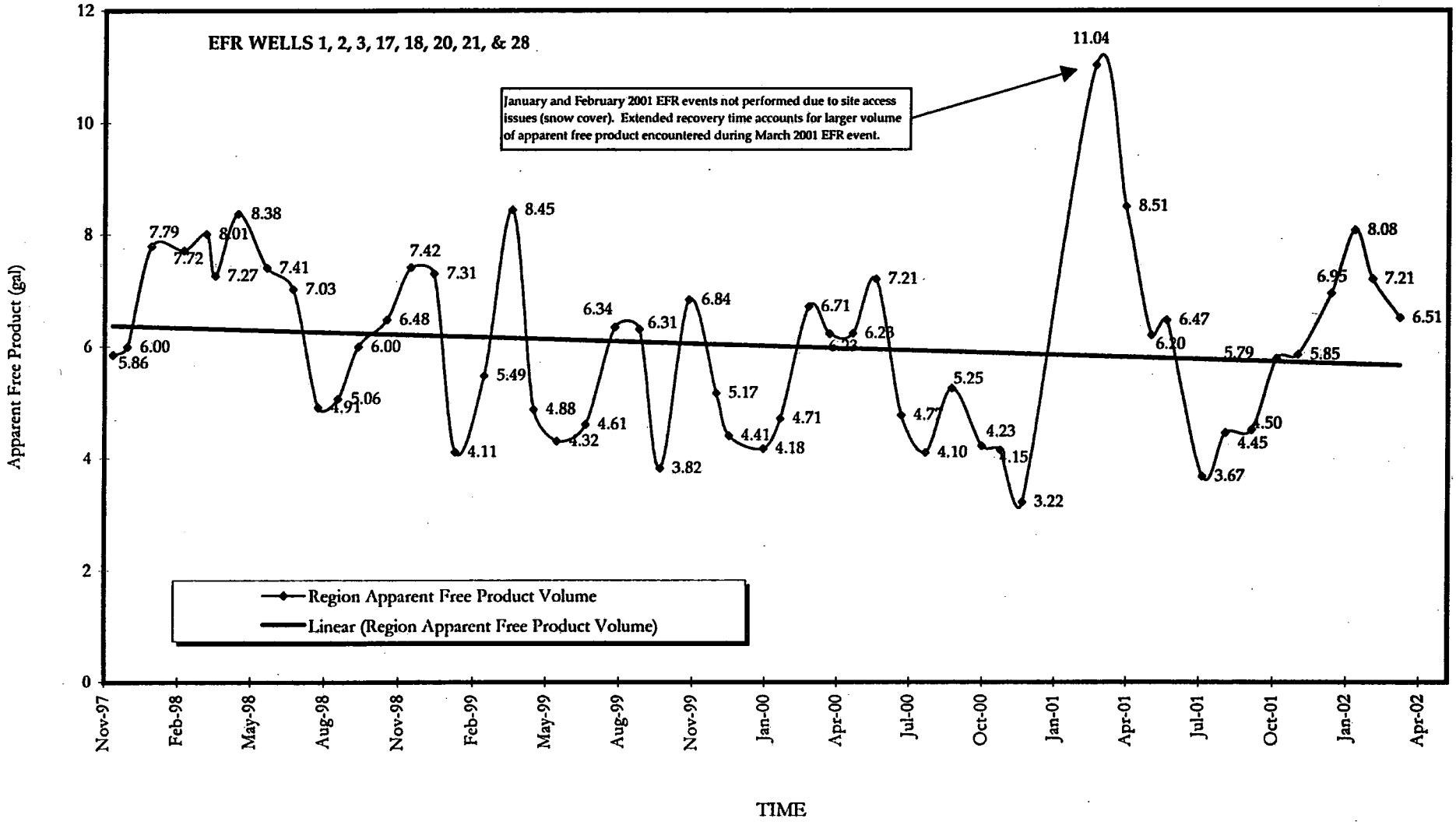
4/25/02

**DATE**

# Appendix B
# Apparent Free Product Volume Trend Charts

# L.E. Carpenter and Company
# Western Region of Free Product

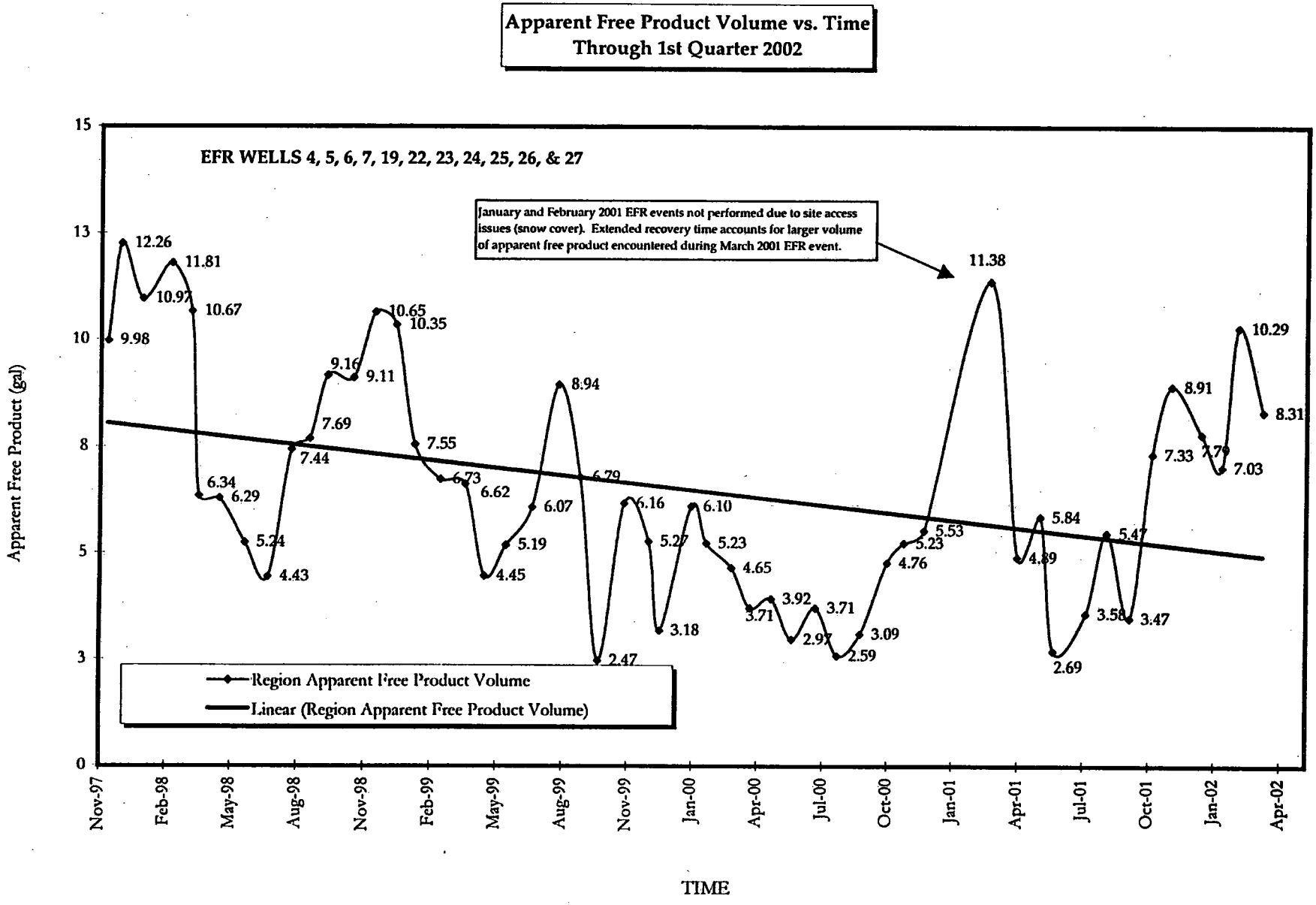
**Apparent Free Product Volume vs. Time**
**Through 1st Quarter 2002**






