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QUARTERLY GROUNDWATER MONITORING REPORT
Martin State Airport: Middle River, Maryland

LOCKHEED MARTIN

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Quarterly Groundwater Monitoring Report
Martin State Airport
Middle River, Maryland

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1.0 INTRODUCTION

On behalf of Lockheed Martin Corporation (LMC), Tetra Tech, Inc. has prepared the following revised final quarterly monitoring well sampling report for the southeast portion of Martin State Airport (MSA) in Middle River, Maryland. This report summarizes data collected during the June 2004 sampling event (2nd quarter 2004). This report was revised in accordance with Maryland Department of the Environment's (MDE's) e-mail comments dated September 23, 2004. The quarterly sampling program was initiated to monitor chlorinated volatile organic compound (VOC) and metal concentrations previously identified in surficial groundwater.

2.0 SITE LOCATION AND DESCRIPTION

The MSA is located at 701 Wilson Point Road in Middle River, Maryland, and is bounded by Frog Mortar Creek to the east and Stansbury Creek to the west. Both creeks join into Chesapeake Bay at the south side of the airport. The area under investigation is located at the southeast portion of the MSA and is bounded by Frog Mortar Creek to the east, and the main airport runway to the west. The location of the investigation area is shown in Figure 1 – *see Appendix A*.

The investigation area was initially identified in July 1991, when the Maryland Aviation Administration (MAA) encountered four drums adjacent to Taxiway Tango during trenching activities for the installation of an electrical cable. Based on the discovery of these buried drums, the surrounding area was investigated for potential impacts to soil and groundwater, as required by MDE in their letters dated January 6, 1992 and January 14, 1997 to MAA.

3.0 SUBSURFACE CONDITIONS

3.1 Geology

Martin State Airport is located in the Western Shore of the Coastal Plain Physiographic Province. Based on geologic mapping of Baltimore County, the property is underlain by the Potomac Group, a Cretaceous age interbedded gravel, sand, silt, and clay unit ranging in thickness from 0 to 800 feet. The Potomac Group is composed of three units: the Raritan and Patapsco Formations, the Arundel Clay, and the Patuxent Formation. The Raritan and Patapsco

Formations range up to 400 feet thick and are composed of a gray, brown, and red variegated silt and clay unit with lenticular lenses of sand and few gravels. The Arundel Clay is composed of dark gray and maroon lignitic clays and ranges in thickness from 0 to 100 feet. The Patuxent Formation is described as a white or light gray to orange brown, moderately sorted sand unit with quartz gravels, silts and clays and ranges up to 250 feet in thickness.

The Potomac Group has not been subdivided in the vicinity of Martin State Airport nor has the unit's total thickness been well mapped in the area.

Based on lithologic logging of soil borings within the investigation area, the subsurface soils are highly heterogeneous, consisting of gravels, sands, silts, and clays. While some soil zones were consistently observed throughout the project area, generally the soil lithology varied considerably between soil borings. The soils consist of an upper layer of fill materials that overlies native soils of the Potomoc Group. The maximum depth of the logged borings (110 feet below ground surface [bgs]) identified interbedded sands, silts, and clays of the Patapsco Formation

3.2 Hydrogeology

The uppermost water-bearing zone in the region is known as the Patapsco Formation. Available regional well log data indicate that the Patapsco Formation may extend to a depth of approximately 120 feet bgs beneath the site. The Patapsco Formation is underlain by the Arundel Formation, a thick red clay aquiclude. Regional lithologic information indicates that the Arundel Formation is approximately 120 feet thick and serves as the aquiclude overlying the water-bearing Patuxent Formation. Based on this information, the Arundel Formation may extend from 120 to 240 feet bgs at the MSA site.

Based on the physiographic setting as a narrow peninsula, surficial groundwater will tend to flow away from topographic rises and toward open water (i.e., toward Chesapeake Bay). The Patapsco aquifer is recharged directly by rainfall in the unpaved portions of the site. Annual precipitation is approximately 42 to 46 inches.

Groundwater supplies in the Baltimore area are obtained primarily from two separate aquifers: the Patuxent and the Patapsco Formations. The Patuxent is generally the major aquifer utilized;

however, the Patapsco is also used in the Middle River Area where the project site is located (Preliminary Assessment, Maryland Air National Guard Base, July 1988).

A total of thirty eight permanent groundwater monitoring wells were located within the investigation area. All wells were screened in the surficial aquifer system (the Patapsco Formation), but at different elevations to understand conditions across the entire water-bearing zone. For data evaluation and correlation, the aquifer was divided into Upper, Intermediate, and Lower zones. Sixteen of the groundwater monitoring wells (DMW-1S through DMW-11S, and MW-3 through MW-7) are screened in the Upper Surficial Aquifer, which is the portion at elevations above -15 feet mean sea level (msl). Thirteen wells (DMW-1A, DMW-2A, DMW-3I through DMW-11I, MW-1, and MW-2) are screened in the Intermediate Surficial Aquifer, which is the portion at elevations between -15 and -45 feet msl. Nine wells (DMW-1B, DMW-2B, and DMW-3D through DMW-9D) are screened in the Lower Surficial Aquifer, which is the portion at elevations below -45 feet msl.

4.0 DESCRIPTION OF HISTORICAL AREAS OF CONCERN

From 1992 through 1996, the Maryland Aviation Administration (MAA) conducted several investigations at the southeast portion of Martin State Airport[1].. Results of the investigations identified four areas of concern. The locations of the four areas of concern are shown in Figure 2 included in Appendix A, and are described as follows:

1) *Taxiway Tango Median Anomaly Area* – After removal of four buried drums in 1991, a geophysical survey was conducted throughout the area adjacent to Taxiway Tango. Several anomalous zones were identified as potentially containing buried metal.

2) *Drum Area* – During a previous investigation conducted at the site in 1996, several drums were uncovered during surface vegetation clearing.

3) *Two Existing Ponds* – Based on historical records, acids may have been discharged during the 1950's and 1960's at the locations where two ponds currently exist.

4) *Petroleum Hydrocarbon Area* – During a previous investigation conducted at the site in 1996, petroleum hydrocarbons were encountered while drilling a soil boring. The petroleum hydrocarbon area is located approximately 200 feet west of the ponds.

[1] The previous investigations included the following: (1) Geophysical Survey of Taxiway Tango (Handex 2/92), (2) Preliminary Site Investigation of Taxiway Tango (MES 5/94), (3) Confirmation Investigation of Taxiway Tango (MES 1/95), and (4) Expanded Investigation of Taxiway Tango (MES 7/96).

5.0 SITE HISTORY

This section provides a brief chronological history of investigation activities that have been conducted at the site by Lockheed Martin Corporation:

- **March 1999: Initial Groundwater Monitoring Well Sampling** – The first evaluation of the site by Lockheed Martin was performed in March 1999 and consisted of sampling six existing groundwater monitoring wells to obtain updated chemical data on groundwater quality, groundwater elevation, and flow direction at the southeast portion of Martin State Airport. Cis-1,2-Dichloroethene, Trichloroethene (TCE) and vinyl chloride were detected in select monitoring wells above the Maximum Contaminant Level (MCL) specified by the U.S. EPA's National Primary Drinking Water Regulations. A detailed description of the groundwater sampling program is provided in the Final Groundwater Monitoring Well Surveying and Sampling Report, dated May 18, 1999. Based on the detection of elevated VOCs in the existing monitoring wells, further investigation of the site to identify potential chemical source areas was initiated.

- **March 2000: Source Identification and Assessment Program** – The second investigation was identified as a Source Identification and Assessment Program and was performed from March through May 2000. Four specific areas were previously identified by MAA as having the potential to have released chemicals. Each of these areas of potential concern was investigated through a combination of excavations, localized trenching, drilling of soil borings, and sampling and laboratory analysis of soil, sediments, and groundwater. VOCs, petroleum hydrocarbons, and metals were detected in the soil and groundwater during this investigation. Only one VOC (*vinyl chloride*) was detected above the EPA Region III industrial soil risk-based concentrations used by MDE. Selected VOCs were also detected in the groundwater above their MCLs. The results of the investigation activities are documented in the Final Source Identification and Assessment Report, dated September 29, 2000. Results of the source identification and assessment program identified VOCs in excess of published cleanup criteria, therefore delineation of chemicals in the groundwater was initiated.

- **December 2001 through December 2002: Partial Chemical Delineation and Initial Modeling** – The third investigation was performed from December 2001 through December 2002 to further delineate the lateral extent of chemicals in the near surface groundwater at the four source areas of concern. In addition, deep multi-level monitoring wells were installed at two locations to characterize the site geology and vertical extent of groundwater impacts. The deep wells were installed where the highest concentrations of TCE and vinyl chloride were detected in the shallow groundwater investigation. A summary of the activities performed during this investigation program is provided below and documented in the Final Chemical Delineation and Groundwater Modeling Report, dated December 27, 2002.

  Based on the data collected during the groundwater investigation, VOCs *(primarily cis-1,2-dichloroethene, TCE, and vinyl chloride)* and metals *(primarily cadmium)* were detected in the groundwater above their MCLs throughout the investigation area. The lateral and vertical distribution of chemicals in groundwater had not been delineated during this phase of the investigation.

- **July 2003 through March 2004: Data Gap Investigation and Groundwater Modeling** – The fourth investigation was performed from July 2003 through March 2004 to fully delineate and characterize the chemical plumes at the site and perform groundwater modeling. Nine additional multi-level monitoring wells (DMW-3 through DMW-11), three shallow wells (DMW-1S, DMW-2S, and MW-7), and four temporary wells (TT-11 through TT-14) were installed at the site. The lateral and vertical distributions of chemical concentrations in groundwater indicate that three potential source areas are present at the site contributing to three primary groundwater plumes. These source areas and plumes are:

  1) Plume 1, originating from the Drum Area
  2) Plume 2, originating from the Petroleum Hydrocarbon and Pond #1 Area
  3) Plume 3, originating from the Taxiway Tango median area

  Three chlorinated VOCs (*cis-1,2-dichloroethene, TCE, and vinyl chloride*) and one metal *(cadmium)* were reported at the highest concentrations during this investigation. The distribution of VOCs in groundwater suggests that dechlorination of TCE to its daughter

products cis-1,2-DCE and vinyl chloride is occurring. The plumes are migrating along the down-gradient groundwater flow path from west to east toward Frog Mortar Creek. While the three plumes represent the primary source areas, the chemicals have commingled, particularly at areas approaching Frog Mortar Creek, to form larger groundwater plumes. This data gap investigation program adequately completed the vertical and lateral delineation of the existing groundwater chemical plumes.

Site-specific information was used to develop a conceptual model, including regional setting, soil lithology, aquifer characteristics, and historical and current chemical concentration data. Numerical modeling was conducted to predict the groundwater flow and chemical migration in the investigation area. The modeling results will be used in future risk assessments, and remedial feasibility studies. A summary of the investigation and modeling effort is documented in the Final Data Gap Investigation and Modeling Report, dated May 2004.

6.0 MONITORING OBJECTIVES

In accordance with MDE's letter dated November 22, 2002, quarterly groundwater sampling was initiated at the site. Quarterly monitoring has been initiated to track and evaluate chemical trends in the groundwater and potential migration of the plumes. The baseline sampling event (September 2003) and first quarter (December 2003) of monitoring consisted of sampling the 10 existing wells (MW-1 through MW-6, multi-level wells DMW-1 and DMW-2), 28 newly installed permanent wells (DMW-1S, DMW-2S, DMW-3 through DMW-11, and MW-7), and 4 temporary wells (TT-11 through TT-14). The second quarter (March 2004) of monitoring consisted of sampling the 10 existing wells, and 28 newly installed permanent wells. The 4 temporary wells were not sampled and scheduled for abandonment[2].

[2] The temporary wells (TT-11 through TT-14) were used for a maximum of two groundwater sampling events (baseline sampling in September 2003 and first quarter of groundwater sampling in December 2003), and not intended for long-term monitoring. In accordance with the Final Data Gap and Hydrogeologic Work Plan (Tetra Tech, May 2003), the temporary wells were abandoned on June 29, 2004.

Based on Tetra Tech's letter dated May 28, 2004, MDE approved a reduction in sampling 13 wells in the June 2004 monitoring event as documented in an e-mail dated June 15, 2004[3]. The wells excluded from the June 2004 sampling include 7 wells (DMW-1S, DMW-6S, DMW-8S, DMW-10S, MW-4, MW-6, and MW-7) screened in the upper surficial aquifer, 2 wells (DMW-6I and MW-2) screened in the intermediate surficial aquifer, and 4 wells (DMW-3D, DMW-5D, DMW-6D, and DMW-7D) screened in the lower surficial aquifer. Therefore, the remaining 25 wells were scheduled for sampling in the June 2004 monitoring event.

The third quarter (June 2004) of monitoring consisted of sampling 6 existing wells, and 18 newly installed permanent wells – *see Figure 3 in Appendix A*. MW-1 was also scheduled for sampling; however, it was severely damaged from airport mowing equipment and could not be sampled.

7.0 GROUNDWATER MONITORING PROCEDURES

Groundwater Level Measurements

Water levels in the monitoring wells were measured using a water level meter consisting of a liquid sensor attached to a measuring tape that was lowered down into the well until water was encountered. A buzzer sounded when the probe reached groundwater and the depth was read from the tape relative to the top of the well casing. Water level measurements for each well were recorded on field data logging sheets. The water level measurement data is presented in Tables B-1 and B-2 – *see Appendix B*.

Well Purging and Sampling

Prior to collecting the groundwater samples, purging was conducted using a low-flow method intended to comply with USEPA Region III's recommended procedure for low-flow purging and sampling of groundwater monitoring wells (USEPA, 1999). Purging was conducted using dedicated bladder pumps for the twenty four permanent wells. During well purging, groundwater parameters including water temperature, pH, conductivity, dissolved oxygen, and turbidity were measured using a field water quality monitoring system. Stabilization of these parameters served as an indication of water representative of the formation, and their values were recorded on field data logging sheets – *see Appendix C*.

[3] MDE will reconsider Tetra Tech's proposal of sampling only 12 wells for the remaining two quarters of 2004 after review of this June 2004 monitoring report.