04/11/20029:40 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

# L.E. Carpenter and Company
# West-Central Region of Free Product

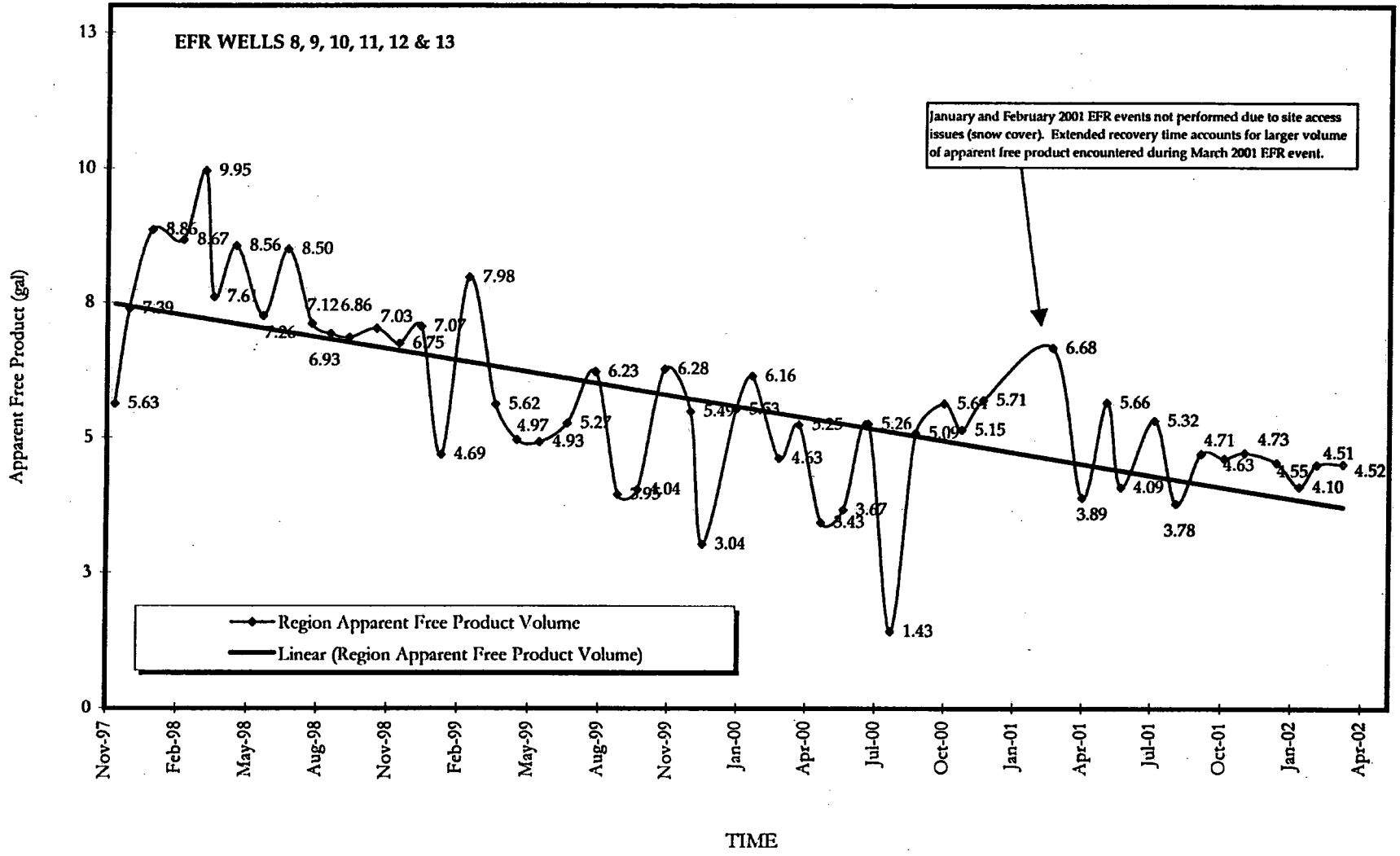



11:/data/projects/lecarpen/quarters/FreeProduct.xls/West-Central Region Trend

04/11/20029:40 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

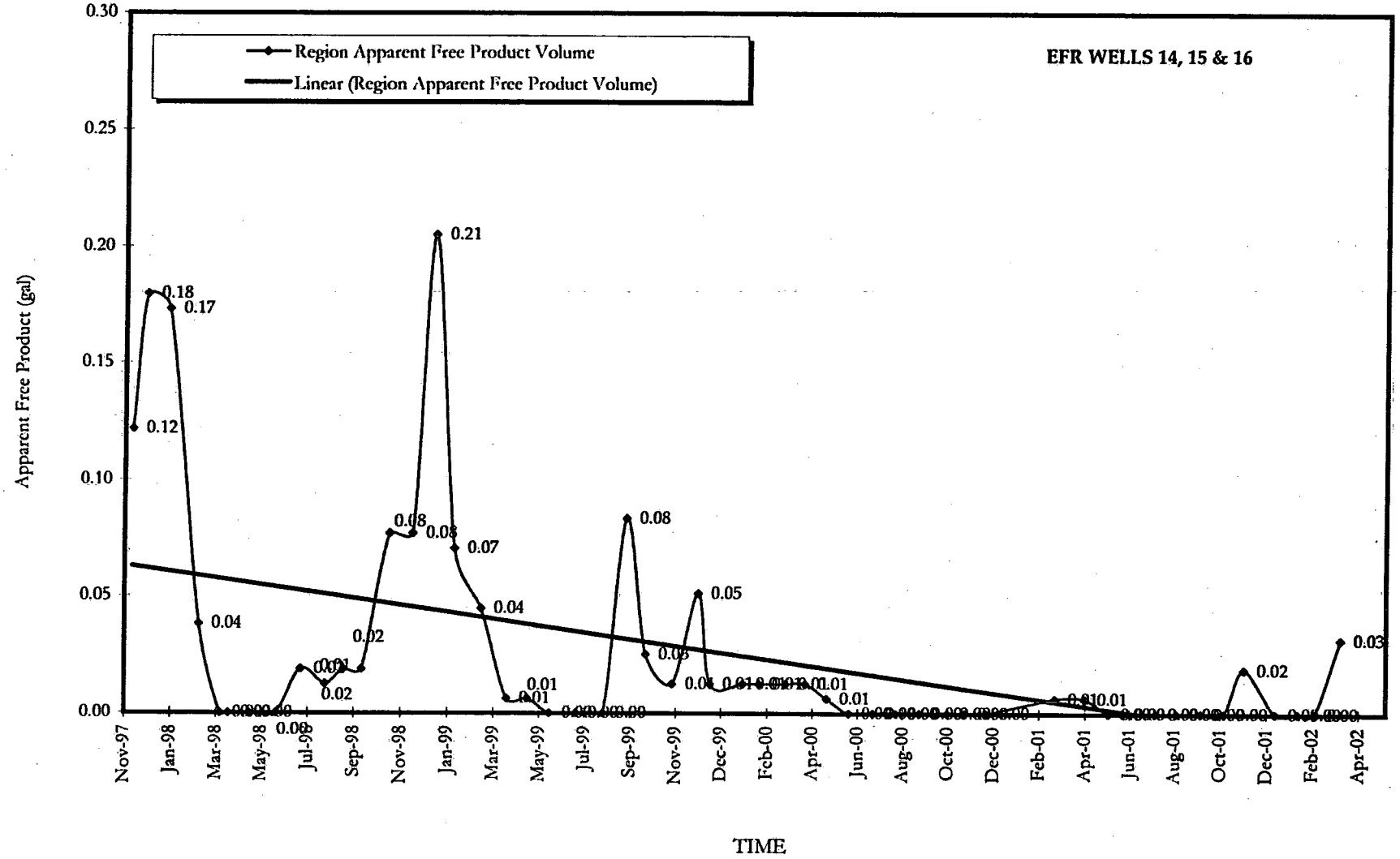
# L.E. Carpenter and Company
# East-Central Region of Free Product

**Apparent Free Product Volume vs. Time**
**Through 1st Quarter 2002**

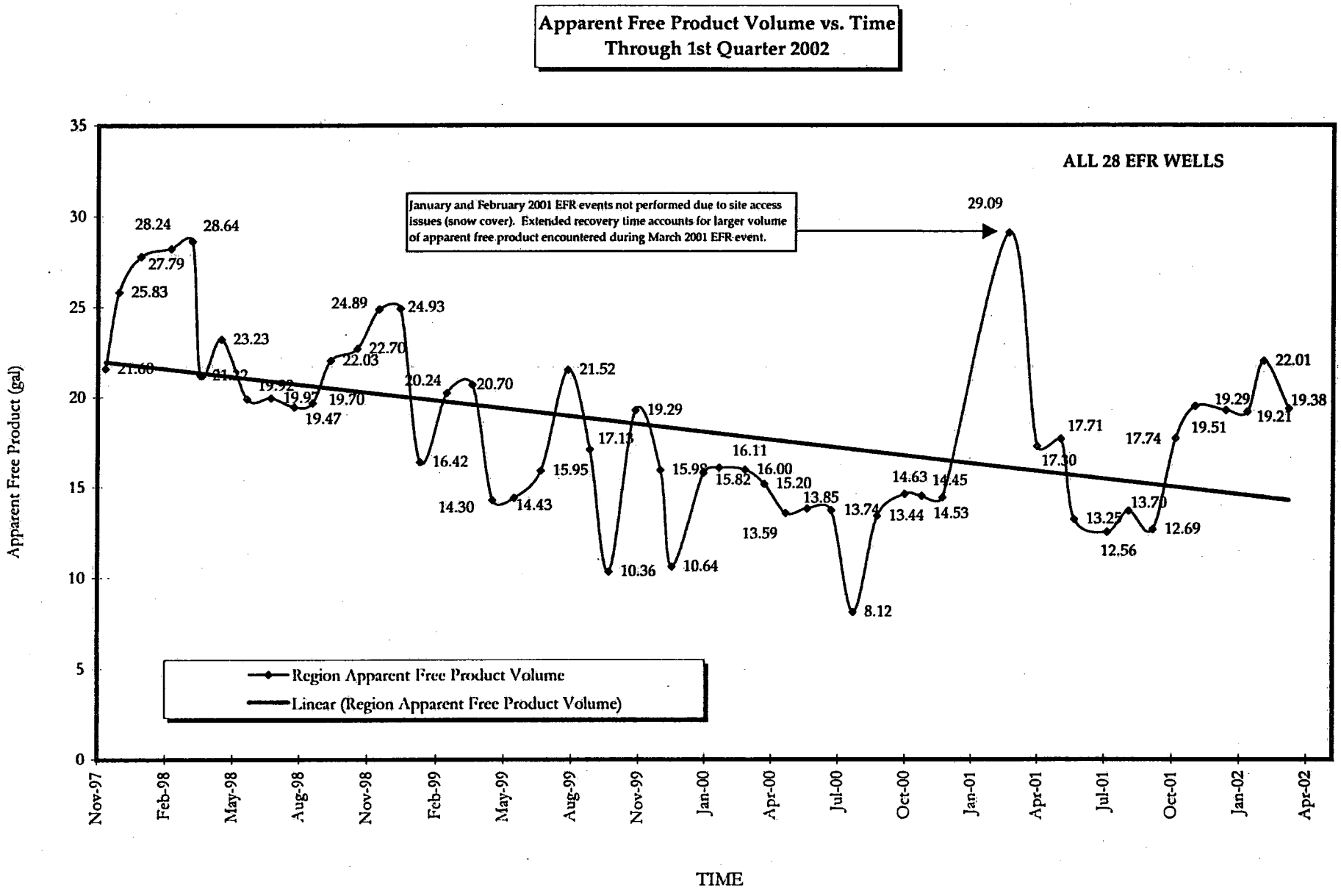


# L.E. Carpenter and Company
# Eastern Region of Free Product

**Apparent Free Product Volume vs. Time**
**Through 1st Quarter 2002**



# L.E. Carpenter and Company
# Total Site Free Product




H:/data/projects/lecarpen/quarters/FreeProduct.xls/Total Site Trend

04/11/20029:44 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

# Appendix C
# Monitoring Well Sampling Data

RMT

:0 refill
:0 discharge

3.5 gal removed

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC
WELL NUMBER: MW 14 I
PROJECT NUMBER: 00-03868.29
WELL DIAMETER: 2
DATE: 3/6/02
SAMPLER: JPM + SL
Type Of Pump Used: Bladder (QED)
Pumping Rate (gallon/minute): 0.3 L/min (0.079 gal/min)
Water level before purging (nearest 0.01 ft. below reference point) 4.18 ft T/
Depth to bottom of well (obtained from well logs) ~~43.24 ft~~ 44.3 T/
Calculated volume of water in casing ~~25.52 gal~~ 26.20 gal
Weather conditions 50s, overcast, calm

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 18:20 | 55 psi 0.9 L/min | 7.11 | 54 | 0.365 | | 9.38 | 4.18 | |
| 18:22 | | 7.55 | 77.6 | 0.344 | | 10.25 | | |
| 18:24 | | 7.66 | 68.1 | 0.335 | | 10.28 | | |
| 18:26 | | 7.77 | 52.5 | 0.333 | | 10.40 | | |
| 18:28 | | 7.81 | 48.1 | 0.333 | | 10.44 | | |
| 18:30 | | 7.82 | 45.2 | 0.332 | | 10.53 | | |
| 18:32 | | 7.83 | 43.1 | 0.332 | | 10.50 | 4.18 | |
| 18:34 | | 7.85 | 39.3 | 0.332 | | 10.48 | | |
| 18:36 | | 7.84 | 32.2 | 0.332 | | 10.44 | | |
| 18:38 | | 7.86 | 24.2 | 0.331 | | 10.42 | | |
| 18:40 | | 7.86 | 20.7 | 0.331 | | 10.57 | | |
| 18:42 | | 7.86 | 22.9 | 0.331 | | 10.50 | | |
| 18:45 | 20 psi 0.3 L/min | 7.87 | 15.7 | 0.331 | | 10.48 | | 3.5 |
| | | | | | | | | |
| | | | | | | | | |

DO E
5.26
3.82 2
3.57 2
3.38 1
3.33 1
3.30 1
3.25 1
3.25 1
3.23 1
3.22 1
3.19 1
3.2 1

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

Sarah Lapka — Signed
3/19/02 — Date
QC'd By
15 Apr 2002 — Date

RMT

1.5 L/min
1.5 L/min

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC
WELL NUMBER: MW-11S
PROJECT NUMBER: 00-03868.29
WELL DIAMETER: 4
DATE: 3/6/02
SAMPLER: JPM & SL
Type Of Pump Used: Bladder (QED)
Pumping Rate (gallon/minute): 0.3 L/min (0.079 gal/min)
Water level before purging (nearest 0.01 ft. below reference point) 3.54 ft T/
Depth to bottom of well (obtained from well logs) SL ~~13.46 ft~~ 15.46 T/
Calculated volume of water in casing SL ~~25.90 gal~~ 31.11 gal
Weather conditions 50s, overcast, calm

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: ____ Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) | DO SL |
|---|---|---|---|---|---|---|---|---|---|
| 17:15 | | 6.73 | 16 | 1.11 | | 9.37 | 3.54 | | 4.33 -4 |
| 17:17 | | 6.75 | 3.3 | 1.06 | | 9.31 | | | 3.69 -4 |
| 17:19 | | 6.85 | 11.3 | 1.07 | | 8.70 | | | 1.93 -6 |
| 17:21 | 20.25 5.9 L/min | 6.88 | 13.5 | 1.06 | | 8.44 | | | 1.21 -8 |
| 17:23 | | 6.90 | 7.1 | 1.06 | | 8.32 | 4.59 | | 1.02 -5 |
| 17:25 | | 6.91 | 8.0 | 1.06 | | 8.29 | | | 0.85 -4 |
| 17:27 | | 6.90 | 9.3 | 1.06 | | 8.23 | 4.59 | | 0.76 -9 |
| 17:29 | | 6.92 | 7.9 | 1.06 | | 8.23 | | | 0.73 -9 |
| 17:31 | | 6.92 | 7.3 | 1.06 | | 8.23 | | | 0.72 - |
| 17:33 | | 6.92 | 6.6 | 1.06 | | 8.21 | | | 0.69 - |
| 17:35 | 12.5 PSI 0.3 L/min | 6.93 | 6.2 | 1.06 | | 8.1 | | 3 | 0.66 -1 |
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NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

Sarah Lapka — Signed
3/19/02 — Date
QC'd By
15APR02 — Date

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RMT

10 refill
10 discharge

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC
WELL NUMBER: MW15I
PROJECT NUMBER: 00-03868.29
WELL DIAMETER: 2
DATE: 3/7/02
SAMPLER: JPM + SL
Type Of Pump Used: Bladder (QED)
Pumping Rate (gallon/minute): 0.3 L/min (0.079 gal/min)
Water level before purging (nearest 0.01 ft. below reference point) 12.19 ft TI
Depth to bottom of well (obtained from well logs) SL ~~40.26 ft~~ 43.92 TI
Calculated volume of water in casing SL ~~18.33 gal~~ 20.72 gal
Weather conditions 60s, overcast, calm

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) | Do | Eh |
|---|---|---|---|---|---|---|---|---|---|---|
| 10:53 | 55 psi 0.24 gpm | 6.57 | 67.6 | 0.771 | | 12.74 | 12.19 | | 7.64 | 9 |
| 10:55 | | 6.84 | 8.7 | 0.872 | | 12.70 | | | 2.98 | - |
| 10:57 | | 6.91 | -1.1 | 0.900 | | 12.73 | | | 1.96 | - |
| 10:59 | | 6.95 | -2.0 | 0.914 | | 12.66 | | | 1.64 | - |
| 11:01 | | 6.97 | -4.4 | 0.924 | | 12.71 | | | 1.35 | - |
| 11:03 | | 6.98 | -5.4 | 0.927 | | 12.74 | | | 1.16 | - |
| 11:05 | | 6.99 | -6.1 | 0.930 | | 12.80 | | | 1.04 | - |
| 11:07 | 19 psi 0.3 L/min | 7.00 | -6.0 | 0.933 | | 12.72 | 12.17 | 1.5 | 0.99 | - |
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NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