After parameter stabilization was achieved, groundwater samples were collected. Groundwater samples were collected directly from the tubing into sample containers provided by the analytical laboratory. Water samples were placed in a cooler with ice pending shipment to a State-Certified laboratory for analysis.

Laboratory Analysis

Groundwater samples were collected from a total of twenty four permanent wells at the site – *see Figure 3 in Appendix A.* A State of Maryland certified laboratory analyzed the groundwater samples collected. All samples were analyzed for VOCs using EPA Method 8260B, and total and dissolved priority pollutant metals using EPA Method 6020A. Samples analyzed for dissolved metals were filtered in the field using a disposable filter. In addition, a sample collected from one well (DMW-9S) was also analyzed for SVOCs using EPA Method 8270C[4]. A completed Chain-of-Custody form accompanied each shipment of samples to the laboratory to insure accountability for the samples from the time of collection to the time they were analyzed.

Bio-parameters consisting of nitrate, sulfate, and iron (III) were also analyzed at selected well locations (DMW-1A, DMW-1B, DMW-4I, DMW-5S, DMW-7S, and DMW-9I). Nitrate and sulfate was analyzed using EPA Method 300.0, and iron (III) was analyzed by EPA Method 6020. In addition, ethane and ethene were also analyzed at these selected well locations by EPA Method 8015 to evaluate the degradation of vinyl chloride.

8.0 PRIMARY CHEMICALS OF CONCERN

Based on the data collected during the well sampling, VOCs, dissolved metals, and SVOCs were detected in the groundwater above the MDE groundwater cleanup standards. A summary of the distribution of chemicals detected above the MDE standards within each groundwater zone is presented in Table 8-1.

[4] In accordance with the Final Data Gap and Hydrogeologic Work Plan (Tetra Tech, May 2003), all wells were also analyzed for SVOCs and pesticides in the September 2003 baseline sampling event. In the wells where SVOCs and pesticides were not detected during the baseline sampling, these parameters were not included in subsequent sampling events. In the March 2004 sampling event, SVOCs were only detected in one well (DMW-9S) above the practical quantitation limit, therefore this well was also sampled for SVOCs in June 2004.

Table 8-1
Summary of Chemicals Detected in Groundwater Above MDE Cleanup Standards

Surficial Aquifer	VOCs	Dissolved Metals	SVOCs
Upper	Benzene; Carbon Tetrachloride; Chloroform; 1,1-DCA; 1,2-DCA; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; Ethylbenzene; Naphthalene; 1,1,2,2-Tetrachloroethane; PCE; Toluene; 1,1,2-TCA, TCE; Vinyl Chloride; Xylenes	Beryllium Cadmium Nickel Selenium	Naphthalene
Intermediate	Benzene; Carbon Tetrachloride; Chloroform; 1,2-DCA; 1,1-DCE; cis-1,2-DCE; PCE; 1,2,4-Trichlorobenzene; 1,1,2-TCA; TCE; Vinyl Chloride	Beryllium Cadmium Chromium Lead Nickel	NA
Lower	Benzene; Chloroform; 1,2-DCA; 1,1-DCE; cis-1,2-DCE; TCE; Vinyl Chloride	Cadmium	NA

NA – Not Analyzed

Three primary chlorinated VOCs (cis-1,2-DCE, TCE, and vinyl chloride) were reported at the highest concentrations and frequency of any VOCs detected during the sampling event. The three primary chlorinated VOCs were detected throughout the investigation area with the highest concentrations in the upper and intermediate surficial groundwater. A detailed discussion and depiction of the primary VOC plumes within the three groundwater zones is presented in Section 10. Dissolved Cadmium was detected at the highest concentration of any metal above its MDE cleanup standard and was generally found east of the Petroleum Hydrocarbon and Pond #1 Area, and east of the Taxiway Tango median area. Most samples containing metals above MDE cleanup standards were co-located with the chlorinated VOCs.

9.0 GROUNDWATER ANALYTICAL RESULTS

The analytical results for the groundwater samples collected at the site were compared to the appropriate MDE groundwater cleanup standards. A summary of all detected VOCs, dissolved and total priority pollutant metals, and SVOCs is included in Table B-3 – *see Appendix B*. The laboratory analytical data reports are included in Appendix E. A summary of results for the four chemicals of concern (cis-1,2-DCE, TCE, vinyl chloride, and dissolved cadmium) detected within each groundwater zone is discussed below.

COC Results in the Upper Surficial Aquifer

A total of nine permanent wells installed in the upper surficial aquifer were sampled for VOCs and metals. A summary of the four chemicals of concern detected in the upper surficial aquifer exceeding MDE groundwater cleanup standards is presented in Table 9-1.

Table 9-1
COCs Detected Above MDE Cleanup Standards in the Upper Surficial Aquifer

Monitoring Well	COC Detected	Concentration (µg/L)	MDE Standard (µg/L)
DMW-2S	Cadmium	200	5
	cis-1,2-Dichloroethene	590	70
	Trichloroethene	2,400	5
	Vinyl Chloride	120	2
DMW-3S	cis-1,2-Dichloroethene	1,900	70
	Vinyl Chloride	3,500	2
DMW-4S	cis-1,2-Dichloroethene	190	70
	Trichloroethene	E3,900	5
	Vinyl Chloride	68	2
DMW-5S	cis-1,2-Dichloroethene	2,600	70
	Trichloroethene	14,000	5
	Vinyl Chloride	35	2
DMW-7S	Cadmium	13	5
	cis-1,2-Dichloroethene	26,000	70
	Trichloroethene	36,000	5
	Vinyl Chloride	180	2
DMW-9S	cis-1,2-Dichloroethene	36,000	70
	Trichloroethene	2,500	5
	Vinyl Chloride	18,000	2
DMW-11S	cis-1,2-Dichloroethene	E31,000	70
	Trichloroethene	E31,000	5
	Vinyl Chloride	1,500	2
MW-3	cis-1,2-Dichloroethene	140	70
	Trichloroethene	130	5
	Vinyl Chloride	4	2
MW-5	Cadmium	6.6	5
	cis-1,2-Dichloroethene	110,000	70
	Trichloroethene	35,000	5
	Vinyl Chloride	550	2

NA – Not Applicable
E – Estimated Value, Exceeds Calibration Range

As shown in Table 9-1, COCs exceeding MDE standards were detected in the nine wells sampled in the upper surficial aquifer. The VOC detected at the highest concentration was cis-1,2-DCE at a maximum concentration of 110,000 µg/L in well MW-5 located near the Drum Area. Dissolved cadmium was detected in only three wells with the highest concentration of 200 µg/L reported in well DMW-2S.

COC Results in the Intermediate Surficial Aquifer

A total of ten wells installed in the intermediate surficial aquifer were sampled for VOCs and metals. A summary of the four chemicals of concern detected in the intermediate surficial aquifer exceeding MDE groundwater standards is presented in Table 9-2.

Table 9-2
COCs Detected Above MDE Cleanup Standards in the Intermediate Surficial Aquifer

Monitoring Well	COC Detected	Concentration (µg/L)	MDE Standard (µg/L)
DMW-1A	Cadmium	1,000	5
	cis-1,2-Dichloroethene	8,000	70
	Trichloroethene	4,900	5
	Vinyl Chloride	5,900	2
DMW-2A	Cadmium	860	5
	cis-1,2-Dichloroethene	4,600	70
	Trichloroethene	23,000	5
	Vinyl Chloride	640	2
DMW-3I	Cadmium	250	5
	cis-1,2-Dichloroethene	14,000	70
	Trichloroethene	13,000	5
	Vinyl Chloride	2,200	2
DMW-4I	cis-1,2-Dichloroethene	1,400	70
	Trichloroethene	7,900	5
DMW-5I	cis-1,2-Dichloroethene	170	70
	Trichloroethene	730	5
DMW-7I	Cadmium	5.3	70
	cis-1,2-Dichloroethene	120	70
	Trichloroethene	150	5
	Vinyl Chloride	12	2
DMW-8I	Cadmium	86	5
	cis-1,2-Dichloroethene	600	70
	Trichloroethene	1,000	5
	Vinyl Chloride	120	2
DMW-9I	cis-1,2-Dichloroethene	9,300	70
	Trichloroethene	1,400	5
	Vinyl Chloride	1,400	2
DMW-10I	Trichloroethene	730	5
DMW-11I	*No COC Detected Above Standards*	NA	NA

NA – Not Applicable

As shown in Table 9-2, COCs exceeding MDE standards were detected in nine of the ten wells in the intermediate surficial aquifer. The VOC detected at the highest concentration was TCE at a maximum concentration of 23,000 µg/L in well DMW-2A. Dissolved cadmium was detected in five wells with the highest concentration of 1,000 µg/L reported in well DMW-1A.

COC Results in the Lower Surficial Aquifer

A total of five wells installed in the lower surficial aquifer were sampled for VOCs. A summary of the four chemicals of concern detected in the lower surficial aquifer exceeding MDE groundwater cleanup standards is presented in Table 9-3.

Table 9-3
COCs Detected Above MDE Cleanup Standards in the Lower Surficial Aquifer

Monitoring Well	COC Detected	Concentration (µg/L)	MDE Standard (µg/L)
DMW-1B	Cadmium	110	5
	cis-1,2-Dichloroethene	4,600	70
	Trichloroethene	190	5
	Vinyl Chloride	6,200	2
DMW-2B	Trichloroethene	15	5
DMW-4D	Cadmium	17	5
	cis-1,2-Dichloroethene	250	70
	Trichloroethene	4,900	5
	Vinyl Chloride	16	2
DMW-8D	Cadmium	16	5
	cis-1,2-Dichloroethene	180	70
	Trichloroethene	140	5
	Vinyl Chloride	85	2
DMW-9D	cis-1,2-Dichloroethene	560	70
	Trichloroethene	4,300	5

NA – Not Applicable

As shown in Table 9-3, VOCs exceeding MDE cleanup standards were detected in five of the wells sampled in the lower surficial aquifer. The VOC detected at the highest concentration was Vinyl Chloride at a maximum concentration of 6,200 µg/L in well DMW-1B. Dissolved cadmium was detected in three wells with the highest concentration of 110 µg/L also reported in well DMW-1B.

Bio-Parameter Results in the Surficial Aquifer

Bio-parameters consisting of ferric iron, nitrate, sulfate, ethane, and ethene were analyzed at six selected well locations. A summary of the bio-parameter data is presented in Table 9-4.

Table 9-4
Summary of Bio-Parameter Data for Selected Monitoring Wells

Bio-Parameters (mg/L)	Monitoring Well					
	DMW-1A	DMW-1B	DMW-4I	DMW-5S	DMW-7S	DMW-9I
Ferric Iron (Fe^{3+})	ND	ND	ND	ND	1.1	ND
Nitrate	0.3	ND	ND	ND	8.8	ND
Total Sulfate	409	93	900	520	1,930	260
Ethane	0.023	0.072	ND	ND	ND	ND
Ethene	0.179	0.317	0.013	ND	ND	0.155

Additional bio-parameter data may be collected during successive groundwater quarterly monitoring events to support remedial action plan development. Following collection of additional bio-parameter data, a comprehensive evaluation will be incorporated into the remedial action plan.

10.0 DATA EVALUATION

10.1 Evaluation of Groundwater Flow Data

Groundwater flow direction in the surficial aquifer is northeast toward Frog Mortar Creek. Horizontal groundwater gradients were calculated at 0.003 in the Upper Surficial Aquifer, 0.002 in Intermediate Surficial Aquifer, and 0.0018 in the Lower Surficial Aquifer. Vertical groundwater gradients range from 0.001 to 0.006. Figures 4 through 6 in Appendix A are groundwater elevation (head) contours for the Upper Surficial Aquifer, Intermediate Surficial Aquifer and Lower Surficial Aquifer, respectively. Groundwater contours are based on field measurements taken in June 2004. Table B-2 in Appendix B lists well groups and groundwater data used for contouring upper, intermediate and lower surficial groundwater. Some well groundwater elevation data were not used because of unusually high groundwater elevations that suggest isolated mounding. The groundwater flow patterns are consistent with all previous data.

10.2 Evaluation of Groundwater Chemical Data

The analytical data from the June 2004 monitoring event is generally consistent with the baseline sampling data, December 2003, and March 2004 monitoring events. This sampling event confirmed that TCE, cis-1,2-DCE, vinyl chloride, and dissolved cadmium are the primary chemicals of concern. For each of these chemicals, depth-specific maps have been prepared to depict the distribution of chemicals of concern in the Upper, Intermediate, and Lower Surficial Aquifers (see Figures 7 through 18). Tables B-4a, B-4b, and B-4c in Appendix B summarize the concentrations of the chemicals of concern used to generate the iso-concentrations maps in each aquifer. Further description of the individual plumes is presented below.

Drum Area – Plume No. 1

Similar to the March 2004 data, TCE and cis-1,2-DCE concentrations greater than 10,000 μg/L were reported in the Upper Surficial Aquifer monitoring well samples down-gradient of the drum

area – *see Figures 7, 10, and 13.* VOC concentrations were detected in the Intermediate Surficial Aquifer, but at much lower concentrations than in the Upper Surficial Aquifer. During this sampling round, the three primary VOC concentrations decreased in down-gradient well DMW-7I. The areal extent of the VOC plume remained essentially unchanged compared to the March 2004 monitoring event.

As shown in Figure 16, a cadmium plume in the Upper Surficial Aquifer is located around the Drum Area. Cadmium was detected at a maximum concentration of 13 μg/L in a sample collected from well DMW-7S in the Upper Surficial Aquifer. One sample (DMW-7I) reported cadmium in the Intermediate Surficial Aquifer at a concentration of 5.3 μg/L (slightly above the action level of 5 μg/L).