Sarah Lapka — Signed
3/19/02 — Date
QC'd By
15APR02 — Date

10 refill
10 discharge

RMT

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEL
WELL NUMBER: MW155
PROJECT NUMBER: 00-03868.29
WELL DIAMETER: 4
DATE: 3/7/02
SAMPLER: JPM + SL
Type Of Pump Used: Bladder (QED)
Pumping Rate (gallon/minute): 0.3 L/min (0.079 gal/min)
Water level before purging (nearest 0.01 ft. below reference point) 12.28 ft TI
Depth to bottom of well (obtained from well logs) SL ~~19.41 ft~~ 25.94 TI
Calculated volume of water in casing SL ~~18.61 gal~~ 35.65 gal
Weather conditions 60s, overcast, calm

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: ____ Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) | DO | Eh |
|---|---|---|---|---|---|---|---|---|---|---|
| 11:52 | | 6.48 | 51.6 | 0.157 | | 12.15 | 12.28 | | 10.32 | 3 |
| 11:54 | 25 psi 0.4 L/min | 6.54 | 31.5 | 0.183 | | 11.55 | | | 9.5 | 3 |
| 11:56 | | 6.64 | 15.9 | 0.179 | | 11.40 | 12.31 | | 9.04 | 31 |
| 11:58 | | 6.65 | 8.4 | 0.175 | | 11.37 | | | 8.85 | 31 |
| 12:00 | | 6.67 | 0 | 0.172 | | 11.23 | | | 8.72 | 3 |
| 12:02 | | 6.68 | -2.0 | 0.171 | | 11.25 | | | 8.62 | 3 |
| 12:04 | 12.5 psi 0.32 L/min | 6.68 | -1.3 | 0.171 | | 11.18 | 12.31 | 2 | 8.57 | 3 |
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NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

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3/19/02 — Date
QC'd By
15 APR — Date

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RMT

15 min
10 turnange

PM: 2.5
PSI ~~25~~ to start

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC
WELL NUMBER: MW-17S
PROJECT NUMBER: 00-03868.29
WELL DIAMETER: 4
DATE: 3-6-02
SAMPLER: JPM + SL
Type Of Pump Used: Bladder (QED)
Pumping Rate (gallon/minute): 0.3 L/min (0.079 gal/min)
Water level before purging (nearest 0.01 ft. below reference point) 10.10 ft T/
Depth to bottom of well (obtained from well logs) 15.04 ft T/
Calculated volume of water in casing ~~3.36 gal~~ SL 12.89 gal
Weather conditions 50s, overcast, calm

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 9:00 | 0.3 L/min | 6.57 | 7.6 | 0.387 | | 3.98 | 10.10 | |
| 9:02 | | 6.72 | 6.9 | 0.387 | | 3.97 | | |
| 9:04 | | 6.75 | 2.6 | 0.387 | | 3.92 | | |
| 9:06 | | 6.8 | 0.5 | 0.387 | | 3.92 | | |
| 9:08 | 25 | 6.83 | -3.1 | 0.388 | | 3.93 | | |
| 9:10 | ~~0.5 psi~~ 0.94 min | 6.89 | -9.1 | 0.387 | | 3.93 | | |
| 9:12 | | 6.91 | -10 | 0.386 | | 3.98 | 10.11 | |
| 9:14 | | 6.92 | -10 | 0.384 | | 3.96 | | |
| 9:34 | 0.3 L/min | 6.94 | -10 | 0.385 | | 3.99 | | |

| TD | EC |
|---|---|
| 10.88 | 3[illegible] |
| 10.73 | 3[illegible] |
| 10.73 | 3[illegible] |
| 10.7 | |
| 10.62 | 3[illegible] |
| 10.48 | [illegible] |
| 10.44 | 3[illegible] |
| 10.45 | 3[illegible] |
| 10.42 | 3[illegible] |

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

Sarah Lapka
Signed

3/19/02
Date

QC'd By

ISAPR
Date

document in microsoft internet explorer 04/07/98 3:59 AM

10 refill
10 discharge

RMT

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC
WELL NUMBER: MW 19-5
PROJECT NUMBER: 00-03868.29
WELL DIAMETER: 2
DATE: 3/7/07
SAMPLER: JPM & SL
Type Of Pump Used: Bladder (QED)
Pumping Rate (gallon/minute): 0.3 L/min (0.079 gal/min)
Water level before purging (nearest 0.01 ft. below reference point) 12.23 ft T/
Depth to bottom of well (obtained from well logs) 16.0 ft T/
Calculated volume of water in casing 2.46 ~~ft~~ SL gal
Weather conditions 60s, overcast, calm

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) | DO |
|---|---|---|---|---|---|---|---|---|---|
| 9:39 | 30 psi 0.9 L/min | 6.23 | 30.6 | 0.475 | | 10.30 | 12.23 | | 3.71 |
| 9:41 | | 6.34 | 6.6 | 0.466 | | 10.12 | | | 1.86 |
| 9:43 | | 6.38 | 1.1 | 0.464 | | 10.07 | | | 1.32 |
| 9:45 | | 6.39 | -8.4 | 0.463 | | 9.99 | | | 1.13 |
| 9:47 | 15 psi 0.3 L/min | 6.41 | -10.0 | 0.467 | | 9.89 | 12.23 | 1 | 1.06 |
| | | | | | | | | | |
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NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

Sarah Lapka — Signed
3/19/07 — Date
QC'd By
15 APR 07 — Date

10 refill
10 discharge

RMT

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC
WELL NUMBER: MW 19-7
PROJECT NUMBER: 00-03868.29
WELL DIAMETER: 2
DATE: 3/7/02
SAMPLER: JPM + SL
Type Of Pump Used: Bladder (QED)
Pumping Rate (gallon/minute): 0.3 L/min (0.079 gal/min)
Water level before purging (nearest 0.01 ft. below reference point) 10.48 ft T/
Depth to bottom of well (obtained from well logs) 20.1 ft T/
Calculated volume of water in casing 6.22 ~~ft³~~ SL gal
Weather conditions 60s, overcast, calm

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) | DO |
|---|---|---|---|---|---|---|---|---|---|
| 8:04 | | 6.07 | 95.5 | 3.18 | | 8.73 | 10.48 | | 7.08 |
| 8:06 | 30 ~~0.9~~ L/min | 6.25 | 79.1 | 3.18 | | 9.50 | | | 2.45 |
| 8:08 | | 6.29 | 54.2 | 3.18 | | 9.72 | | | 1.58 |
| 8:10 | | 6.31 | 46.3 | 3.15 | | 9.87 | | | 1.24 |
| 8:12 | | 6.32 | 40.2 | 3.12 | | 9.97 | | | 1.15 |
| 8:14 | | 6.34 | 34.6 | 3.16 | | 10.06 | | | 1.08 |
| 8:16 | | 6.36 | 27.8 | 3.07 | | 10.11 | | | [illegible] |
| 8:18 | | 6.38 | 22.3 | 3.05 | | 10.17 | | | 0.98 |
| 8:20 | | 6.39 | 20.2 | 3.01 | | 10.20 | | | 0.97 |
| 8:22 | | 6.41 | 15.2 | 2.98 | | 10.21 | | | 0.95 |
| 8:24 | | 6.42 | 10.9 | 2.94 | | 10.22 | | | 0.92 |
| 8:26 | | 6.43 | 8.3 | 2.91 | | 10.21 | | | 0.90 |
| 8:28 | | 6.44 | 7.3 | 2.87 | | 10.28 | | | 0.88 |
| 8:30 | | 6.47 | 4.3 | 2.81 | | 10.28 | | | 0.86 |
| 8:32 | | 6.48 | 3.0 | 2.79 | | 10.30 | | | 0.87 |

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

Sarah Lapka — Signed
3/19/02 — Date
QC'd By
15APR02 — Date

RMT

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: _____ WELL NUMBER: MW19-7

PROJECT NUMBER: _____ WELL DIAMETER: _____

DATE: 3/7/02 SAMPLER: _____

Type Of Pump Used: _____

Pumping Rate (gallon/minute): _____

Water level before purging (nearest 0.01 ft. below reference point) _____ + _____ T/

Depth to bottom of well (obtained from well logs) _____ + _____ T/

Calculated volume of water in casing _____

Weather conditions _____

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: _____ Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) | DO Eh |
|---|---|---|---|---|---|---|---|---|---|
| 8:34 | | 6.48 | 4.2 | 2.76 | | 10.32 | | | 0.84 -29 |
| 8:36 | | 6.50 | 1.1 | 2.71 | | 10.35 | 10.51 | 2.5 | 0.81 -33 |
| | 15 PSI | | | | | | | | |
| | 0.3 L/min | | | | | | | | |
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NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

Sara Capka (for) 15APR02 [signature] 15APR02

Signed Date QC'd By Date

RMT

10 Refill
10 discharge

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC
WELL NUMBER: MW-21
PROJECT NUMBER: 00-03868.29
WELL DIAMETER: 4
DATE: 3/6/02
SAMPLER: JPM + SL
Type Of Pump Used: Bladder (QED)
Pumping Rate (gallon/minute): 0.3 L/min (0.079 gal/min)
Water level before purging (nearest 0.01 ft. below reference point) 4.93 ft T/
Depth to bottom of well (obtained from well logs) 15 ft T/
Calculated volume of water in casing ~~6.56 gal~~ SL 26.29 gal
Weather conditions 50s, overcast, calm

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: ____ Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) | DO | E |
|---|---|---|---|---|---|---|---|---|---|---|
| 11:25 | | 6.4 | 27.6 | 0.726 | | 7.45 | | | 8.41 | 3 |
| 11:27 | | 6.67 | 25.6 | 0.778 | | 7.65 | | | 5.21 | 2 |
| 11:29 | 2.5 L/min 0.66 gal/min | 6.79 | 13.0 | 0.781 | | 7.71 | | | 3.84 | 2 |
| 11:31 | | 6.87 | 13.6 | 0.785 | | 7.69 | 4.98 | | 3.39 | 1 |
| 11:33 | | 6.89 | 20.6 | 0.786 | | 7.76 | | | 3.21 | 1 |
| 11:35 | | 6.91 | 2.6 | 0.785 | | 7.70 | | | 3.13 | 1 |
| 11:37 | | 6.92 | 12.5 | [illegible] | | 7.63 | | | 3.05 | 1 |
| 11:39 | | 6.93 | 5.9 | [illegible] | | 7.65 | 4.98 | | 3.02 | 1 |
| 11:41 | | 6.94 | 1.2 | 0.794 | | 7.74 | | | 2.95 | 1 |
| 11:43 | | 6.94 | -0.1 | [illegible] | | 7.78 | | | 2.91 | 1 |
| 11:45 | | 6.95 | 0 | [illegible] | | 7.81 | | | 2.89 | 1 |
| 11:46 | Bl=1.2 0.3 L/min | 6.96 | 0 | 0.799 | | 7.97 | | | 2.85 | 1 |
| | | | | | | | | | | |
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NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

Sarah Lapka
Signed

3/19/02
Date

QC'd By

15APR02
Date

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RMT

10 refill
10 discharge

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC
WELL NUMBER: MW-22R
PROJECT NUMBER: 00-03868.29
WELL DIAMETER: 2
DATE: 3/6/02
SAMPLER: JPM & SL
Type Of Pump Used: Bladder (QED)
Pumping Rate (gallon/minute): 0.3 L/min (0.079 gal/min)
Water level before purging (nearest 0.01 ft. below reference point) 4.06 ft T/
Depth to bottom of well (obtained from well logs) 7.5 ft T/
Calculated volume of water in casing 2.25 gal
Weather conditions 50s, overcast, calm

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: Uncorrected | Conductivity Units: Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) | DO | Eh |
|---|---|---|---|---|---|---|---|---|---|---|
| 15:05 | | 6.2 | 219 | 0.504 | | 8.51 | | | 3.69 | 2[illegible] |
| 15:07 | 12.5 psi 0.3 L/min | 6.31 | 105 | 0.450 | | 7.74 | | | 2.21 | 19[illegible] |
| 15:09 | | 6.36 | 56.3 | 0.455 | | 6.84 | | | 1.56 | 14[illegible] |
| 15:11 | | 6.38 | 51.5 | 0.448 | | 6.62 | | | 1.21 | 11[illegible] |
| 15:13 | | 6.38 | 36.5 | 0.445 | | 6.57 | | | 1.09 | 9[illegible] |
| 15:15 | | 6.38 | 45.0 | 0.443 | | 6.52 | | | 0.97 | 6[illegible] |
| 15:17 | | 6.39 | -2.2 | 0.441 | | 6.63 | | | 0.84 | 2[illegible] |
| 15:19 | | 6.4 | -5.7 | 0.441 | | 6.7 | | | 0.82 | 1[illegible] |
| 15:21 | | 6.41 | -8.7 | 0.441 | | 6.7 | | | 0.79 | [illegible] |
| 15:23 | | 6.43 | -10 | 0.441 | | 6.74 | | | 0.77 | -1 |
| 15:25 | | 6.44 | -10 | 0.443 | | 6.86 | | | 0.74 | [illegible] |
| 15:30 | 12 psi 0.3 L/min | 6.42 | 424 | 0.440 | | 1.38 | | 3 | 0.76 | - |
| | | | | | | | | | | |
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NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

Sarah Lapka — Signed
3/19/02 — Date
QC'd By
15 APR 02 — Date

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RMT

10 Gal
10 Discharge

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC
WELL NUMBER: MW-25(R)
PROJECT NUMBER: 00-03868.29
WELL DIAMETER: 2
DATE: 3/6/02
SAMPLER: JPM + SL
Type Of Pump Used: Bladder (QED)
Pumping Rate (gallon/minute): 0.3 L/min (0.079 gal/min)
Water level before purging (nearest 0.01 ft. below reference point) ~~3.26~~ 3.05 T/
Depth to bottom of well (obtained from well logs) 10 ft T/
Calculated volume of water in casing 4.54 gal
Weather conditions 50s, overcast, calm

| Time | Purge Rate (gal/min) 12.5 psi | pH (Units) | Turbidity (NTU) | Conductivity Units: Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) | DO | Eh |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:55 | 0.75 L/m | 6.60 | 999 | 0.409 | | | | | | |
| 13:01 | | 6.54 | 999 | 0.417 | | 5.57 | | | 6.56 | 16 |
| 13:05 | | 6.54 | 999 | 0.410 | | 6.45 | | | 6.76 | 16 |
| 13:07 | | 6.51 | 577 | 0.416 | | 5.48 | | | 5.49 | 15 |
| 13:09 | | 6.49 | 392 | 0.426 | | 5.48 | | | 4.37 | 14 |
| 13:11 | | 6.49 | 292 | 0.425 | | 5.55 | | | 4.14 | 14 |
| 13:13 | | 6.49 | 293 | 0.425 | | 5.51 | | | 3.97 | 14 |
| 13:15 | | 6.48 | 304 | 0.428 | | 5.5 | | | 3.71 | 14 |
| 13:17 | | 6.47 | 280 | 0.429 | | 5.59 | | | 3.44 | 15 |
| 13:19 | | 6.45 | 315 | 0.433 | | 5.69 | | | 2.84 | 15 |
| 13:21 | | 6.46 | 384 | 0.435 | | 5.89 | 3.28 | | 2.47 | 15 |
| 13:23 | | 6.47 | 405 | 0.436 | | 5.99 | | | | 15 |
| 13:25 | | 6.49 | 200 | 0.430 | | 6.21 | | | 4.28 | 1 |
| 13:29 | | 6.51 | 196 | 0.429 | | 6.27 | | | 5.25 | 16 |
| 13:31 | | 6.51 | 195 | 0.429 | | 6.28 | | | 5.59 | 16 |

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

Sarah Lapka — Signed
3/19/02 — Date
QC'd By
15APR02 — Date

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RMT

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: _____ WELL NUMBER: MW 25 (R)

PROJECT NUMBER: _____ WELL DIAMETER: _____

DATE: _____ SAMPLER: _____

Type Of Pump Used: _____

Pumping Rate (gallon/minute): _____

Water level before purging (nearest 0.01 ft. below reference point) ___ + T/ ___

Depth to bottom of well (obtained from well logs) ___ + T/ ___

Calculated volume of water in casing _____

Weather conditions _____

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: ___ Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) | DO Eh |
|---|---|---|---|---|---|---|---|---|---|
| ~~13:33~~ | ~~6.53~~ | ~~7.71~~ | ~~0.479~~ | ~~?~~ | | ~~6.37~~ | | | ~~5.85 16~~ |
| ~~13:35~~ | | ~~6.53~~ | ~~3.08~~ | ~~0.425~~ | | ~~6.45~~ | | | ~~6.91 16~~ |
| | | accidentally | shook | flow | through | - ignore | readings | | |
| 1337 | ~~6.53~~ | 6.53 | 191 | .363 | | 6.24 | | | 5.75 17 |
| 1339 | | 6.52 | 195 | .361 | | 6.24 | | | 5.32 17 |
| 1341 | | 6.53 | 190 | .427 | | 6.56 | | | 5.01 16 |
| 1343 | | 6.56 | 190 | 0.427 | | 6.57 | | | 5.27 16 |
| 1345 | | 6.55 | 186 | 0.427 | | 6.64 | 3.28 | 3 gallons | 5.27 16 |
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NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

very silty well. will not stabilize turbidity

Sam Cafka (for) _____ Signed _____ Date _____ QC'd By _____ Date

15APROC

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RMT

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC
WELL NUMBER: MW 11
PROJECT NUMBER: 00-03868.29
WELL DIAMETER: 2 in
DATE: 3/7/02
SAMPLER: JPM + SL
Type Of Pump Used: bladder (QED)
Pumping Rate (gallon/minute): 0.3 L/min (0.079 gal/min)
Water level before purging (nearest 0.01 ft. below reference point) 7.40 ft T/
Depth to bottom of well (obtained from well logs) 27 ft T/
Calculated volume of water in casing 12.80 gal
Weather conditions 60s, overcast, calm

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) | Do | Eh |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:50 | | 6.43 | 476 | 0.470 | | 8.83 | 7.40 | | 5.77 | 213 |
| 12:56 | | 6.55 | 317 | 0.439 | | 8.32 | | | 3.73 | 189 |
| 12:58 | 15 psi | 6.59 | 146 | 0.424 | | 7.62 | | | 2.88 | 158 |
| 13:00 | 0.6 L/min | 6.62 | 125 | 0.417 | | 7.02 | | | 2.50 | 128 |
| 13:02 | | 6.63 | 103 | 0.413 | | 6.89 | | | 2.36 | 106 |
| 13:04 | | 6.64 | 48.3 | 0.410 | | 6.88 | | | 2.32 | 96 |
| 13:06 | | 6.64 | 108 | 0.409 | | 6.99 | | | 2.32 | 84 |
| 13:08 | | 6.64 | 226 | 0.410 | | 7.12 | 8.1 | | 2.27 | 75 |
| 13:10 | 10 psi 0.3 L/min | 6.65 | 231 | 0.405 | | 7.38 | | | 2.25 | 74 |
| 13:12 | | 6.64 | 234 | 0.390 | | 8.69 | | | 2.23 | 69 |
| 13:14 | | 6.65 | 227 | 0.390 | | 9.15 | | | 2.26 | 65 |
| 13:16 | | 6.65 | 235 | 0.391 | | 9.49 | 7.96 | 1 | 2.35 | 63 |
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NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

Sarah Lapka — Signed
3/19/02 — Date
QC'd By
15 APR 02 — Date

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30 refill
20 discharge



RMT

re-written – original notes attached

Max air pressure to controller is 100 psi so we set it to 90 psi

# LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC
WELL NUMBER: MW 11D
PROJECT NUMBER: 00-03868.29
WELL DIAMETER: 2 in.
DATE: 3/7/02
SAMPLER: JPM + SL
Type Of Pump Used: Bladder (QED)
Pumping Rate (gallon/minute): 0.3 L/min (0.079 gal/min)
Water level before purging (nearest 0.01 ft. below reference point) 7.42 ft T/
Depth to bottom of well (obtained from well logs) 157 ft T/
Calculated volume of water in casing ~~152.15 ft³~~ SL 97.64 gal
Weather conditions 60's, overcast, calm

| Time | Purge Rate (gal/min) | pH (Units) | Turbidity (NTU) | Conductivity Units: Uncorrected | Conductivity Corrected | Temperature (°C) | Water Level (0.01 ft.) | Cumulative Purge Volume (gal) | DO | Eh |
|---|---|---|---|---|---|---|---|---|---|---|
| 14:25 | | 7.61 | 0 | 0.230 | | 16.69 | 7.42 | | 7.91 | 28 |
| 14:27 | 0.45 L/min 100 psi | 7.84 | 0.2 | 0.226 | | 16.53 | | | 7.16 | 27 |
| 14:29 | | 7.99 | 1.1 | 0.217 | | 16.54 | | (inc. depth to 152 ft) | 6.63 | 27 |
| 14:31 | | 8.11 | 0.5 | 0.215 | | 16.87 | | | 6.14 | 26 |
| 14:33 | 0.3 L/min 100 psi | 8.16 | 0.8 | 0.213 | | 17.02 | 7.47 | 0.5 | 6.08 | 26 |
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NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ±0.1 pH; COND. - ±5%, TEMP (CORRECTED); TEMP. - ±0.5°c; TURBIDITY ±10%

Sarah Lapka — Signed
3/19/02 — Date
QC'd By
15APR02 — Date

3/7/02 ·30 refill 20 discharge MW 11D

Initial depth prior 7.42 ft

| | Time | Purge Rate | pH | Turb | Cond | Temp | WL | DO | Eh |
|---|---|---|---|---|---|---|---|---|---|
| ax | 14:25 | | 7.61 | 0 | 0.230 | 16.69 | 7.42 | 7.91 | 25 |
| ni press | 14:27 | 0.45 L/min. 100 psi | 7.74 | 0.2 | 0.226 | 16.53 | | 7.16 | 27 |
| to nitrogen is 100 psi | 14:29 | | 7.99 | 1.1 | 0.217 | 16.54 | | 6.63 | 27 |
| o we set + to 90 psi | 14:31 | | 8.11 | 0.5 | 0.215 | 16.87 | | 6.14 | 26 |
| | 14:33 | 0.3 L/min 100 psi | 8.16 | 0.8 | 0.213 | 17.02 | 7.47 | 6.05 | 26 |
| | ~~14:35~~ | | | | | | | | |

increased depth to 152 ft

Purge Vol 0.5 gal

RMT INC.

# WATER LEVEL DATA

PROJECT NAME: LEC DATE: 3/5/02

PROJECT NUMBER: 0003868.29 SAMPLER: Sarah Lapka

| Well Location | Time | Depth to Water (feet)* | Depth to Bottom (feet) | Water Elev (MSL) |
|---|---|---|---|---|
| WPC1 | 11:21 | 6.50 | | |
| WPC3 | 11:28 | 5.02 | | |
| WPC2 | 11:34 | 7.15 | | |
| WPC4 | 11:41 | 7.30 | | |
| MW12 R | 11:45 | 6.69 | | |
| ~~WPA9~~ | ~~11:53~~ | | | |
| WPA5 | 12:00 | 12.95 | | |
| MW 15S | 12:16 | 12.17 | | |
| MW17S | 12:22 | 10.06 | | |
| MW9 | 13:53 | 4.47 | | |
| ~~MW8~~ MW-4 | 13:59 | 7.41 | | |
| WPA3 | 14:11 | 11.35 | | |
| ☆ WPA2 | 14.25 | | 14.62 | 15.28 |
| WPA1 | 14:29 | 12.10 | | |
| MW16S | 15:09 | 9.43 | | |
| MW19-6 | 15:30 | 11.22 | | |
| MW19-5 | 15:35 | 10.96 | | |
| MW19-2 | 15:41 | 11.63 | | |
| MW19-3 | 15:50 | 11.96 | | |
| MW19-1 | 15:55 | 10.94 | | |
| MW19-4 | 16:00 | 10.61 | | |

* All Water Levels Must Include Reference Point and Tape Correction factor, i.e. 1.11 + 0.00 T/PVC.

Sarah Lapka — Signed; 3/19/02 — Date; QC'd By; 5/ARROC — Date

RMT INC.

# WATER LEVEL DATA

PROJECT NAME: LEC DATE: 3/5/02

PROJECT NUMBER: 0003868.29 SAMPLER: Sarah Lapka

| Well Location | Time | Depth to Water (feet)* | Depth to Bottom (feet) | Water Elev (MSL) |
|---|---|---|---|---|
| MW-20 | 16:09 | 10.93 | | |
| MW-18I | 16:15 | 6.35 | | |
| MW-13R | 16:29 | 6.43 | | |
| MW-13I | 16:32 | 6.44 | | |
| MW-14I | 16:54 | 4.12 | | |
| MW-3 | 16:58 | 8.43 | | |
| WP-B7 | 17:03 | 4.97 | | |
| WP-B6 | 17:07 | 6.59 | | |
| GEI-3I | 17:55 | 14.81 | | |
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* All Water Levels Must Include Reference Point and Tape Correction factor, i.e. 1.11 + 0.00 T/PVC.

Sarah Lapka — Signed

3/9/02 — Date

QC'd By

15APR02 — Date

RMT INC.

# WATER LEVEL DATA

PROJECT NAME: LEC DATE: 3-5 & 7-02

PROJECT NUMBER: 00003868.29 SAMPLER: John Mihalich

| Well Location | Time | Depth to Water (feet)* | Depth to Bottom (feet) | Water Elev (MSL) |
|---|---|---|---|---|
| SGR1 ~~SGR3~~ | 17:53 | 1.55 | | |
| GEI 25 | 8:36 | 12.48 | | |

3-5-02
3-7 0

-2-02 not locked on 3-5-02)

* All Water Levels Must Include Reference Point and Tape Correction factor, i.e. 1.11 + 0.00 T/PVC.

Signed 3-7-02 Date QC'd By 15APR02 Date



REV 01/05/94

RMT INC.