Petroleum Hydrocarbon and Pond #1 Area – Plume No. 2

The areal extent of the VOC plume remained essentially unchanged compared to the March 2004 monitoring event. Individual VOC concentrations (cis-1,2-DCE, vinyl chloride) were reported above 10,000 μg/L in Upper Surficial Aquifer monitoring well sample from DMW-9S located down-gradient of the Petroleum Hydrocarbon Area, which is consistent with the previous monitoring data. The three primary VOC concentrations decreased in down-gradient well DMW-2S. VOC concentrations above 10,000 μg/L were also detected in the Intermediate Surficial Aquifer (maximum 23,000 μg/L for TCE in DMW-2A). The maximum concentration detected in the Lower Surficial Aquifer was 4,300 μg/L for TCE in DMW-9D. Generally, VOC concentrations in the Intermediate and Lower Surficial Aquifers were fairly consistent with the previous March 2004 data.

Cadmium was detected in one sample collected in the Upper Surficial Aquifer at down-gradient well DMW-2S at 200 μg/L, which is consistent with the previous monitoring data. Elevated cadmium concentrations were identified in the Intermediate Surficial Aquifer at down-gradient wells DMW-2A and DMW-3I. The maximum cadmium concentration detected was 860 μg/L in DMW-2A, which is consistent with the previous March 2004 monitoring data. The overall areal extent of the cadmium plume remained unchanged in the Intermediate Surficial Aquifer.

Taxiway Tango Area – Plume No. 3

The VOC contours show that two distinct releases have occurred: one near DMW-11 and one at DMW-1A/B. DMW-11S, located within the median area, reported TCE and cis-1,2-DCE concentrations above 10,000 μg/L. DMW-1A, located east of Taxiway Tango and screened in the Intermediate Surficial Aquifer, reported cis-1,2-DCE at 8,000 μg/L. In the Lower Surficial Aquifer, the maximum concentration detected was 6,200 μg/L for vinyl chloride in DMW-1B. The areal extent of the VOC plume has essentially remained unchanged compared to the previous monitoring event.

As shown in Figures 16, 17, and 18, a cadmium plume is located down-gradient of the Taxiway Tango Area. The highest cadmium concentrations were detected in the Intermediate Surficial Aquifer, with a maximum concentration of 1,000 μg/L detected in DMW-1A. Overall, the cadmium concentrations and plume shape remained unchanged compared to the March 2004 monitoring event.

11.0 CHEMICAL TRENDS IN MONITORING WELLS

In accordance with MDE's e-mail dated May 13, 2004, graphs depicting the concentration trends (i.e., concentration vs. time) of the three primary VOCs (TCE, cis-1,2-DCE, and vinyl chloride) and dissolved cadmium for the thirty eight permanent monitoring wells are included in Appendix D. The graphs show all historical data available for each well. Graphs of the previously installed wells (MW-1 through MW-6, DMW-1A, DMW-1B, DMW-2A, and DMW-2B) include data obtained prior to September 2003. Graphs of the 28 recently installed wells include sampling events from September 2003 through June 2004. In addition, a summary of the analytical results for the four primary chemicals of concern detected in each groundwater zone during the previous sampling events is presented in Tables B-5a, B-5b, and B-5c in Appendix B. A summary of the VOC trends is presented in Section 11.1 and dissolved cadmium trends is presented in Section 11.2.

11.1 VOC Concentration Trends

Based on the concentration ranges of the three primary VOCs (TCE, cis-1,2-DCE, and vinyl chloride), the thirty eight permanent groundwater monitoring wells were divided into seven groups as shown in Table 11-1.

Table 11-1
Summary of VOC Concentration Ranges

Well Group	3 Primary VOCs Concentration Range	Number of Wells	Monitoring Well ID
Group 1	ND to 10 μg/L	8	MW-7, DMW-6S, DMW-8S, DMW-6I, DMW-3D, DMW-5D, DMW-6D, DMW-7D
Group 2	10 μg/L to 100 μ/L	5	MW-4, MW-6, DMW-1S, DMW-10S
Group 3	100 μg/L to 500 μg/L	3	MW-1, DMW-2B, DMW-8D
Group 4	500 μg/L to 1,000 μg/L	4	MW-2, DMW-5I, DMW-7I, DMW-10I
Group 5	1,000 μg/L to 5,000 μg/L	4	MW-3, DMW-3S, DMW-4S, DMW-8I
Group 6	5,000 μg/L to 10,000 μg/L	4	DMW-2S, DMW-4D, DMW-9D, DMW-1B
Group 7	Above 10,000 μg/L	10	MW-5, DMW-5S, DMW-7S, DMW-9S, DMW-11S, DMW-1A, DMW-2A, DMW-3I, DMW-4I, DMW-9I

Group 1 – VOC Concentration Range from Not Detected (ND) to 10 μg/L

- ✓ As presented in Table 11-1, there are eight groundwater monitoring wells with concentrations of VOCs between ND to 10 μg/L.
- ✓ The most recent data available indicated that VOC concentrations were not detected in these wells with the exception of DMW-8S (cis-1,2-DCE = 1 μg/L) and DMW-5D (TCE = 2 μg/L).

Group 2 – VOC Concentration Range from 10 μg/L to 100 μg/L

- ✓ As presented in Table 11-1, there are five groundwater monitoring wells with concentrations of VOCs between 10 μg/L to 100 μg/L.
- ✓ The most recent data available indicated that VOC concentrations were not detected or less than 5 μg/L in wells MW-4, MW-6 and DMW-11I.

- ✓ Although TCE was not detected in DMW-1S, low concentration levels of cis-1,2-DCE and vinyl chloride were reported in the March 2004 sampling event .

- ✓ Vinyl chloride was the only VOC detected in DMW-10S in the March 2004 sampling event.

Group 3 – VOC Concentration Range from 100 μg/L to 500 μg/L

- ✓ As presented in Table 11-1, there are three groundwater monitoring wells with concentrations of VOCs between 100 μg/L to 500 μg/L.

- ✓ The groundwater data from well MW-1 indicated that the VOC concentrations were consistent through the sampling events with the exception of one sample taken in June 2002.

- ✓ The VOC concentrations at DMW-8D and DMW-2B were generally consistent throughout the sampling events.

Group 4 – VOC Concentration Range from 500 μg/L to 1,000 μg/L

- ✓ As presented in Table 11-1, there are four groundwater monitoring wells with concentrations of VOCs between 500 μg/L to 1,000 μg/L.

- ✓ The VOC concentrations in well DMW-5I increased in the June 2004 sampling event.

- ✓ The VOCs concentrations in well MW-2 decreased to ND, which may be due to the down-gradient migration of the plume migration or natural attenuation.

- ✓ The VOCs in well DMW-7I depict decreasing concentration trends. It is possible that chemicals were introduced from the upper surficial aquifer during well installation.

- ✓ The VOC concentrations in well DMW-10I were generally consistent throughout the sampling events.

Group 5 – VOC Concentration Range from 1,000 μg/L to 5,000 μg/L

- ✓ As presented in Table 11-1, there are four groundwater monitoring wells with concentrations of VOCs were between 1,000 μg/L to 5,000 μg/L.

- ✓ The VOCs in well MW-3 depict decreasing concentration trends.

- ✓ The TCE concentrations in well DMW-3S show decreasing trends, while cis-1,2-DCE and vinyl chloride concentrations depict fluctuations.

- ✓ The TCE concentrations in well DMW-4S show increasing trends, while cis-1,2-DCE and vinyl chloride concentrations were generally consistent throughout the sampling events.

- ✓ Overall, VOC concentrations in well DMW-8I were relatively consistent.

Group 6 – VOC Concentration Range from 5,000 µg/L to 10,000 µg/L

- ✓ As presented in Table 11-1, there are four groundwater monitoring wells with concentrations of VOCs between 5,000 µg/L to 10,000 µg/L.
- ✓ TCE concentrations in well DMW-1B decreased significantly from the first sampling event.
- ✓ The VOCs concentrations in well DMW-2S depict fluctuations.
- ✓ Overall, TCE concentrations in well DMW-4D increased, while cis-1,2-DCE and vinyl chloride concentrations were relatively consistent.
- ✓ TCE and cis-1,2-DCE concentrations in well DMW-9D do not show clear trend, while vinyl chloride concentrations decreased to ND.

Group 7 – VOC Concentrations Above 10,000 µg/L

- ✓ As presented in Table 11-1, there are ten groundwater monitoring wells with concentrations of the VOCs above 10,000 µg/L.
- ✓ These wells show consistently elevated VOC concentrations. Some of the data was reported as estimated values, and therefore the trends may not be representative of the actual concentrations.
- ✓ Based on the long history of data available for well MW-5, the VOC concentration trends in well MW-5 may be used as characteristic curves for natural attenuation evaluation during remedial action plan development.

11.2 Dissolved Cadmium Concentration Trends

Based on the concentration ranges of dissolved cadmium, the thirty eight permanent groundwater monitoring wells were divided into four groups as shown in Table 11-2.

Table 11-2
Summary of Dissolved Cadmium Concentration Ranges

Well Group	Cadmium Concentration Range	Number of Wells	Monitoring Well ID
Group 1	ND	23	MW-1,MW-3, MW-7, DMW-1S, DMW-3S, DMW-4S, DMW-5S, DMW-6S, DMW-8S, DMW-9S, DMW-10S, DMW-11S, DMW-4I, DMW-5I, DMW-6I, DMW-9I, DMW-10I, DMW-11I, DMW-3D, DMW-5D, DMW-6D, DMW-7D, and DMW-9D
Group 2	1 μg/L to 100 μg/L	9	MW-2, MW-4, MW-5, MW-6, DMW-7S, DMW-7I, DWM-8I, DMW-2B, DMW-4D
Group 3	100 μg/L to 1,000 μg/L	4	DMW-2S, DMW-3I, DMW-1B, DMW-8D
Group 4	Above 1,000 μg/L	2	DMW-1A, DMW-2A

Group 1 – Dissolved Cadmium Non-Detectable Concentrations

- ✓ As presented in Table 11-2, the groundwater monitoring data indicate that twenty three of the thirty eight groundwater monitoring wells do not have detectable concentrations of dissolved cadmium.

Group 2 – Dissolved Cadmium Concentration Range from 1 μg/L to 100 μg/L

- ✓ As presented in Table 11-2, there are nine groundwater monitoring wells with dissolved cadmium concentrations between 1 μg/L to 100 μg/L.
- ✓ Overall, dissolved cadmium concentrations in wells DMW-7S and DMW8I were generally consistent throughout the sampling events.
- ✓ Dissolved cadmium was detected in only one sampling event in wells DMW-7I and DMW-2B.
- ✓ At least one of the sampling events indicates that dissolved cadmium was not detected in wells MW-2, MW-4, MW-5, MW-6 and DMW-4D.

Group 3 – Dissolved Cadmium Concentration Range from 100 μg/L to 1,000 μg/L

- ✓ As presented in Table 11-2, there are four groundwater monitoring wells with dissolved cadmium concentrations between 100 μg/L to 1,000 μg/L.
- ✓ Dissolved cadmium concentrations in well DMW-2S was not detected in the first two sampling events, and was 200 μg/L in the last two sampling events.
- ✓ Dissolved cadmium concentrations in well DMW-3I were generally consistent throughout the sampling events.

- ✓ Dissolved cadmium concentration in well DMW-1B was near 400 μg/L in the first sampling event, however, the concentrations were near 100 μg/L in all subsequent sampling events.

- ✓ Dissolved cadmium concentration in well DMW-8D was above 100 μg/L in the first sampling event, and less than 20 μg/L in all subsequent sampling events.

Group 4 – Dissolved Cadmium Concentration Above 1,000 µg/L

- ✓ As presented in Table 11-2, there are two groundwater monitoring wells with dissolved cadmium concentrations above 1,000 μg/L.

- ✓ Dissolved cadmium concentrations in DMW-1A were relatively consistent throughout the sampling events.

- ✓ Dissolved cadmium was not detected in well DMW-2A in the first sampling event, however, the concentrations were above 800 μg/L in all subsequent sampling events.

12.0 PROPOSED WELLS FOR FUTURE MONITORING

Initially, the objective of the groundwater monitoring was two-fold: (1) to investigate and delineate the extent of the groundwater chemical plumes, and (2) monitor the plumes to track and evaluate chemical trends. As previously documented, delineation of the three chemical plumes has been completed, and therefore only a selected number of wells will be sufficient to monitor the plumes for future chemical trends.

In order to focus on tracking and evaluating chemical trends of the plumes, specific wells are proposed for selection in future groundwater monitoring of the plumes. The wells proposed for sampling in future monitoring events are based on two or more of the following: (1) the wells are located on the main migration pathway of the plumes, (2) primary chemicals of concern (i.e., cis-1,2-DCE, TCE, vinyl chloride, and dissolved cadmium) have been detected at significant concentrations, and (3) well screens are not surrounded by impermeable clay soil. Therefore, a total of twelve wells are proposed for sampling in future monitoring events as presented in Table 12-1 and shown in Figure 19 in Appendix A.

Table 12-1
Summary of Proposed Wells for Future Monitoring

Groundwater Zone	Well ID	Rationale for Proposed Selection of Wells for Future Sampling
Upper Surficial Aquifer	DMW-2S	The well is located on the migration pathway of Plume No.2 (Petroleum Hydrocarbon and Pond #1 Area), and significant concentrations for the primary chemicals of concern (COCs) have been detected.
	DMW-4S	The well is located on the migration pathway of Plume No.3 (Taxiway Tango Area), and significant concentrations for the COCs have been detected.
	DMW-5S	The well is located on the migration pathway of Plume No.1 (Drum Area), and significant concentrations for the COCs have been detected.
	DMW-9S	The well is near the source area of Plume No.2, and significant concentrations for the COCs have been detected.
	MW-5	The well is near the current VOC mass center of Plume No.1, and significant concentrations for the COCs have been detected.
Intermediate Surficial Aquifer	DMW-1A	The well is near the source area of Plume No.3, and significant concentrations for the COCs have been detected.
	DMW-2A	The well is located on the migration pathway of Plume No.2, and significant concentrations for the COCs have been detected.
	DMW-4I	The well is located on the migration pathway of Plume No.3, and significant concentrations for the COCs have been detected.
	DMW-9I	The well is near the source area of Plume No.2, and significant concentrations for the COCs have been detected.
Lower Surficial Aquifer	DMW-1B	The well is near the source area of Plume No.3, and significant concentrations for the COCs have been detected.
	DMW-4D	The well is located on the migration pathway of Plume No.3, and significant concentrations for the COCs have been detected.
	DMW-9D	The well is near the source area of Plume No.2, and significant concentrations for the COCs have been detected.

These twelve wells will effectively monitor the plumes within each of the three groundwater zones. As shown above, these wells include five wells (DMW-2S, DMW-4S, DMW-5S, DMW-9S, and MW-5) screened in the upper surficial aquifer, four wells (DMW-1A, DMW-2A, DMW-4I, and DMW-9I) screened in the intermediate surficial aquifer, and three wells (DMW- 1B, DMW-4D and DMW-9D) screened in the lower surficial aquifer. A summary of the analytical results for the four primary chemicals of concern detected in each groundwater zone during the previous sampling events is presented in Tables B-5a, B-5b, and B-5c in Appendix B. In addition, Table B-6 summarizes the rationale for exclusion of thirteen wells from future monitoring.

In accordance with MDE's comments, testing of the wells proposed for monitoring will only serve as continuing documentation of current plume conditions until the next phase of the remedial process begin[5]. Sampling select wells does not imply the monitoring network will be scaled back or monitoring wells are being proposed for abandonment. Wells selected for elimination now may be chosen in the future to monitor the effectiveness of the remedial technologies implemented. At different phases in the process, select wells in the network may be chosen for testing, depending on specific monitoring goals at the time. Changes in the selection of wells at each phase will be proposed and submitted with rationale for their elimination to MDE for review and approval.

In an e-mail dated September 16, 2004, MDE approved the request to sample the selected wells with the exception that MW-3 continues to be monitored.

[5] If plume maps are included in upcoming monitoring reports, previous data will be used for wells eliminated from the sampling event in order to depict the entire footprint of the plumes.

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Martin State Airport, Middle River, Maryland
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20. Maryland Department of the Environment E-mail Approval for
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Peggy Smith, June 15, 2004

21. Maryland Department of the Environment E-mail Approval for
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Peggy Smith, September 16, 2004

22. Maryland Department of the Environment E-mail Comments
June 2004 Monitoring Report
Martin State Airport, Middle River, Maryland
Peggy Smith, September 23, 2004

APPENDIX A
FIGURES

FIGURE 1
SITE LOCATION MAP

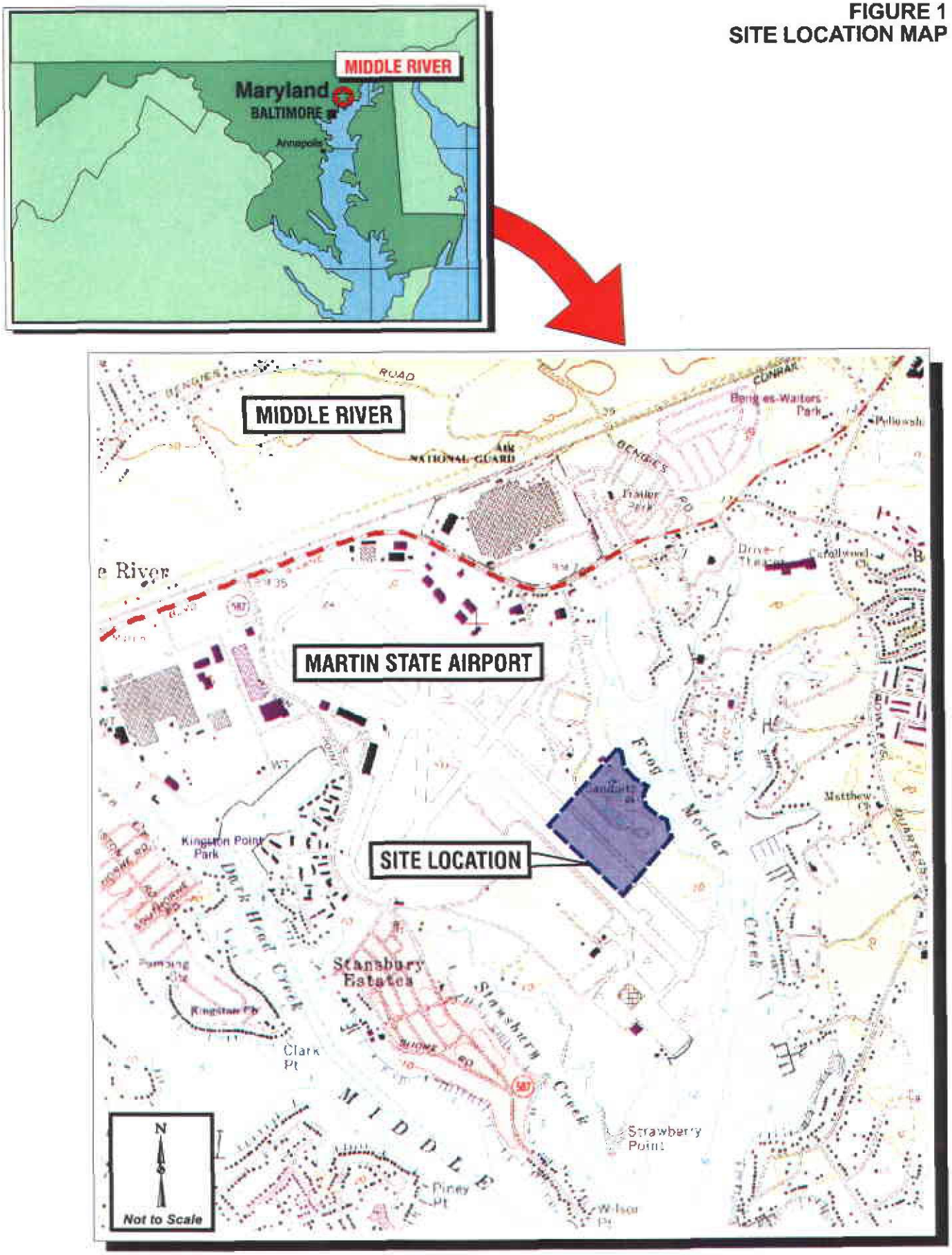


FIGURE 2
LOCATION OF AREAS OF CONCERN

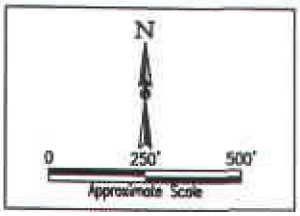


FIGURE 3
GROUNDWATER MONITORING WELL LOCATIONS

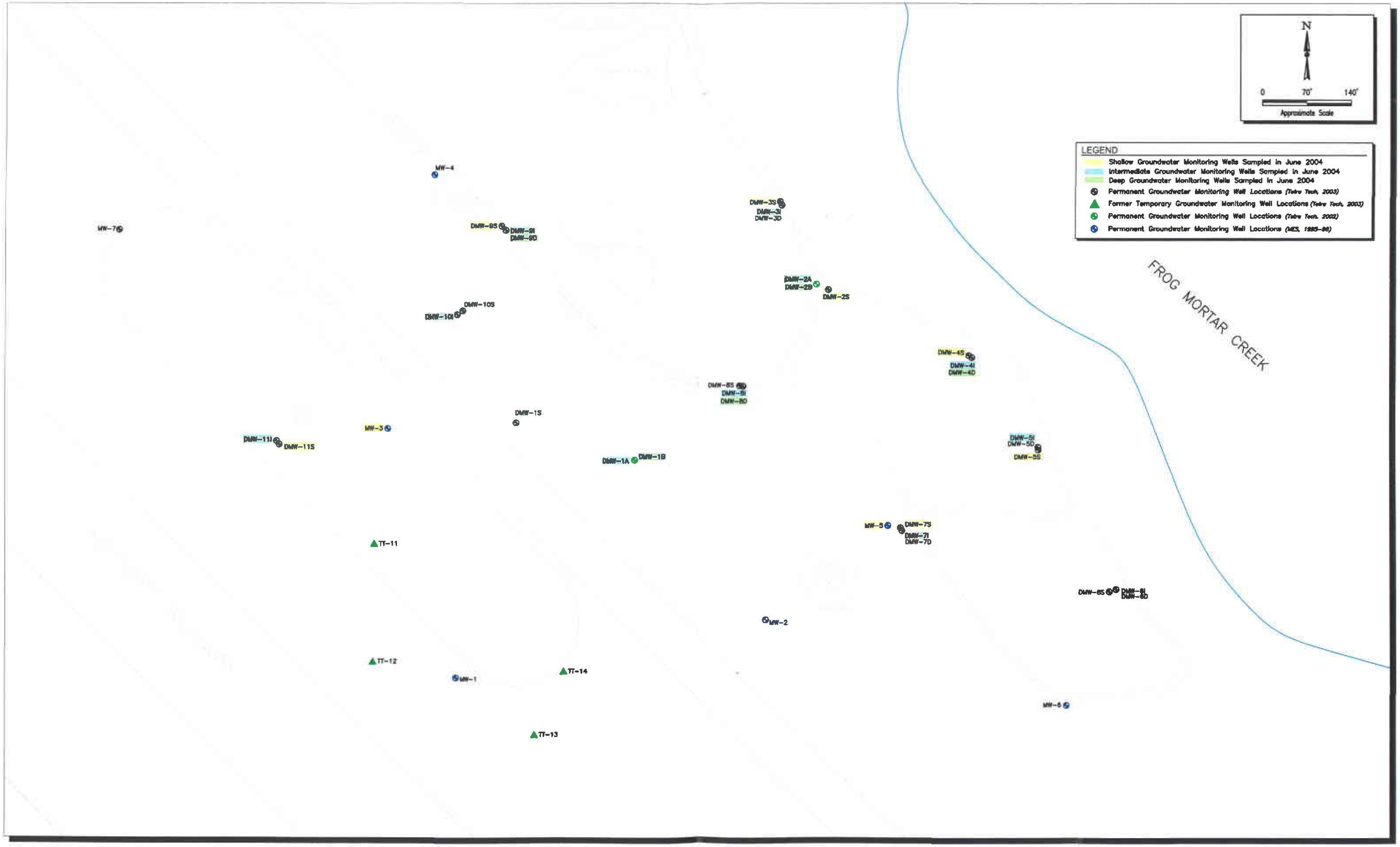


FIGURE 4
GROUNDWATER ELEVATION CONTOURS FOR THE UPPER SURFICIAL AQUIFER
(JUNE 2004)

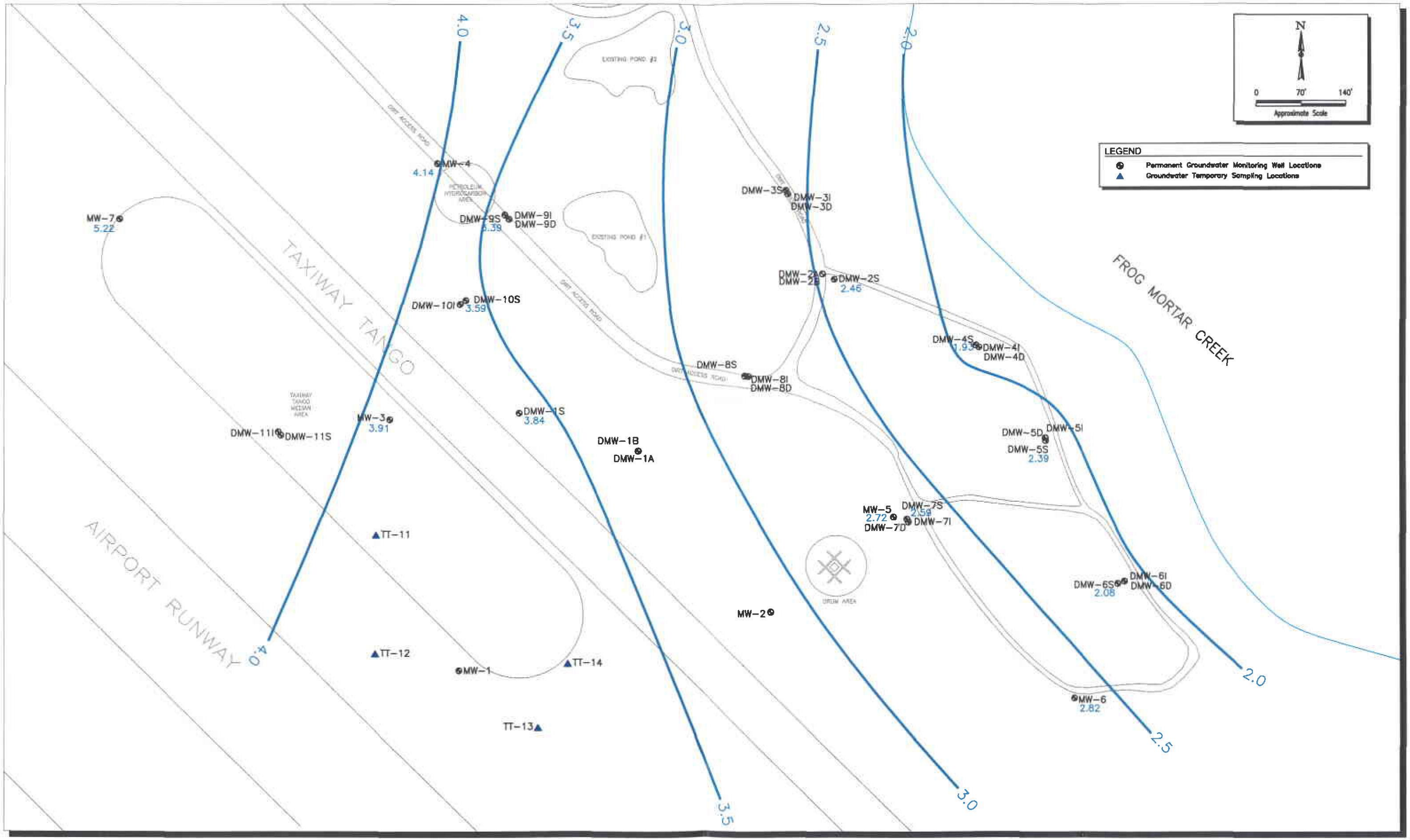


FIGURE 5
GROUNDWATER ELEVATION CONTOURS FOR THE INTERMEDIATE SURFICIAL AQUIFER
(JUNE 2004)