# WATER LEVEL DATA

PROJECT NAME: LEC DATE: 3-5-02

PROJECT NUMBER: 000 3868.29 SAMPLER: John Mihalich

| Well Location | Time | Depth to Water (feet)* | Depth to Bottom (feet) | Water Elev (MSL) |
|---|---|---|---|---|
| MW-19-8 | 15:37 | 10.98 | | |
| MW-19-7 | 15:42 | 10.48 | | |
| GEI-2I | 15:48 | 12.72 | | |
| ~~GEI-2S~~ | | ~~11.29~~ 28m | got it on | 3-7-02 |
| MW-19 | 15:52 | 11.29 | | |
| MW-18S | 16:10 | 6.32 | | |
| GEI-1I | 16:12 | 6.01 | | |
| MW-13S | 16:26 | 6.75 | | |
| MW-23 | 16:30 | 4.47 | | |
| SG-D1 | 16:31 | 0.55 | | |
| SG-D2 | 16:37 | 0.34 | | |
| SG-D3 | 16:39 | 0.85 | | |
| MW-14S | 16:50 | 4.50 | | |
| MW-22 | 16:53 | 4.17 | | labeled 24 |
| MW-25R | 16:54 | 3.05 | | |
| MW-21 | 16:58 | 4.93 | | |
| SG-R3 | 17:05 | 0.50 | | |
| WPA 4 | | ~~12.98~~ 28m | ? | covered by dirt pile |
| MW 1R | 17:27 | 10.96/11.82 | | |
| MW-8 | 17:37 | 4.96 | | |
| RW-1 | 17:44 | 12.78/13.10 | | |

Key

product water

* All Water Levels Must Include Reference Point and Tape Correction factor, i.e. 1.11 + 0.00 T/PVC.

Sara Lapka (for) 15APR02
Signed Date

QC'd By 15APR02
Date

if there are two numbers, 1st is product; 2nd is water

RMT INC.



# WATER LEVEL DATA

PROJECT NAME: LEC DATE: 3-5-02

PROJECT NUMBER: 0003868.29 SAMPLER: John Mihalich

| Well Location | Time | Depth to Water (feet)* | Depth to Bottom (feet) | Water Elev. (MSL) |
|---|---|---|---|---|
| MW-26 | 11:28 | 8.86 | | |
| RW-3 | 11:32 | 7.21 | | |
| WP-B5 | 11:37 | 6.56 | | |
| WP-B4 | 11:46 | 8.18/all product | 9.10 | clear* |
| WP-B10 | 11:53 | 8.33 | | |
| MW-2R | 11:57 | 7.90 | | |
| RW-2 | 11:59 | 7.39 | | |
| MW-3 | 12:03 | 7.86/9.91 | | brown |
| MW-6 | 12:26 | 6.88/6.89 | | |
| CW-1 | 12:30 | 7.96 | | (from hole on S sid of casing) |
| MW-11R | 12:43 | 8.97 | (9.38 from outer casing - marked) | |
| MW-11DR | 12:47 | 7.44 | | |
| MW-11S | 12:52 | 8.78/13.20 | | |
| WP-B2 | 12:59 | 7.85 | (8.28 from outer casing - marked) | |
| WP-B3 | 13:03 | 7.94 | | |
| WP-B1 | 13:07 | 7.58/7.81 | | |
| WP-A8 | 13:48 | 13.00/15.68 | | |
| WP-A7 | 13:56 | 10.45/12.00 | | |
| WP-A9 | 14:02 | 14.77/17.25 | | |
| WP-A6 | 14:09 | 12.74/13.69 | | |
| MW-16I | 15:03 | 10.06 | | |

* All Water Levels Must Include Reference Point and Tape Correction factor, i.e. 1.11 + 0.00 T/PVC.

Signed 3-5-02 Date QC'd By 15APR02 Date

* WP-B4 was only well w/ "clear" product. All other product was brown

# Appendix D
# MW-22R & MW-25R Groundwater Concentration Trend Analysis

# MW-22R
## BTEX and DEHP Concentration(s) Trend Analysis

| | ANALYTE | | | | |
|---|---|---|---|---|---|
| Sampling Date(s) | Benzene (ug/L) | Ethylbenzene (ug/L) | Toluene (ug/L) | Total Xylenes (ug/L) | DEHP (ug/L) |
| 21-Feb-95 | ND | 57 | ND | 260 | 6500 |
| 13-Jun-95 | ND | 311 | ND | 955 | 380 |
| 13-Sep-95 | ND | 171 | ND | 693 | NS |
| 07-Dec-95 | ND | 123 | ND | 494 | 320 |
| 14-Aug-97 | ND | 5,730 | ND | 32,900 | 7,500 |
| 03-Oct-97 | ND | 11,400 | 348 | 66,000 | NS |
| 12-Mar-98 | ND | 4,070 | 348 | 20,600 | NS |
| 26-Aug-98 | ND | 2,260 | ND | 11,300 | 5,800 |
| 28-Aug-98 | ND | 1,880 | ND | 10,300 | NS |
| 18-Dec-98 | ND | 1,650 | ND | 7,230 | 1,100 |
| 21-Jan-99 | ND | 18 | ND | 84 | NS |
| 15-Apr-99 | ND | 1,600 | ND | 7,600 | 670 |
| 22-Jul-99 | ND | 1,200 | ND | 5,200 | NS |
| 25-Oct-99 | ND | 810 | ND | 3,300 | 1,200 |
| 17-Jan-00 | ND | 360 | ND | 1,400 | NS |
| 13-Apr-00 | ND | 820 | ND | 3,600 | 92 |
| 31-Jul-00 | ND | 1,000 | ND | 4,800 | NS |
| 30-Oct-00 | ND | 1,200 | ND | 6,200 | 5,100 |
| 27-Feb-01 | ND | 1,900 | ND | 9,000 | NS |
| 02-Apr-01 | ND | 910 | ND | 4,100 | 2,400 |
| 24-Jul-01 | ND | 1,100 | ND | 5,300 | 8,200 |
| 26-Oct-01 | ND | 980 | ND | 4,700 | 15,000 |
| 06-Mar-02 | ND | 140 | ND | 420 | 18 |

| | | | | | |
|---|---|---|---|---|---|
| NJGWQS (ug/l) | 1 | 700 | 1000 | 40 | 30 |
| ROD Discharge Criteria (ug/l) | 1 | 350 | 500 | 20 | 30 |

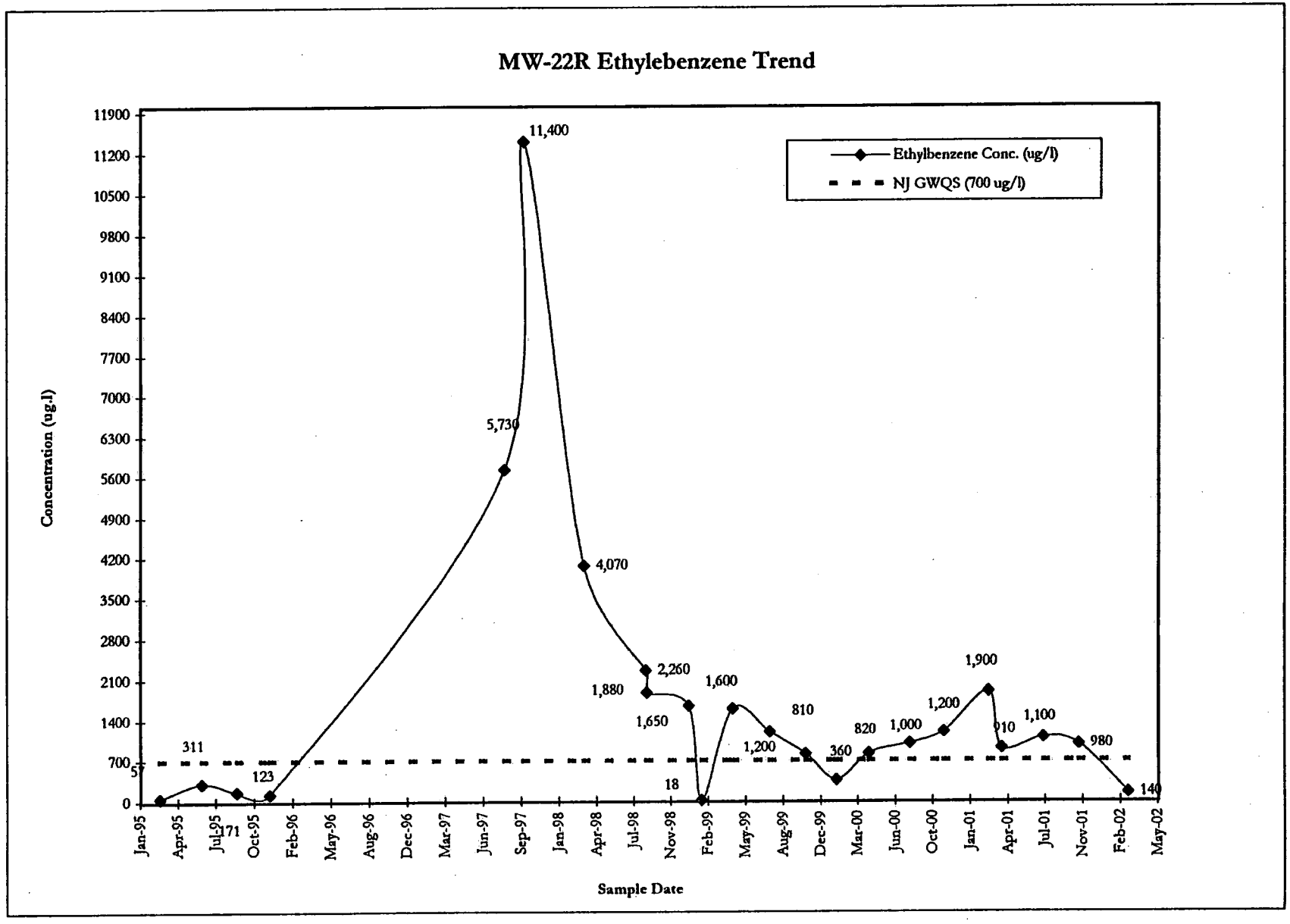
NOTES

Concentrations in bold exceed both the ROD discharge criteria and NJDEP GWQS

ND = Not detected above method detection limits

NS = Not Sampled

MW-22R
CONTAMINANT OF CONCERN
*Concentration vs. Time*

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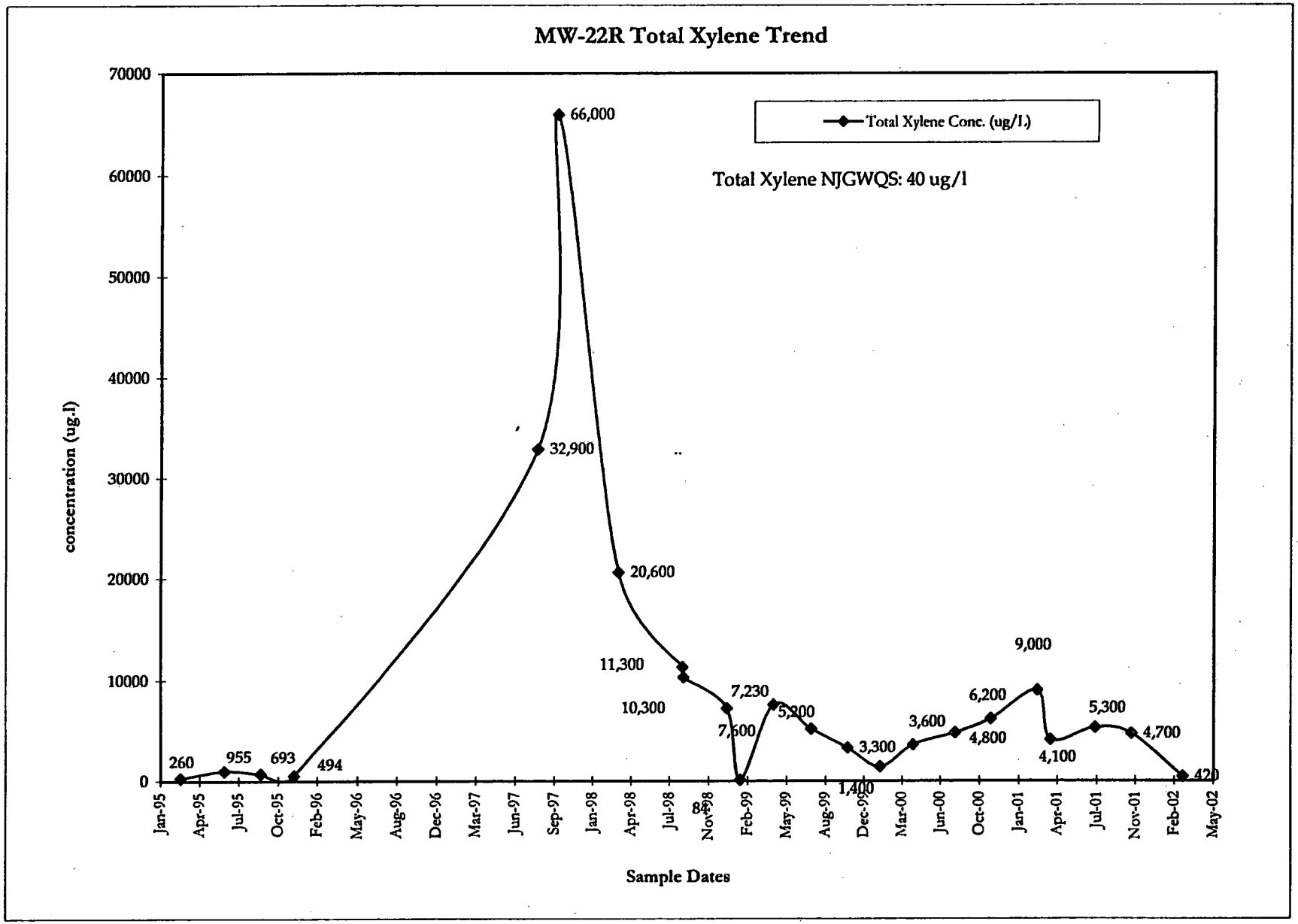
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