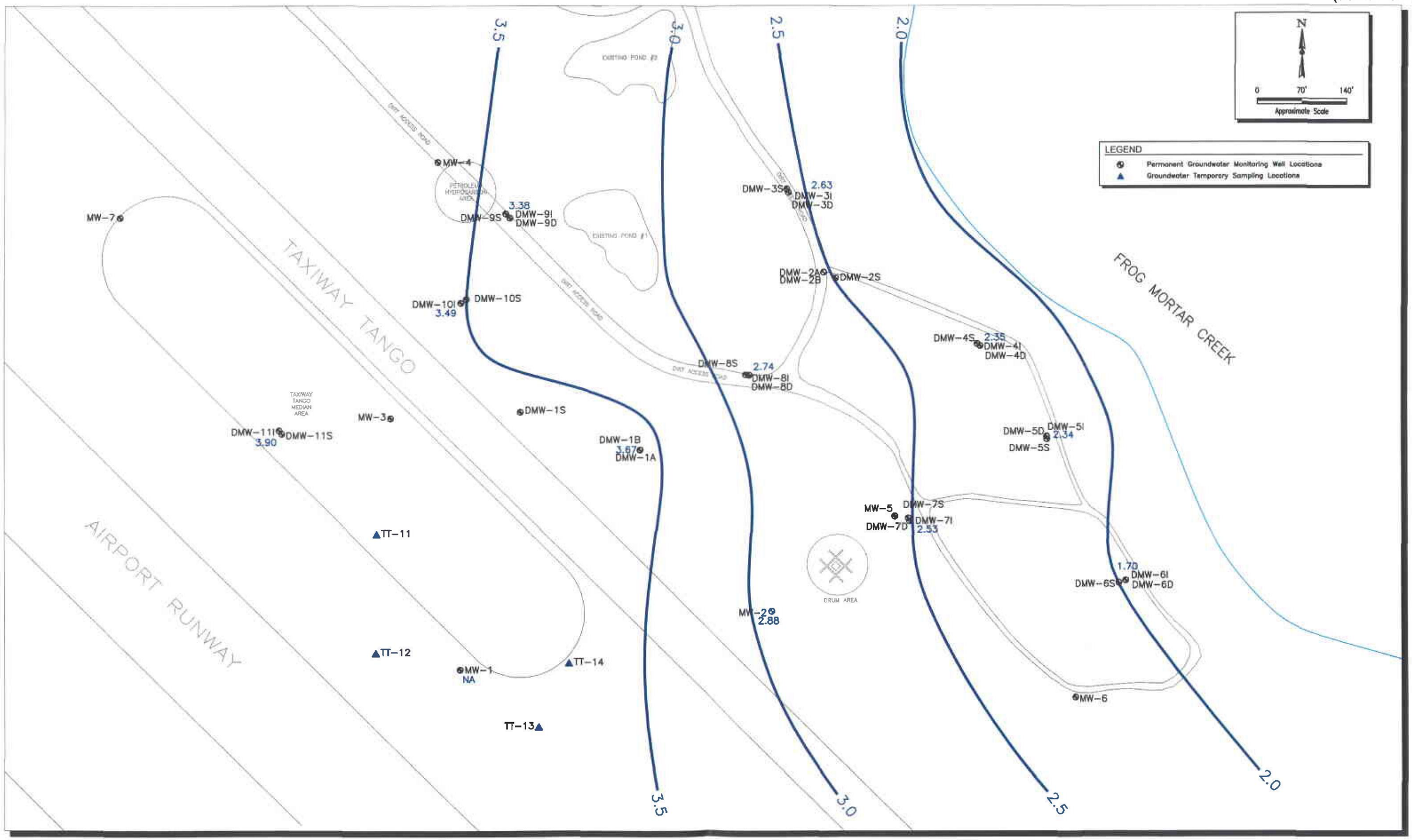


FIGURE 6
GROUNDWATER ELEVATION CONTOURS FOR THE LOWER SURFICIAL AQUIFER
(JUNE 2004)

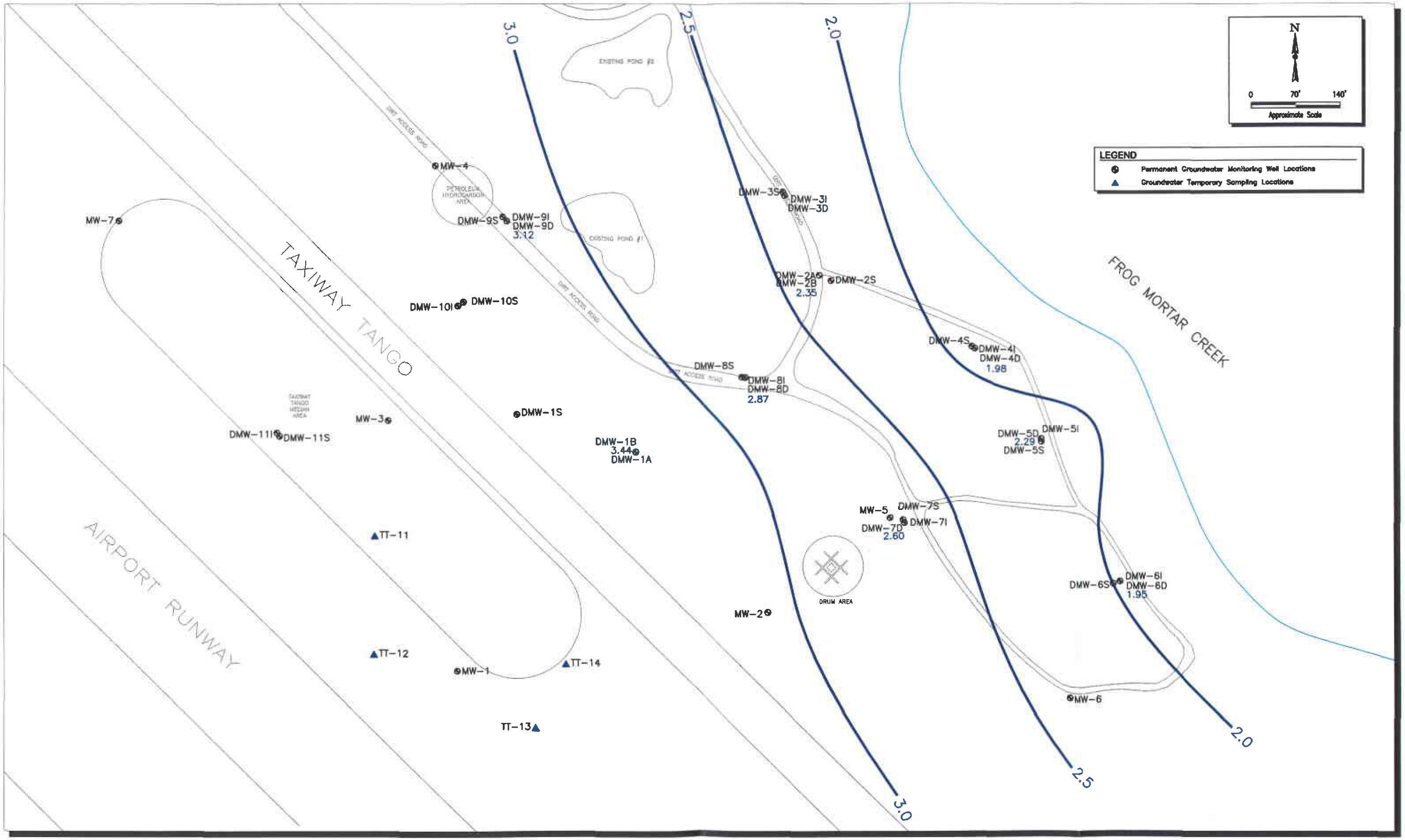


FIGURE 7
TCE IN THE UPPER SURFICIAL AQUIFER
(JUNE 2004)

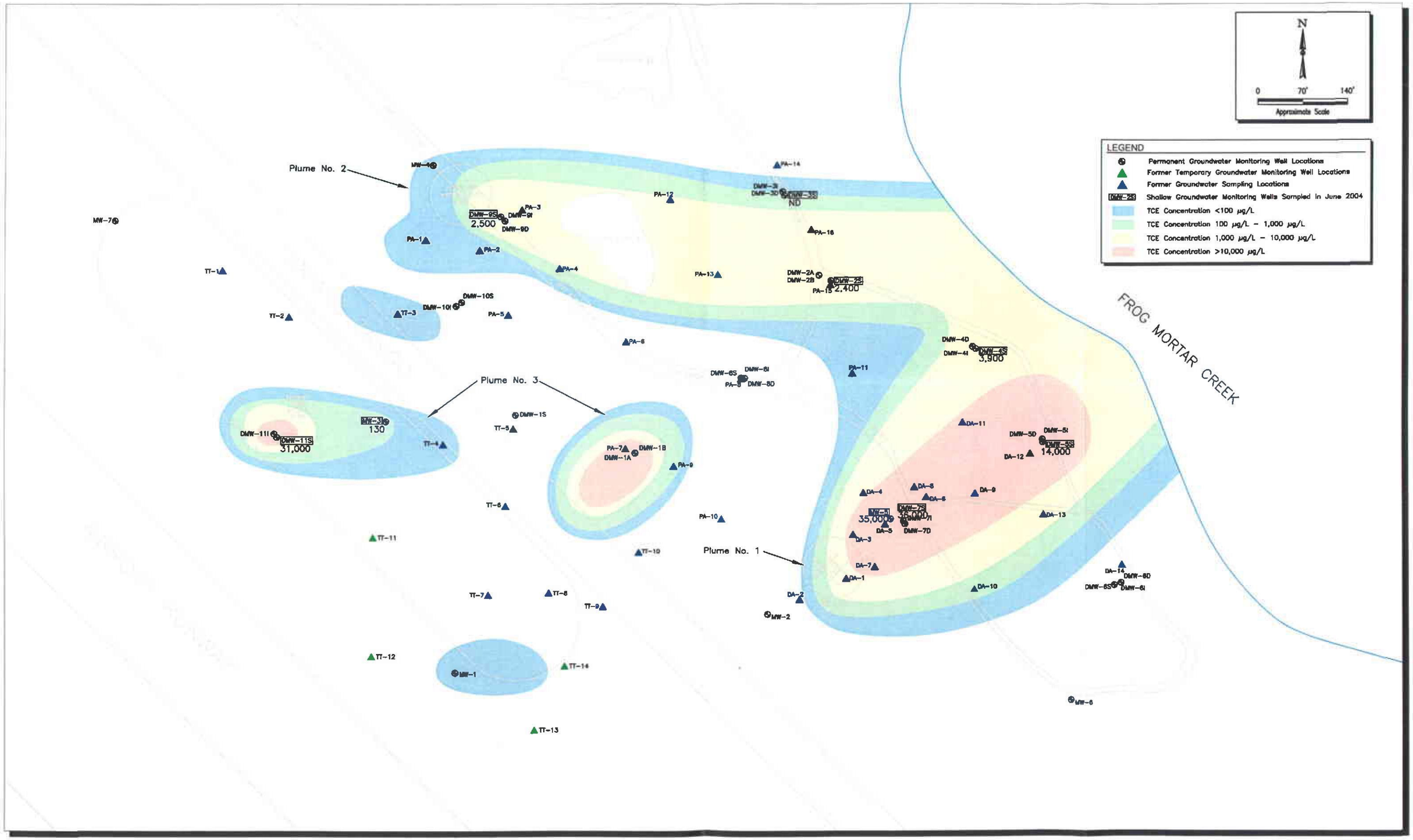


FIGURE 8
TCE IN THE INTERMEDIATE SURFICIAL AQUIFER
(JUNE 2004)

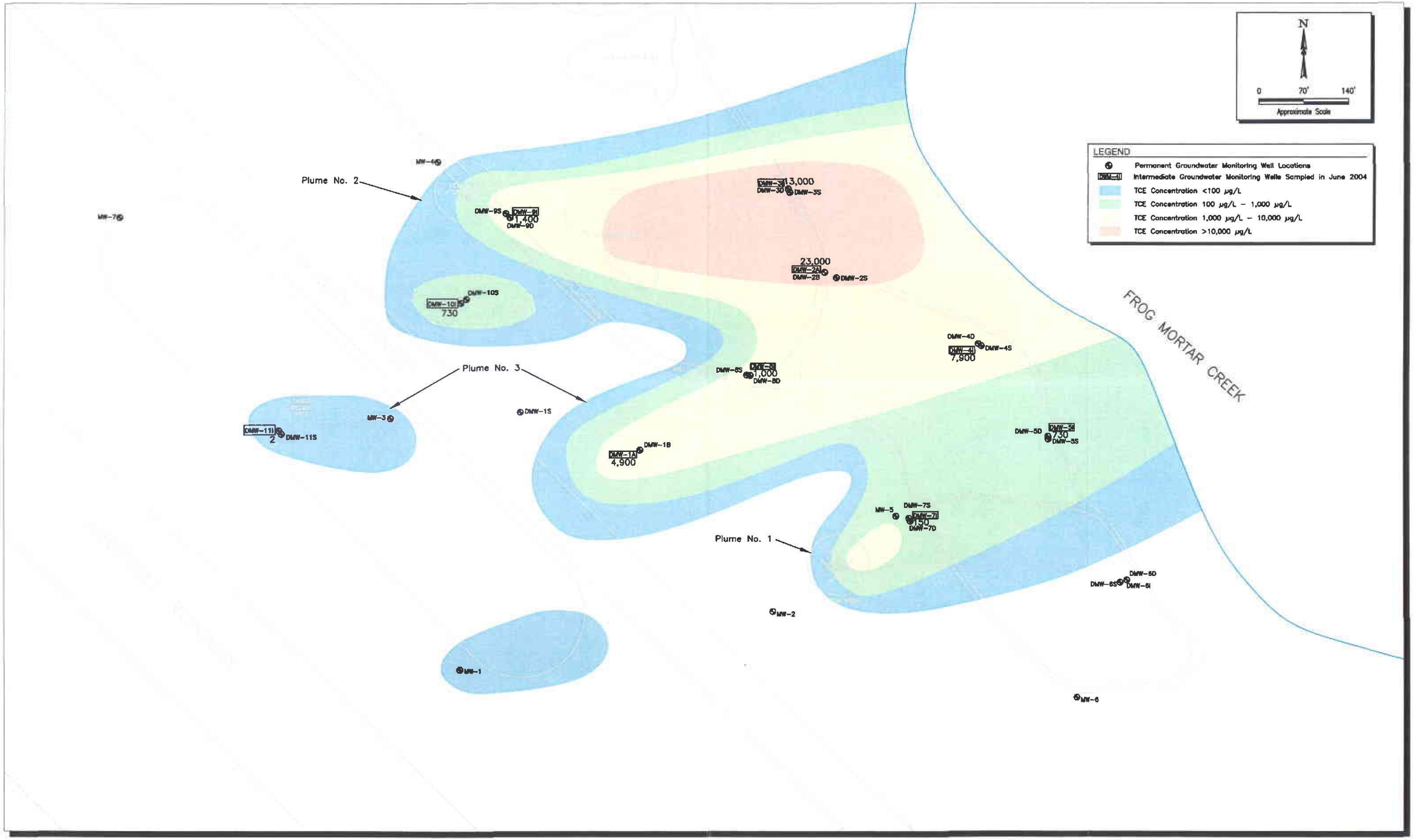


FIGURE 9
TCE IN THE LOWER SURFICIAL AQUIFER
(JUNE 2004)

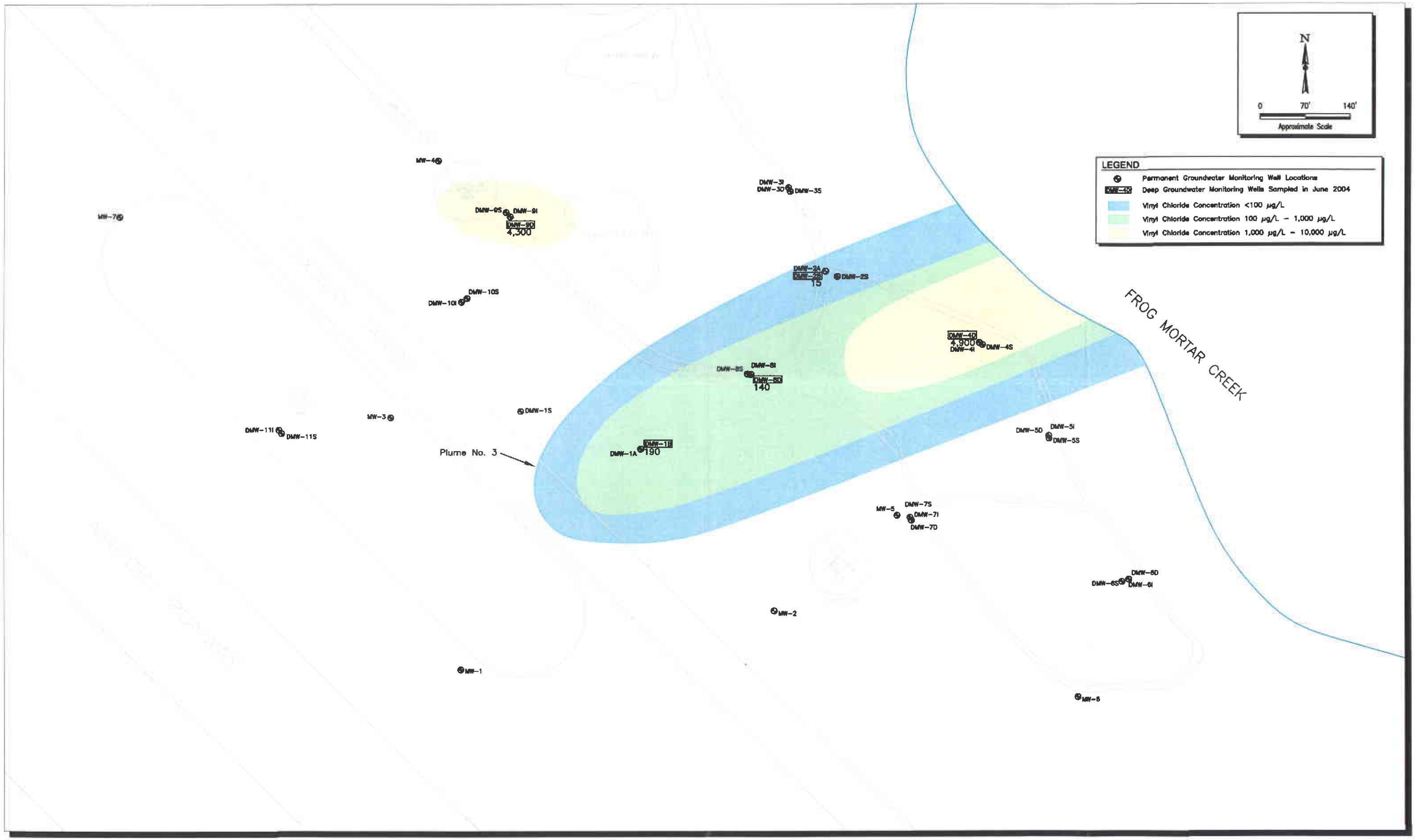


FIGURE 10
cis-1,2-DCE IN THE UPPER SURFICIAL AQUIFER
(JUNE 2004)

FIGURE 11
cis-1,2-DCE IN THE INTERMEDIATE SURFICIAL AQUIFER
(JUNE 2004)

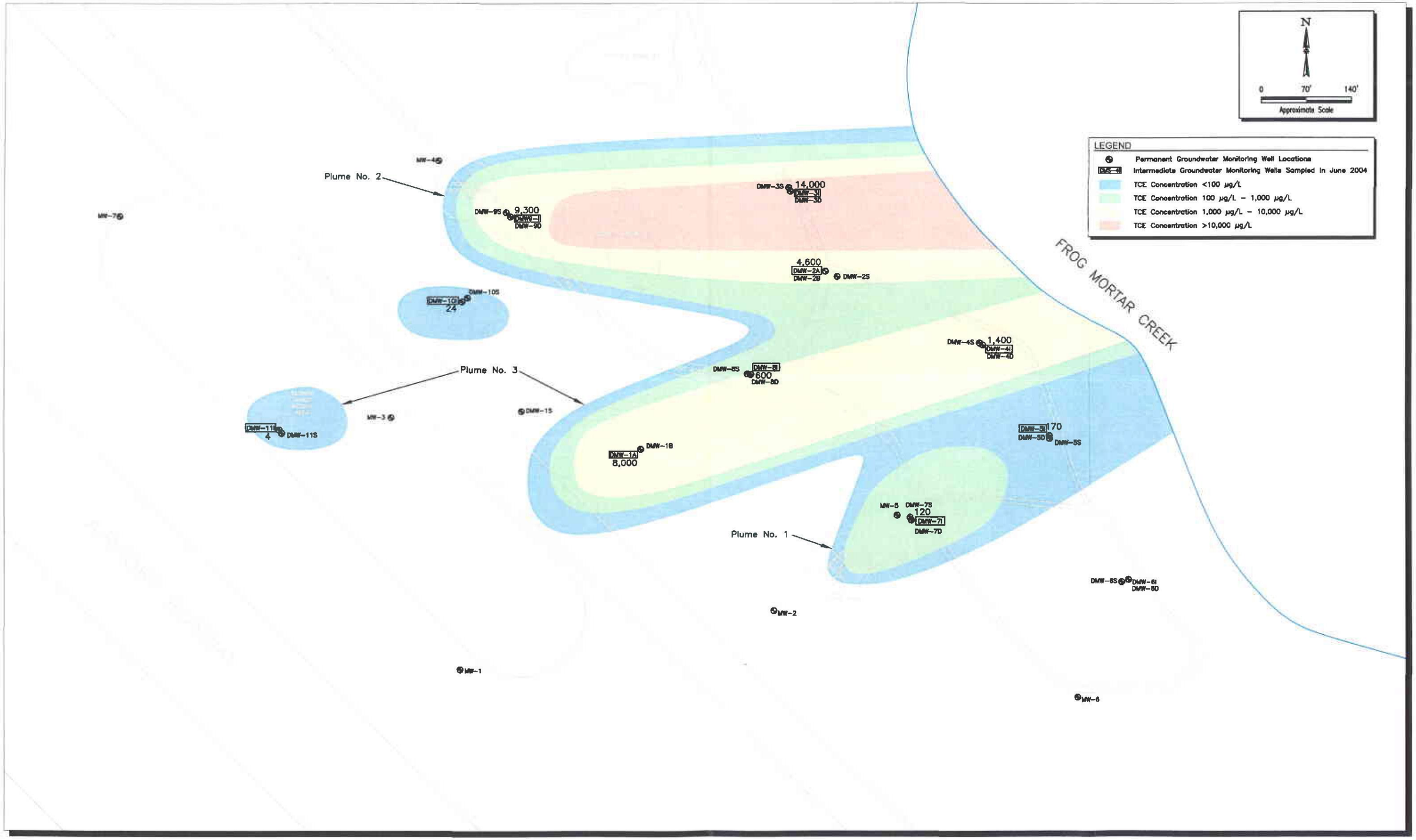


FIGURE 12
cis-1,2-DCE IN THE LOWER SURFICIAL AQUIFER
(JUNE 2004)

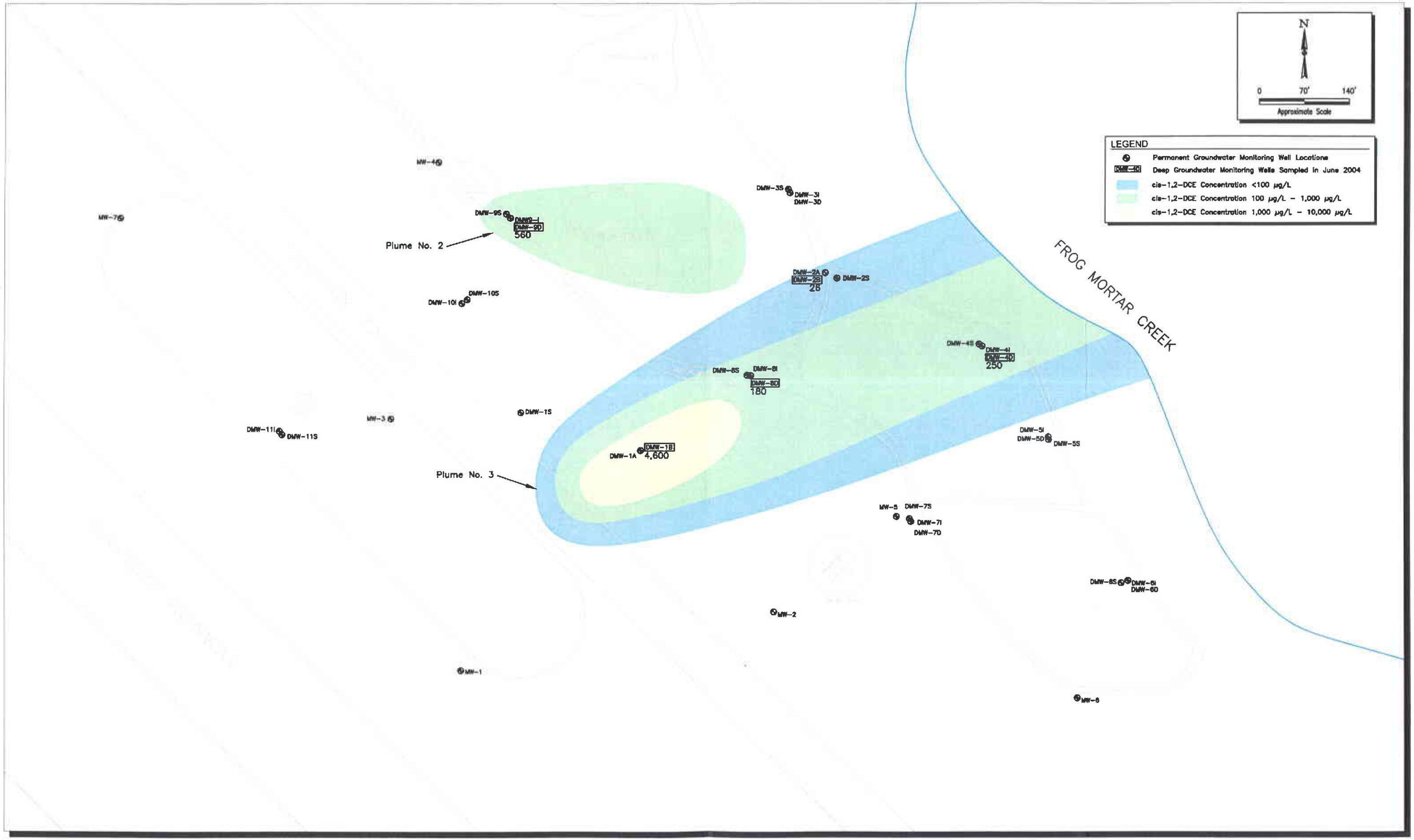


FIGURE 13
VINYL CHLORIDE IN THE UPPER SURFICIAL AQUIFER
(JUNE 2004)