T000386817-005.DOCMW-22(R) Trend Charts Chart 3

MW-22R

CONTAMINANTS OF CONCERN

*Concentration vs. Time*




T000386817-005.DOCMW-22(R) Trend Charts Chart 5

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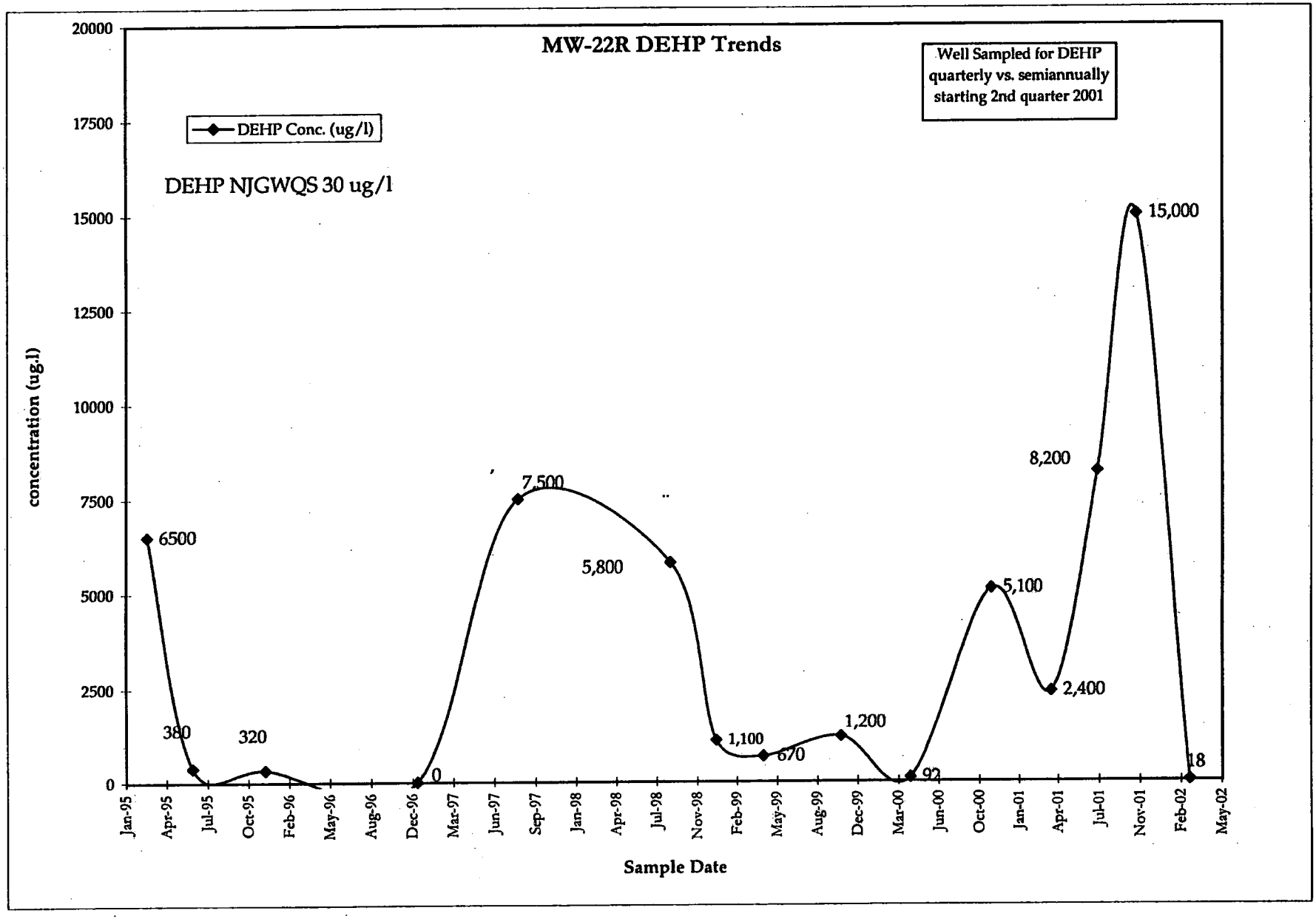
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

# MW-22R
## Contaminants of Concern
*Concentration vs. Time*



# MW-25R
## BTEX and DEHP Concentration(s) Trend Analysis

| | ANALYTE | | | | |
|---|---|---|---|---|---|
| Sampling Date(s) | Benzene (ug/L) | Ethylbenzene (ug/L) | Toluene (ug/L) | Total Xylenes (ug/L) | DEHP (ug/L) |
| 01-Apr-95 | ND | ND | ND | ND | 1.6 |
| 01-Jul-95 | ND | ND | ND | ND | NS |
| 07-Dec-95 | ND | ND | ND | ND | **68** |
| 17-Sep-96 | ND | 0.34 | ND | 2.2 | NS |
| 12-Dec-96 | ND | ND | ND | ND | ND |
| 01-Jan-97 | ND | ND | ND | ND | NS |
| 01-Apr-97 | ND | 13.5 | ND | **89** | **63** |
| 01-Jul-97 | ND | 4.1 | ND | **30.7** | NS |
| 12-Mar-98 | ND | 0.33 | ND | 1.5 | NS |
| 01-Apr-98 | ND | ND | ND | ND | 5.3 |
| 28-Aug-98 | ND | ND | ND | ND | NS |
| 18-Dec-98 | ND | ND | ND | ND | 1.9 |
| 21-Jan-99 | ND | ND | ND | ND | ND |
| 15-Apr-99 | ND | ND | ND | 14 | ND |
| 22-Jul-99 | ND | 0.39 | ND | 1.4 | 9.6 |
| 25-Oct-99 | ND | ND | ND | ND | ND |
| 17-Jan-00 | ND | ND | ND | ND | ND |
| 13-Apr-00 | ND | ND | ND | ND | ND |
| 31-Jul-00 | ND | ND | ND | ND | ND |
| 30-Oct-00 | ND | 0.33 | ND | 1.1 | 3.4 |
| 27-Feb-01 | ND | ND | ND | ND | 1.9 |
| 02-Apr-01 | ND | ND | ND | ND | 1.4 |
| 24-Jul-01 | ND | ND | ND | ND | 0.5 |
| 26-Oct-01 | ND | ND | ND | ND | 0.7 |
| 06-Mar-02 | ND | ND | ND | ND | 0.5 |
| NJGWQS (ug/l) | NA | 700 | 1000 | 40 | 30 |
| ROD Discharge Criteria (ug/l) | NA | 350 | 500 | 20 | 30 |