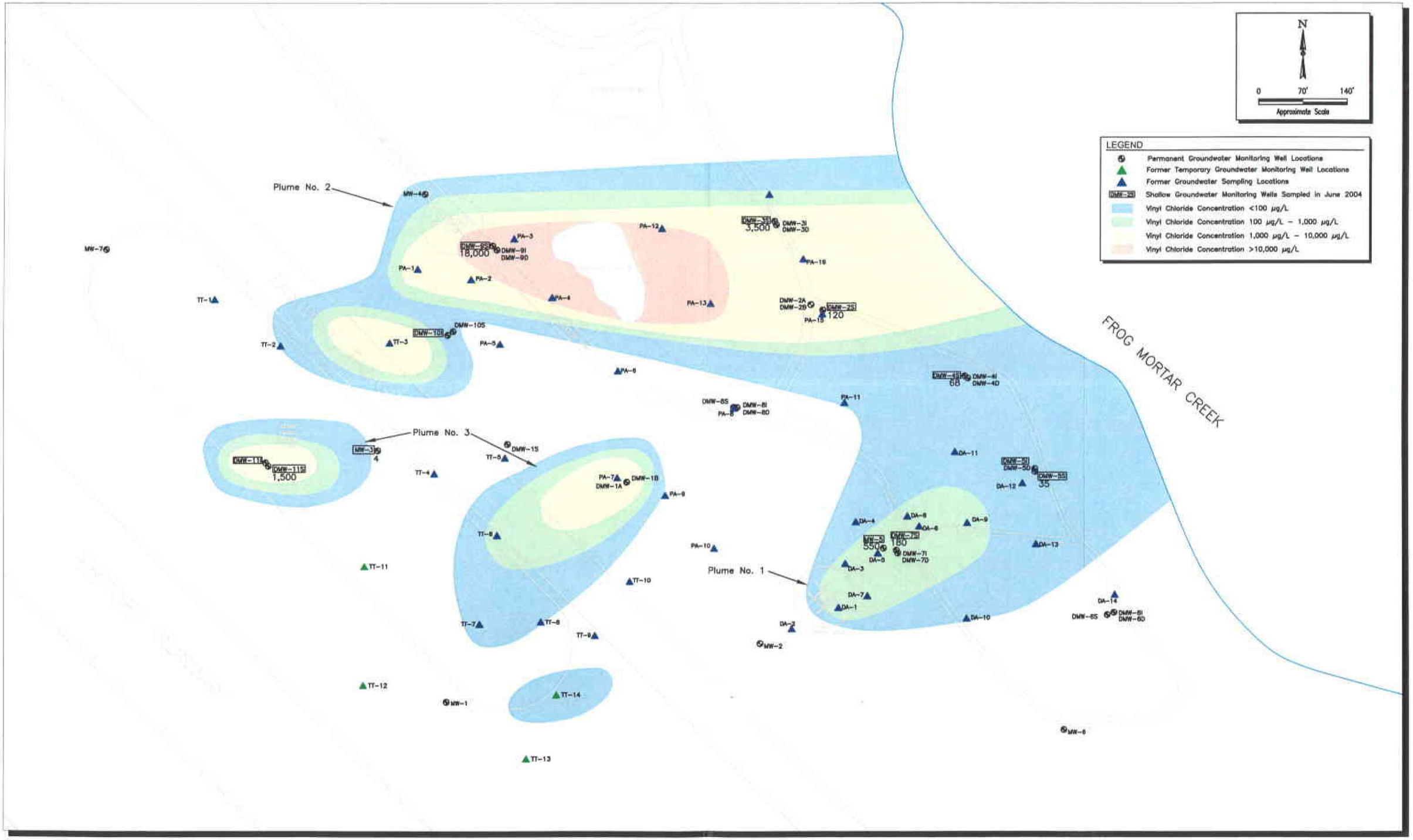


FIGURE 14
VINYL CHLORIDE IN THE INTERMEDIATE SURFICIAL AQUIFER
(JUNE 2004)

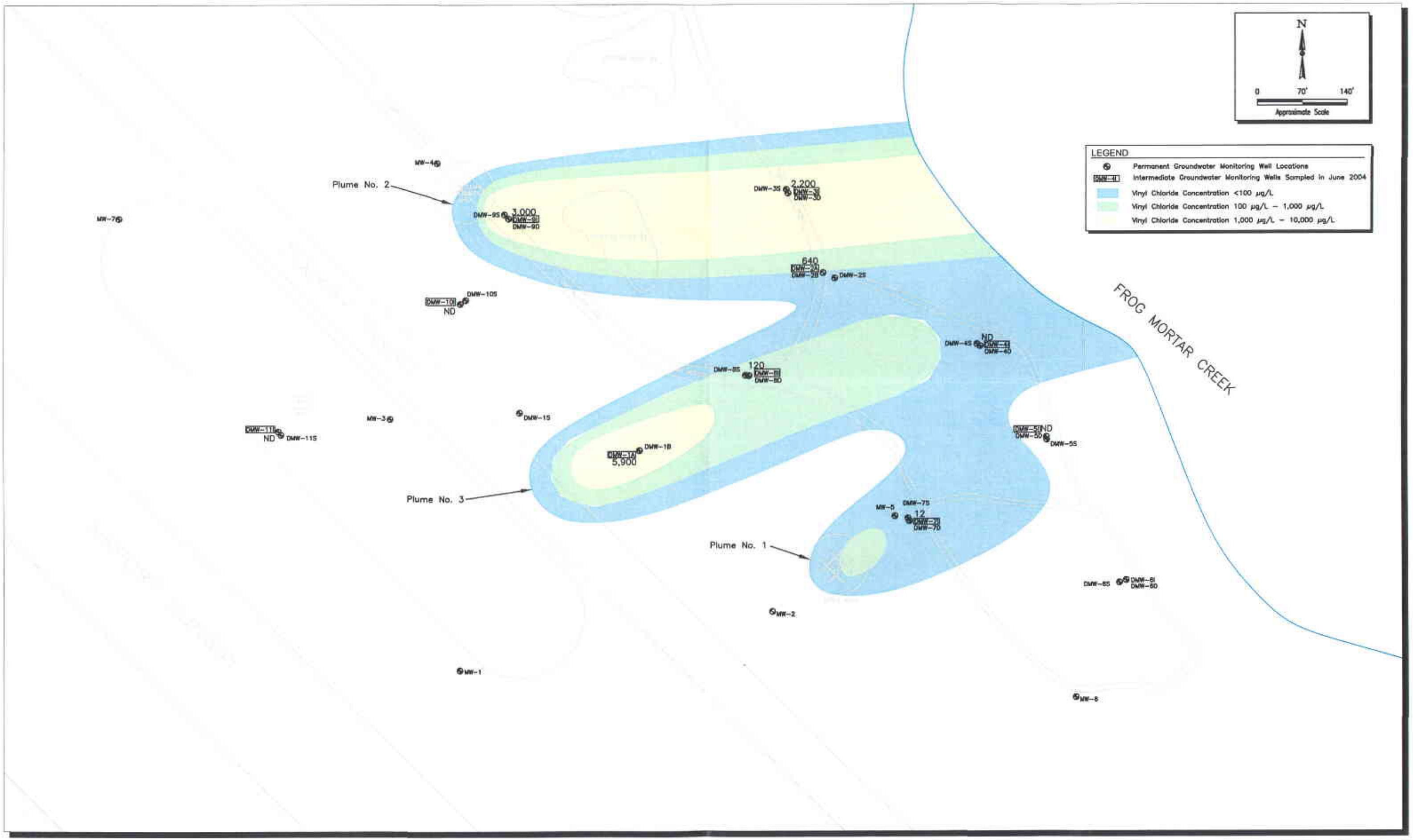


FIGURE 15
VINYL CHLORIDE IN THE LOWER SURFICIAL AQUIFER
(JUNE 2004)

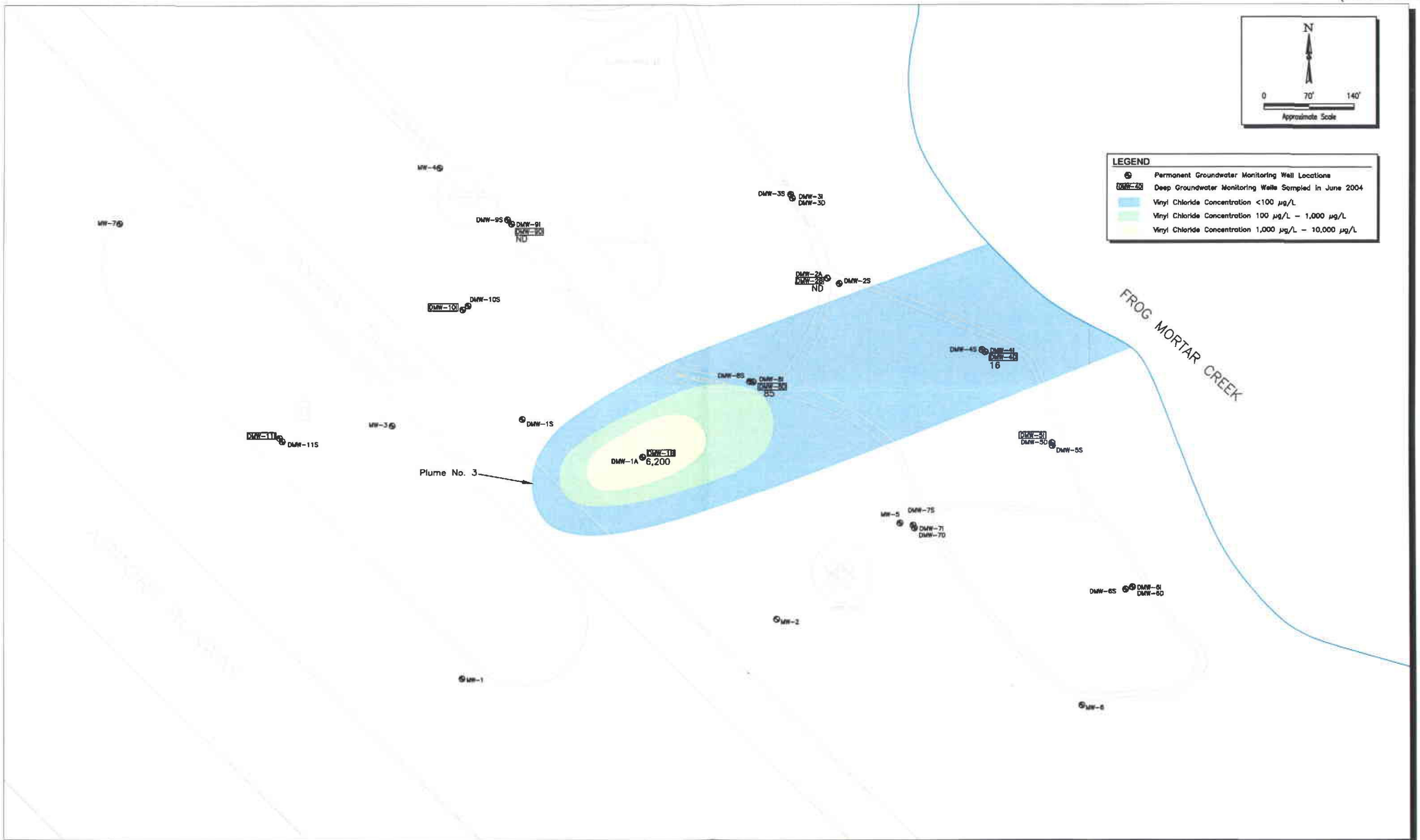


FIGURE 16
DISSOLVED CADMIUM IN THE UPPER SURFICIAL AQUIFER
(JUNE 2004)

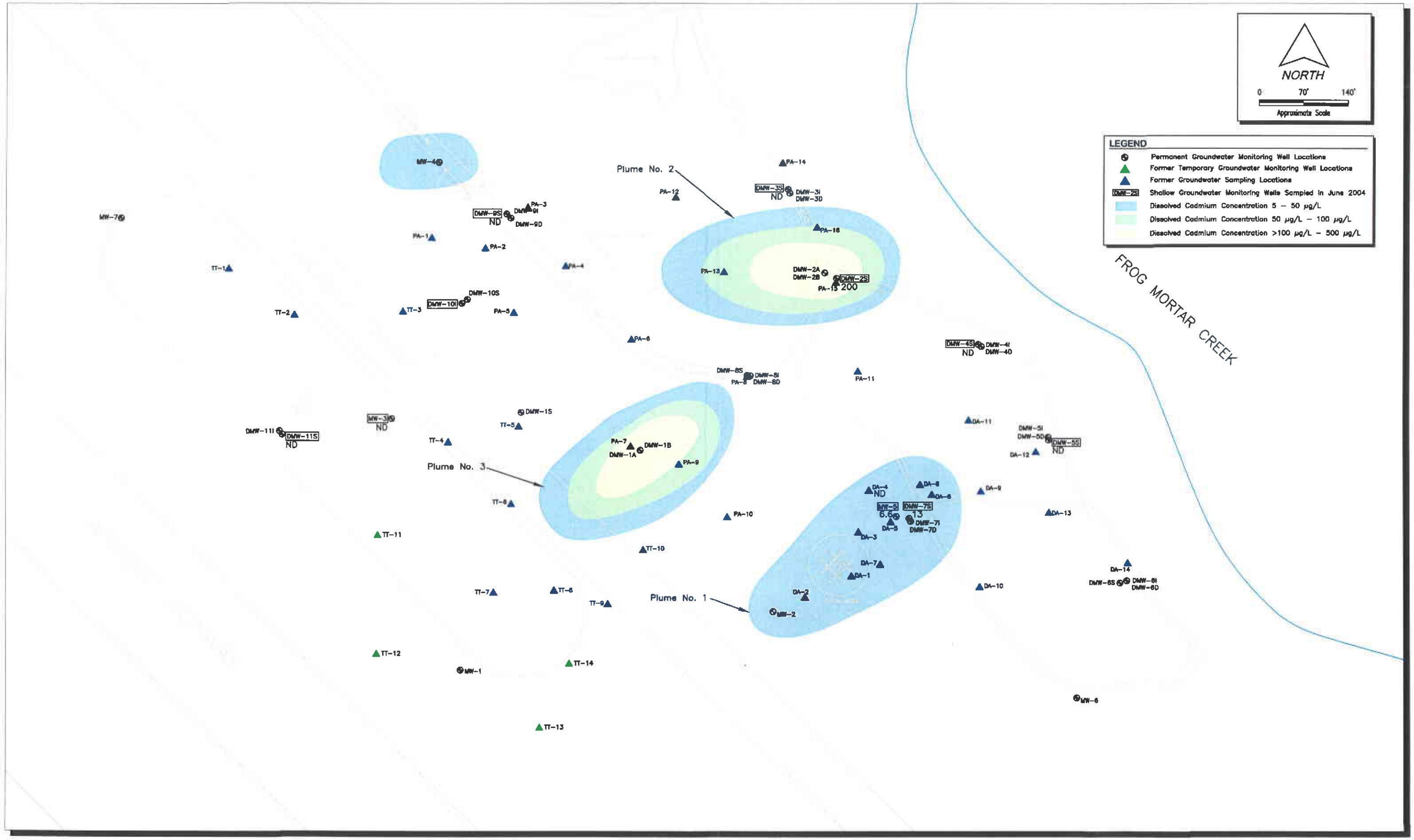


FIGURE 17
DISSOLVED CADMIUM IN THE INTERMEDIATE SURFICIAL AQUIFER
(JUNE 2004)