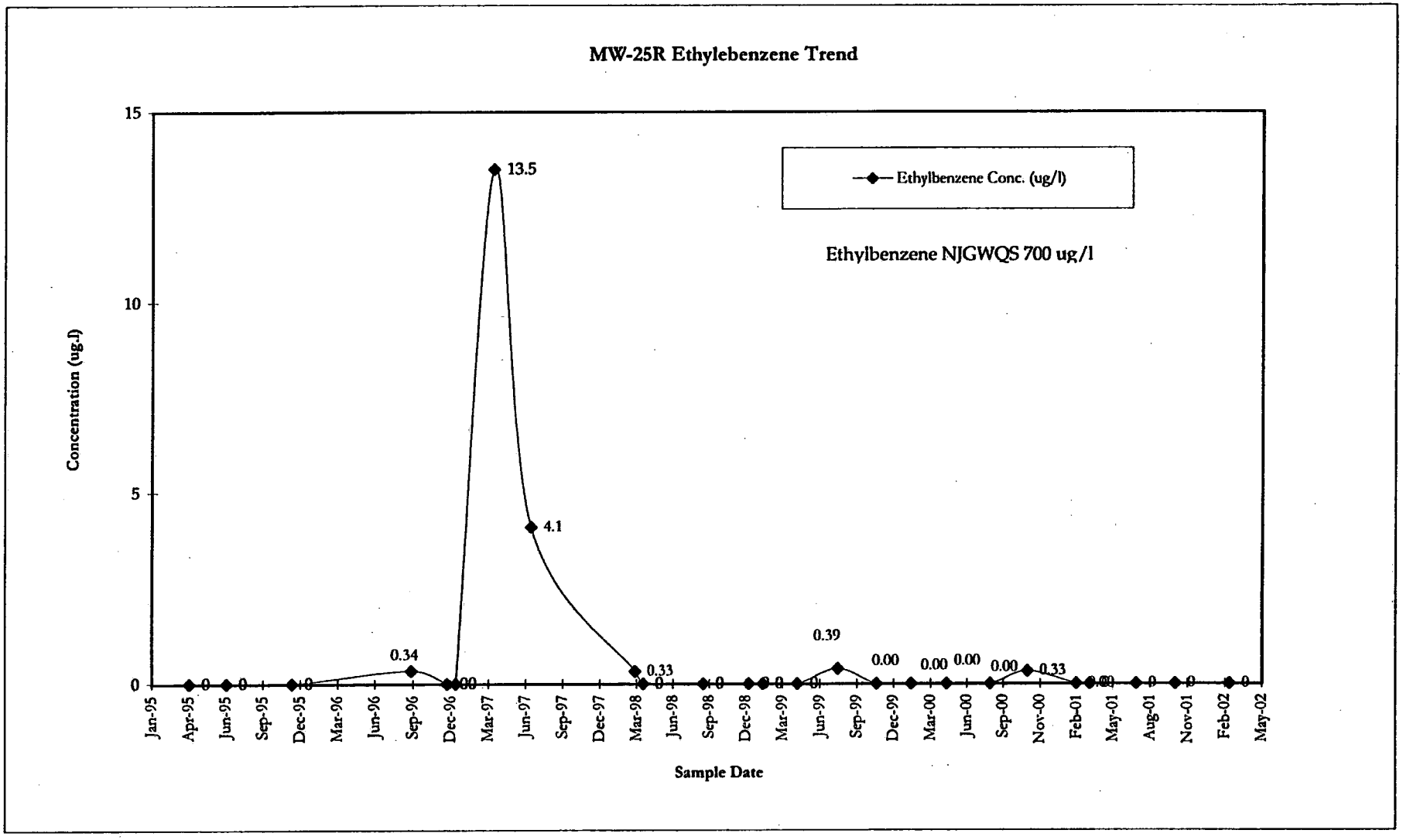
NOTES

Concentrations in bold exceed both the ROD discharge criteria and NJDEP GWQS

ND = Not detected above method detection limits

NS = Not Sampled

MW-25R
CONTAMINANT OF CONCERN
*Concentration vs. Time*



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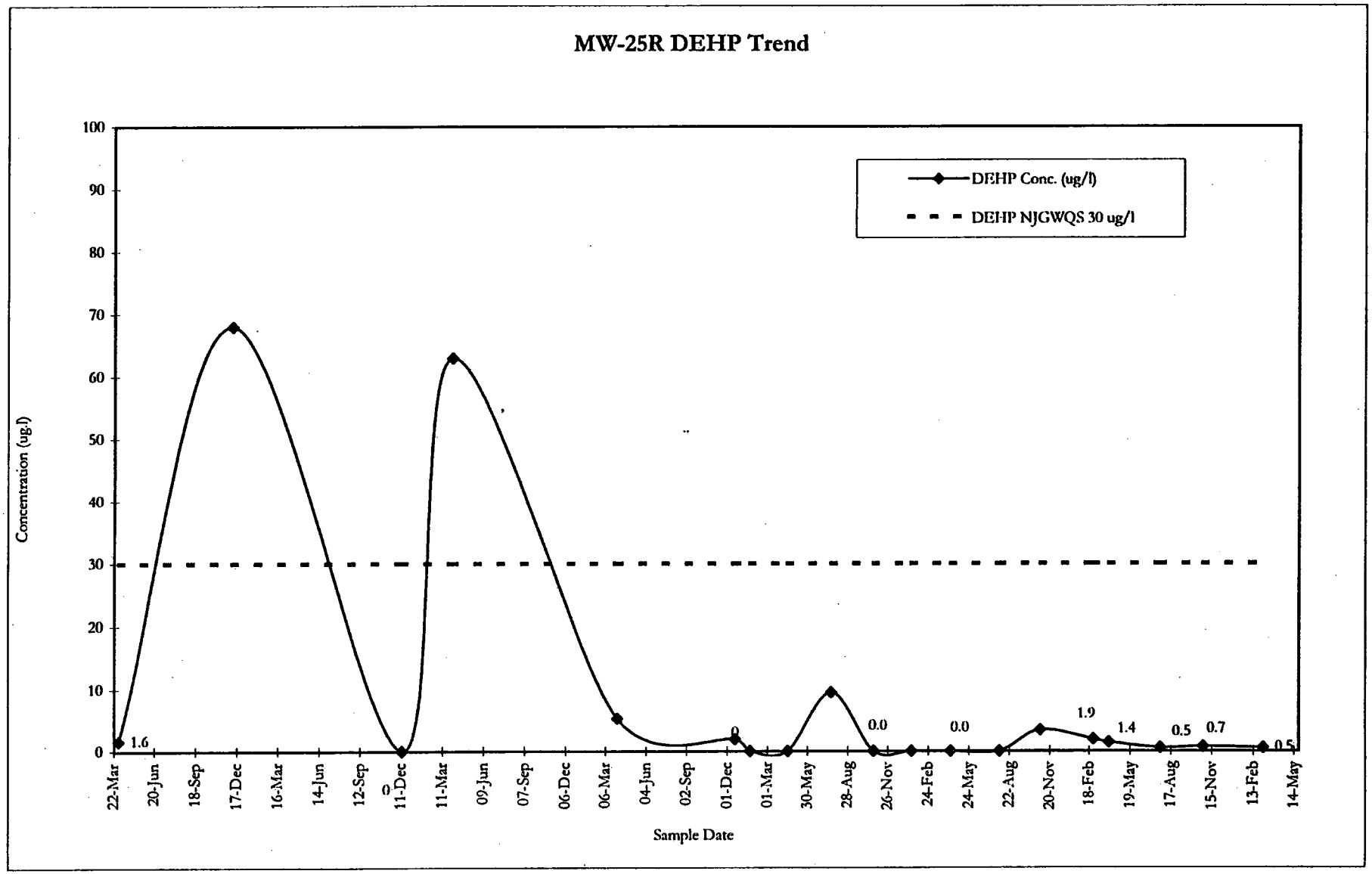
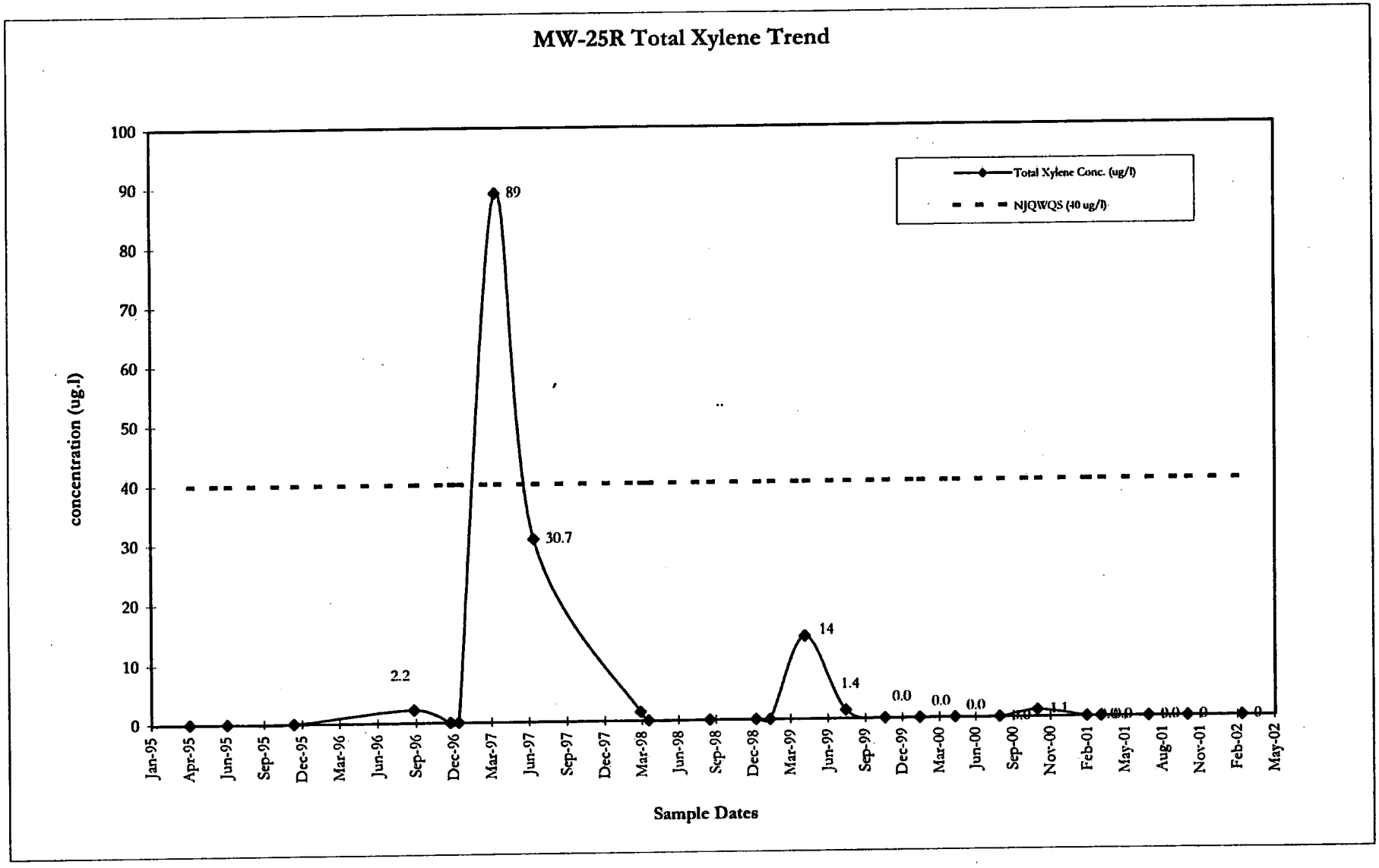
RMT, Inc. - Project Manager

MW-25R
CONTAMINANT OF CONCERN
*Concentration vs. Time*



MW-25R
CONTAMINANTS OF CONCERN
*Concentration vs. Time*

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Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

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# Appendix E
# Laboratory Report
# Severn Trent Services, STL Edison

SEVERN
TRENT
SERVICES

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732-549-3900
Fax: 732-549-3679
www.stl-inc.com

# Laboratory Results
## Job No. U251 - L.E. Carpenter (cont'd)

| Lab No. | Client ID | Analysis Required |
|---|---|---|
| 336316 | Rinsate-01 | BTEX (GC)<br>Bis-2-EHP |
| 336317 | FB01 | BTEX (GC)<br>Bis-2-EHP |
| 336318 | Trip_Blank | BTEX (GC) |
| 336319 | MW-15I | BTEX (GC)<br>Bis-2-EHP |
| 336320 | MW-15s | BTEX (GC)<br>Bis-2-EHP |
| 336321 | MW-4 | BTEX (GC)<br>Bis-2-EHP |
| 336322 | MW-11D | BTEX (GC) |

04/08/2002

SEVERN TRENT SERVICES

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732-549-3900
Fax: 732-549-3679
www.stl-inc.com

Residuals Management Technologies, Inc.
222 South Riverside Plaza
Suite 280
Chicago, IL 60606

Attention: Mr Nick Clevett

Laboratory Results
Job No. U251 - L.E. Carpenter

Dear Mr Clevett:

Enclosed are the results you requested for the following sample(s) received at our laboratory on March 7, 2002.

| Lab No. | Client ID | Analysis Required |
|---|---|---|
| 336307 | MW-25-R | BTEX (GC)<br>Bis-2-EHP |
| 336308 | MW-17S | BTEX (GC)<br>Bis-2-EHP |
| 336309 | MW-22R | BTEX (GC)<br>Bis-2-EHP |
| 336310 | MW-14S | BTEX (GC)<br>Bis-2-EHP |
| 336311 | MW-14I | BTEX (GC)<br>Bis-2-EHP |
| 336312 | MW-21 | BTEX (GC)<br>Bis-2-EHP |
| 336313 | DUP01 | BTEX (GC)<br>Bis-2-EHP |
| 336314 | MW19-7 | BTEX (GC)<br>Bis-2-EHP |
| 336315 | MW19-5 | BTEX (GC)<br>Bis-2-EHP |

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Edison, NJ 08817

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Fax: 732-549-3679
www.stl-inc.com

Laboratory Results
Job No. U251 - L.E. Carpenter (cont'd)

| Lab No. | Client ID | Analysis Required |
|---|---|---|
| | | Bis-2-EHP |

If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael J. Urban
Laboratory Director

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# Analytical Results Summary

Client ID: MW-25-R
Site: L.E. Carpenter

Lab Sample No: 336307
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Analyzed: 03/10/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2947.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | ND | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: MW-17S
Site: L.E. Carpenter

Lab Sample No: 336308
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Analyzed: 03/10/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2948.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | ND | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: MW-22R
Site: L.E. Carpenter

Lab Sample No: 336309
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Analyzed: 03/10/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2951.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 10.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 2.8 |
| Toluene | ND | 2.6 |
| Ethylbenzene | 140 | 2.6 |
| Xylene (Total) | 420 | 2.5 |

Client ID: MW-14S
Site: L.E. Carpenter

Lab Sample No: 336310
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Analyzed: 03/10/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2954.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | ND | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: MW-14I
Site: L.E. Carpenter

Lab Sample No: 336311
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Analyzed: 03/10/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2955.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | ND | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: MW-21
Site: L.E. Carpenter

Lab Sample No: 336312
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Analyzed: 03/10/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2956.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | ND | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: **DUP01**
Site: L.E. Carpenter

Lab Sample No: **336313**
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Analyzed: 03/10/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2957.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | ND | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: MW19-7
Site: L.E. Carpenter

Lab Sample No: 336314
Lab Job No: U251

Date Sampled: 03/07/02
Date Received: 03/07/02
Date Analyzed: 03/10/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2958.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 5.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | 3.0 | 1.4 |
| Toluene | ND | 1.3 |
| Ethylbenzene | ND | 1.3 |
| Xylene (Total) | 250 | 1.2 |

Client ID: MW19-5
Site: L.E. Carpenter

Lab Sample No: 336315
Lab Job No: U251

Date Sampled: 03/07/02
Date Received: 03/07/02
Date Analyzed: 03/11/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2972.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 500.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 140 |
| Toluene | 10000 | 130 |
| Ethylbenzene | 300 | 130 |
| Xylene (Total) | 1700 | 120 |

Client ID: **Rinsate-01**
Site: L.E. Carpenter

Lab Sample No: **336316**
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Analyzed: 03/11/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2960.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | 0.74 | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: FB01
Site: L.E. Carpenter

Lab Sample No: 336317
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Analyzed: 03/11/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2961.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | ND | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: **Trip_Blank**
Site: L.E. Carpenter

Lab Sample No: 336318
Lab Job No: U251

Date Sampled: 03/05/02
Date Received: 03/07/02
Date Analyzed: 03/11/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2962.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | ND | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: MW-15I
Site: L.E. Carpenter

Lab Sample No: 336319
Lab Job No: U251

Date Sampled: 03/07/02
Date Received: 03/07/02
Date Analyzed: 03/11/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2963.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | ND | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: MW-15s
Site: L.E. Carpenter

Lab Sample No: 336320
Lab Job No: U251

Date Sampled: 03/07/02
Date Received: 03/07/02
Date Analyzed: 03/11/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2964.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | ND | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: MW-4
Site: L.E. Carpenter

Lab Sample No: 336321
Lab Job No: U251

Date Sampled: 03/07/02
Date Received: 03/07/02
Date Analyzed: 03/11/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2965.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | ND | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: MW-11D
Site: L.E. Carpenter

Lab Sample No: 336322
Lab Job No: U251

Date Sampled: 03/07/02
Date Received: 03/07/02
Date Analyzed: 03/11/02
GC Column: DB624
Instrument ID: VOAGC3.i
Lab File ID: ipid2966.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**
**METHOD 602**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| Benzene | ND | 0.28 |
| Toluene | ND | 0.26 |
| Ethylbenzene | ND | 0.26 |
| Xylene (Total) | ND | 0.25 |

Client ID: MW-25-R
Site: L.E. Carpenter

Lab Sample No: 336307
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/12/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6030.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 0.5 | 0.5 |

Client ID: MW-17S
Site: L.E. Carpenter

Lab Sample No: 336308
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/13/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6052.d

Matrix: WATER
Level: LOW
Sample Volume: 610 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 1.0 | 0.7 |

Client ID: MW-22R
Site: L.E. Carpenter

Lab Sample No: 336309
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/12/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6031.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 18 | 0.4 |

Client ID: MW-14S
Site: L.E. Carpenter

Lab Sample No: 336310
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/13/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6065.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 1.2 | 0.4 |

Client ID: MW-14I
Site: L.E. Carpenter

Lab Sample No: 336311
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/12/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6032.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 3.4 | 0.5 |

Client ID: MW-21
Site: L.E. Carpenter

Lab Sample No: 336312
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/12/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6033.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 1.3 | 0.5 |

Client ID: DUP01
Site: L.E. Carpenter

Lab Sample No: 336313
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/12/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6034.d

Matrix: WATER
Level: LOW
Sample Volume: 960 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 1.6 | 0.5 |

Client ID: MW19-7
Site: L.E. Carpenter

Lab Sample No: 336314
Lab Job No: U251

Date Sampled: 03/07/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/12/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6035.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 1.6 | 0.5 |

Client ID: MW19-5
Site: L.E. Carpenter

Lab Sample No: 336315
Lab Job No: U251

Date Sampled: 03/07/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/14/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6082.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 1.3 | 0.4 |

Client ID: **Rinsate-01**
Site: L.E. Carpenter

Lab Sample No: **336316**
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/13/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6067.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 2.5 | 0.5 |

Client ID: FB01
Site: L.E. Carpenter

Lab Sample No: 336317
Lab Job No: U251

Date Sampled: 03/06/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/13/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6068.d

Matrix: WATER
Level: LOW
Sample Volume: 940 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 16 | 0.5 |

Client ID: MW-15I
Site: L.E. Carpenter

Lab Sample No: 336319
Lab Job No: U251

Date Sampled: 03/07/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/14/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6069.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 1.0 | 0.5 |

Client ID: MW-15s
Site: L.E. Carpenter

Lab Sample No: 336320
Lab Job No: U251

Date Sampled: 03/07/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/14/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6070.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 1.0 | 0.4 |

Client ID: MW-4
Site: L.E. Carpenter

Lab Sample No: 336321
Lab Job No: U251

Date Sampled: 03/07/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/14/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6071.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 150 | 0.4 |

Client ID: MW-11D
Site: L.E. Carpenter

Lab Sample No: 336322
Lab Job No: U251

Date Sampled: 03/07/02
Date Received: 03/07/02
Date Extracted: 03/11/02
Date Analyzed: 03/14/02
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q6072.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**
**METHOD 625**

| Parameter | Analytical Result Units: ug/l | Method Detection Limit Units: ug/l |
|---|---|---|
| bis(2-Ethylhexyl)phthalate | 2.8 | 0.5 |

# General Information

## Chain of Custody

U251

# STL EDISON

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

## CHAIN OF CUSTODY / ANALYSIS REQUEST

PAGE ___ OF ___

| | | |
|---|---|---|
| Name ( for report and invoice ) ~~John Minalich~~ Nick Cleaff | Samplers Name ( Printed ) John Minalich | Site/Project Identification L E Carpenter |
| Company RMT | P.O. # | State (Location of site): NJ: ✓ NY: ☐ Other: |
| Address ~~527 Plymouth Rd~~ 225 Riverside Plaza Suite 406 | Analysis Turnaround Time: Standard ☐ | Regulatory Program: |
| City ~~Plymouth~~ Chicago ~~IL 60538~~ State ~~PA 19462~~ | Rush Charges Authorized For: 2 Week ☐ 1 Week ✓ Other ☐ | |
| Phone ~~(610) 834-0490~~ Fax ~~(610) 834-1469~~ | | |

ANALYSIS REQUESTED ( ENTER "X" BELOW TO INDICATE REQUEST )

LAB USE ONLY
Project No:
Job No: U251

| Sample Identification | Date | Time | Matrix | No. of Cont. | BTEX Method 602 | DGHP | Sample Numbers |
|---|---|---|---|---|---|---|---|
| MW25(R) | 3/6/02 | 13:45 | GW | 4 | ✓ | ✓ | 336307 |
| MW17S | 3/6/02 | 9:34 | GW | 4 | ✓ | ✓ | 336308 |
| MW17S MS/MSD | 3/6/02 | 9:34 | GW | 4 | ✓ | ✓ | 336308 |
| MW22R | 3/6/02 | 15:30 | GW | 4 | ✓ | ✓ | 336309 |
| MW14S | 3/6/02 | 17:35 | GW | 4 | ✓ | ✓ | 336310 |
| MW14I | 3/6/02 | 18:45 | GW | 4 | ✓ | ✓ | 336311 |
| MW21 | 3/6/02 | 11:46 | GW | 4 | ✓ | ✓ | 336312 |
| DUP01 | | | GW | 4 | ✓ | ✓ | 336313 |
| MW19-7 | 3/7/02 | 8:36 | GW | 4 | ✓ | ✓ | 336314 |
| MW19-5 | 3/7/02 | 9:47 | GW | 4 | ✓ | ✓ | 336315 |

Preservation Used: 1 = ICE, 2 = HCl, 3 = $H_2SO_4$, 4 = $HNO_3$, 5 = NaOH
6 = Other _____, 7 = Other _____

Soil:
Water:

**Special Instructions**

Water Metals Filtered (Yes/No)?

| Relinquished by | Company | Date / Time | Received by | Company |
|---|---|---|---|---|
| 1) Anna Lapka | RMT | 3/7/02 15:28 | 1) K. Chaloka | STL |
| 2) K. Chaloka | STL Edison Ken Chaloka | 3/7/02 4:36 pm | 2) U Pandya | STL-Edison. |
| 3) | | | 3) | |
| 4) | | | 4) | |

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

U251

# STL EDISON

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

## CHAIN OF CUSTODY / ANALYSIS REQUEST

PAGE ___ OF ___

| | | |
|---|---|---|
| Name ( for report and invoice ) ~~RMT~~ John Mihalich | Samplers Name ( Printed ) John Mihalich | Site/Project Identification LE Carpenter |
| Company RMT | P.O. # | State (Location of site): NJ: ✓ NY: ☐ Other: |
| | | Regulatory Program: |
| Address 301 Plym... Rd Suite 4... | Analysis Turnaround Time: Standard ☐ | |
| City Plymouth Meeting State PA 19462 | Rush Charges Authorized For: 2 Week ☐ 1 Week ✓ Other ☐ | |
| Phone 610-834-0490 Fax 610-834-1469 | | |

REQUESTED (ENTER BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No:
Job No: U251

| Sample Identification | Date | Time | Matrix | No. of. Cont. | BTEX | DEHP | Sample Numbers |
|---|---|---|---|---|---|---|---|
| RinSite C1 | 3/6/02 | 16:20 | GW | 4 | ✓ | ✓ | 336316 |
| FB01 | 3/6/02 | 15:33 | GW | 4 | ✓ | ✓ | 336317 |
| Trip Blank | 3/6/02 | | GW | 2 | ✓ | | 336318 |
| MW 15I | 3/7/02 | 11:07 | GW | 4 | ✓ | ✓ | 336319 |
| MW 15S | 3/7/02 | 12:44 | GW | 4 | ✓ | ✓ | 336320 |
| MW4 | 3/7/02 | 13:16 | GW | 4 | ✓ | ✓ | 336321 |
| MW11D | 3/7/02 | 14:33 | GW | 4 | ✓ | ✓ | 336322 |
| | | | | | | | — |
| | | | | | | | |
| | | | | | | | |

Preservation Used: 1 = ICE, 2 = HCl, 3 = $H_2SO_4$, 4 = $HNO_3$, 5 = NaOH
6 = Other _____, 7 = Other _____
Soil:
Water:

Special Instructions

Water Metals Filtered (Yes/No)?

| Relinquished by | Company | Date / Time | Received by | Company |
|---|---|---|---|---|
| 1) Sarah Lupka | RMT | 3/7/02 15:28 | 1) K. CHALOKA | STL |
| 2) K. CHALOKA | STL Edison Ken Chaloka | 3/7/02 4:36 Pm | 2) UPandy9 | STL-Edison |
| 3) | | | 3) | |
| 4) | | | 4) | |

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

Laboratory Chronicles

# INTERNAL CUSTODY RECORD
# AND
# LABORATORY CHRONICLE
# STL Edison

777 New Durham Road, Edison, New Jersey
08817

**Job No:** U251 **Site:** L.E. Carpenter

**Client:** Residuals Management Technologies, Inc.

BNAMS

**WATER - 625**

| Lab Sample ID | Date Sampled | Date Received | Preparation Date | Technician's Name | Analysis Date | Analyst's Name | QA Batch |
|---|---|---|---|---|---|---|---|
| 336307 | 3/6/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/12/2002 | Martinez, Eddie | 7087 |
| 336308 | 3/6/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/13/2002 | Martinez, Eddie | 7087 |
| 336309 | 3/6/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/12/2002 | Martinez, Eddie | 7087 |
| 336310 | 3/6/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/13/2002 | Martinez, Eddie | 7087 |
| 336311 | 3/6/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/12/2002 | Martinez, Eddie | 7087 |
| 336312 | 3/6/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/12/2002 | Martinez, Eddie | 7087 |
| 336313 | 3/6/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/12/2002 | Martinez, Eddie | 7087 |
| 336314 | 3/7/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/12/2002 | Martinez, Eddie | 7087 |
| 336315 | 3/7/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/14/2002 | Martinez, Eddie | 7087 |
| 336316 | 3/6/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/13/2002 | Martinez, Eddie | 7087 |
| 336317 | 3/6/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/13/2002 | Martinez, Eddie | 7087 |
| 336319 | 3/7/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/14/2002 | Martinez, Eddie | 7087 |
| 336320 | 3/7/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/14/2002 | Martinez, Eddie | 7087 |
| 336321 | 3/7/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/14/2002 | Martinez, Eddie | 7087 |
| 336322 | 3/7/2002 | 3/7/2002 | 3/11/2002 | Romero, Juan | 3/14/2002 | Martinez, Eddie | 7087 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# INTERNAL CUSTODY RECORD
# AND
# LABORATORY CHRONICLE
# STL Edison

777 New Durham Road, Edison, New Jersey
08817

**Job No:** U251 **Site:** L.E. Carpenter

**Client:** Residuals Management Technologies, Inc.

VOAGC

**602**

| Lab Sample ID | Date Sampled | Date Received | Preparation Date | Technician's Name | Analysis Date | Analyst's Name | QA Batch |
|---|---|---|---|---|---|---|---|
| **WATER** | | | | | | | |
| 336307 | 3/6/2002 | 3/07/2002 | | | 3/10/2002 | Zhang, John | 7331 |
| 336308 | 3/6/2002 | 3/07/2002 | | | 3/10/2002 | Zhang, John | 7331 |
| 336309 | 3/6/2002 | 3/07/2002 | | | 3/10/2002 | Zhang, John | 7332 |
| 336310 | 3/6/2002 | 3/07/2002 | | | 3/10/2002 | Zhang, John | 7332 |
| 336311 | 3/6/2002 | 3/07/2002 | | | 3/10/2002 | Zhang, John | 7332 |
| 336312 | 3/6/2002 | 3/07/2002 | | | 3/10/2002 | Zhang, John | 7332 |
| 336313 | 3/6/2002 | 3/07/2002 | | | 3/10/2002 | Zhang, John | 7332 |
| 336314 | 3/7/2002 | 3/07/2002 | | | 3/10/2002 | Zhang, John | 7331 |
| 336315 | 3/7/2002 | 3/07/2002 | | | 3/11/2002 | Zhang, John | 7331 |
| 336316 | 3/6/2002 | 3/07/2002 | | | 3/11/2002 | Zhang, John | 7331 |
| 336317 | 3/6/2002 | 3/07/2002 | | | 3/11/2002 | Zhang, John | 7331 |
| 336318 | 3/5/2002 | 3/07/2002 | | | 3/11/2002 | Zhang, John | 7331 |
| 336319 | 3/7/2002 | 3/07/2002 | | | 3/11/2002 | Zhang, John | 7331 |
| 336320 | 3/7/2002 | 3/07/2002 | | | 3/11/2002 | Zhang, John | 7331 |
| 336321 | 3/7/2002 | 3/07/2002 | | | 3/11/2002 | Zhang, John | 7331 |
| 336322 | 3/7/2002 | 3/07/2002 | | | 3/11/2002 | Zhang, John | 7331 |

Methodology Review

## Analytical Methodology Summary

Volatile Organics:

Unless otherwise specified, water samples are analyzed for volatile organics by purge and trap GC/MS as specified in EPA Method 624. Drinking water samples are analyzed by EPA Method 524.2. Solid samples are analyzed for volatile organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8260B. Water samples are analyzed for volatile organics by purge and trap GC/PID and GC/ELCD as specified in EPA Methods 601 and 602. Solid samples are analyzed by GC/PID and GC/ELCD in accordance with SW-846, 3rd Edition Method 8021B.

Acid and Base/Neutral Extractable Organics:

Unless otherwise specified, water samples are analyzed for acid and/or base/neutral extractable organics by GC/MS in accordance with EPA Method 625. Solids are analyzed for acid and/or base/neutral extractable organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8270C.

GC/MS Nontarget Compound Analysis:

Analysis for nontarget compounds is conducted, upon request, in conjunction with GC/MS analyses by EPA Methods 624, 625, 8260B and 8270C. Nontarget compound analysis is conducted using a forward library search of the EPA/NIH/NBS mass spectral library of compounds at the greatest apparent concentration (10% or greater of the nearest internal standard) in each organic fraction (15 for volatile, 15 for base/neutrals and 10 for acid extractables).

Organochlorine Pesticides and PCBs:

Unless otherwise specified, water samples are analyzed for organochlorine pesticides and PCBs by dual column gas chromatography with electron capture detectors as specified in EPA Method 608. Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8081A for organochlorine pesticides and Method 8082 for PCBs.

Total Petroleum Hydrocarbons:

Water samples are analyzed for petroleum hydrocarbons by I.R. using EPA Method 418.1. Solid samples are prepared for analysis by soxhlet extraction consistent with the March 1990 N.J. DEP "Remedial Investigation Guide" Appendix A, page 52, and analyzed by U.S. EPA Method 418.1