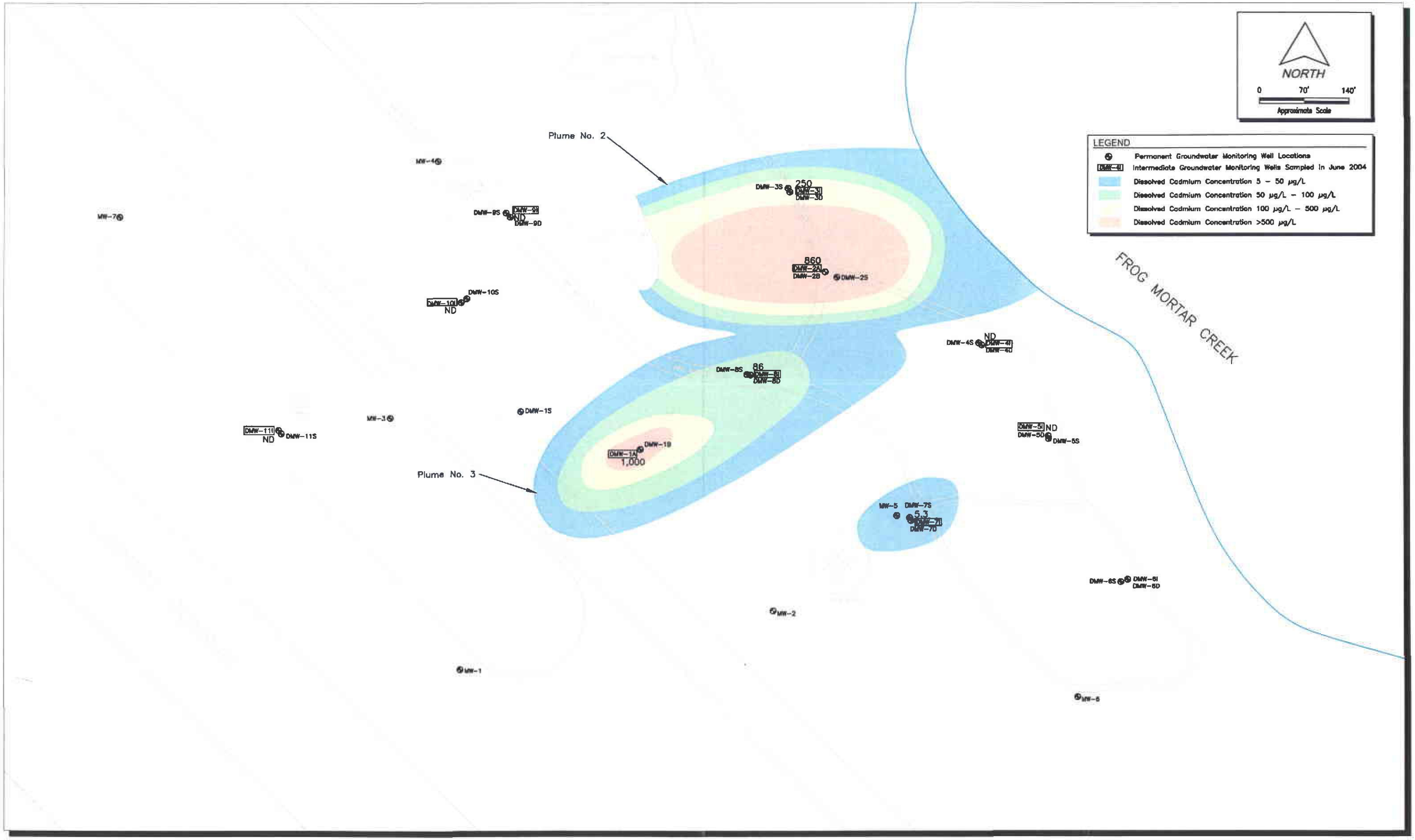


FIGURE 18
DISSOLVED CADMIUM IN THE LOWER SURFICIAL AQUIFER
(JUNE 2004)

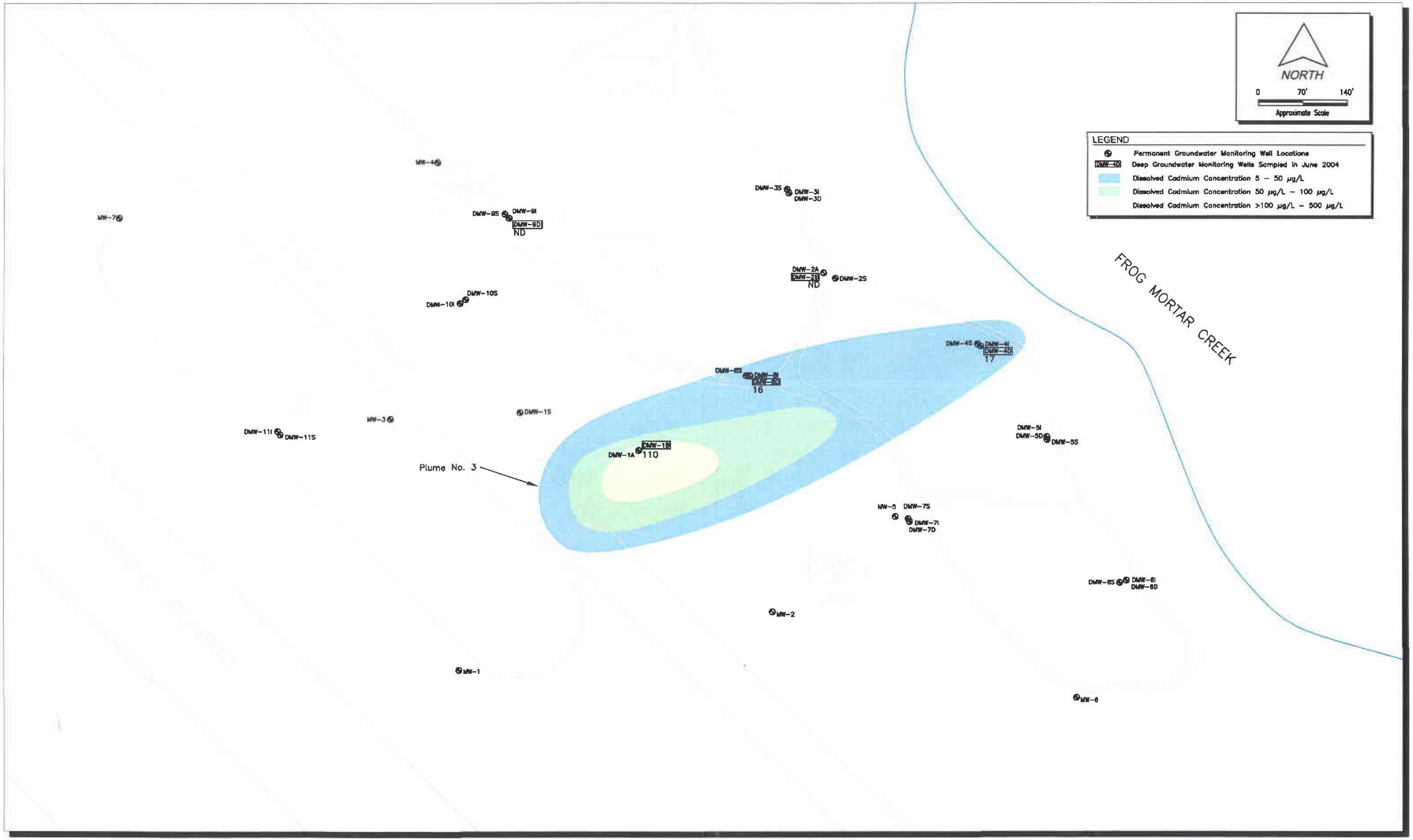
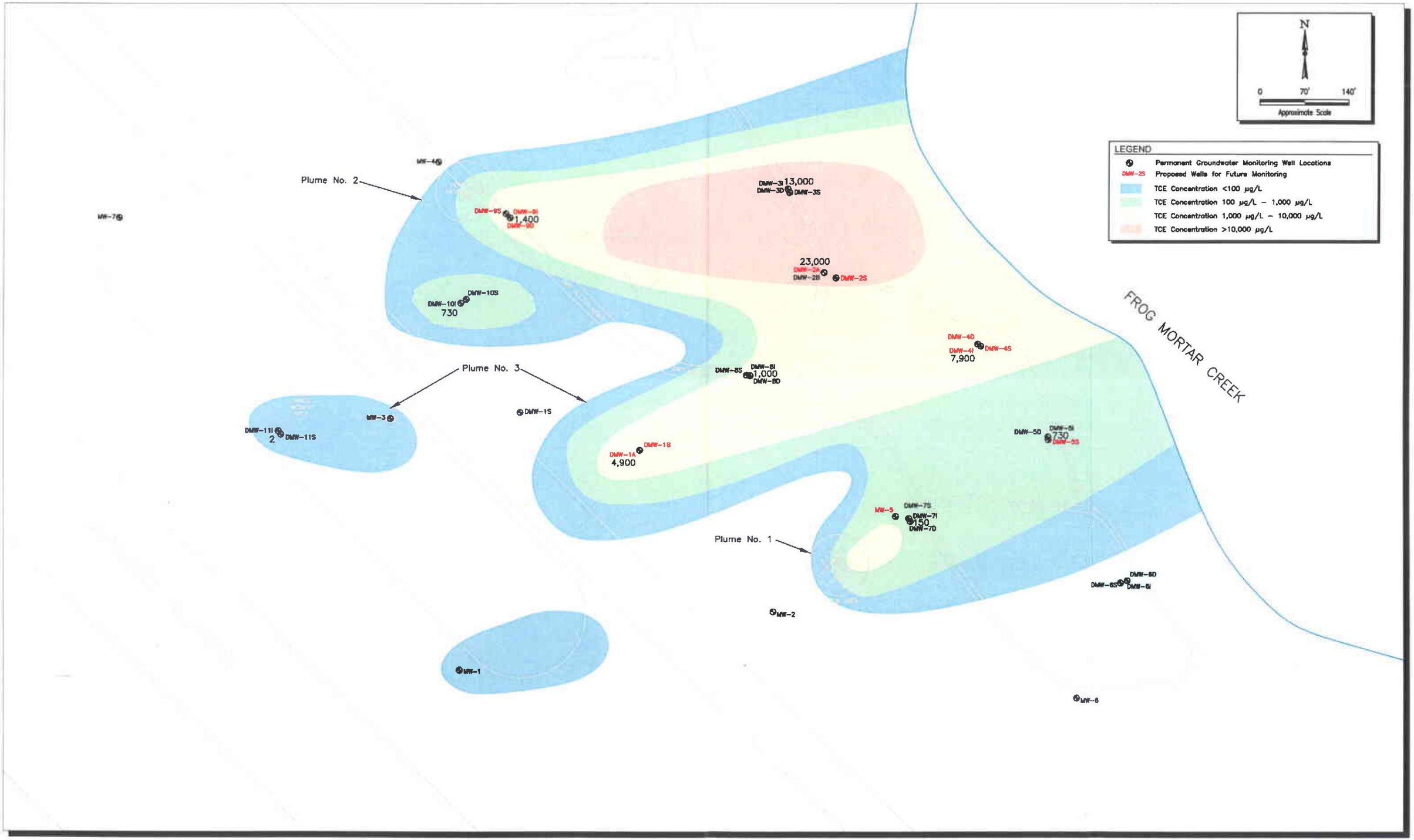


FIGURE 19
PROPOSED WELL LOCATIONS FOR FUTURE GROUNDWATER MONITORING



APPENDIX B
TABLES

Table B-1
Summary of Groundwater Elevation Data
(Based on Field Measurements 6/25/2004)

Well ID	Well Screen Elevation (feet) msl	TOC Elevation (feet) msl	TOC to Groundwater (feet)	Groundwater Elevation (feet) msl
DMW-1S	3.33 to -6.67	11.99	8.15	3.84
DMW-1A	-34 to -44	13.02	9.35	3.67
DMW-1B	-72 to -77	13.01	9.57	3.44
DMW-2S	2.35 to -7.65	22.95	20.49	2.46
DMW-2A	-30 to -40	22.71	20.75	1.96
DMW-2B	-65 to -75	22.70	20.35	2.35
DMW-3S	0.65 to -9.35	17.61	9.63	7.98
DMW-3I	-30.73 to -40.73	17.53	14.90	2.63
DMW-3D	-57.71 to -67.71	17.55	14.95	2.60
DMW-4S	1.58 to -8.42	21.53	19.60	1.93
DMW-4I	-25.16 to -35.16	21.47	19.12	2.35
DMW-4D	-49.04 to -59.04	21.48	19.50	1.98
DMW-5S	1.96 to -8.04	22.41	20.02	2.39
DMW-5I	-23.96 to -33.96	22.49	20.15	2.34
DMW-5D	-48.56 to -58.56	22.49	20.20	2.29
DMW-6S	4.29 to -5.71	19.83	17.75	2.08
DMW-6I	-21.62 to -31.62	19.68	17.98	1.70
DMW-6D	-40.40 to -50.40	19.65	17.70	1.95
DMW-7S	3.02 to -6.98	22.79	20.20	2.59
DMW-7I	-21.11 to -31.11	23.00	20.47	2.53
DMW-7D	-46.20 to -56.20	22.95	20.35	2.60
DMW-8S	6.94 to -3.06	16.89	13.05	3.84
DMW-8I	-17.85 to -27.85	17.19	14.45	2.74
DMW-8D	-42.47 to -52.47	17.23	14.36	2.87
DMW-9S	3.04 to -6.96	12.49	9.10	3.39
DMW-9I	-22.21 to -32.21	12.49	9.11	3.38
DMW-9D	-47.71 to -57.71	12.49	9.37	3.12
DMW-10S	0.49 to -9.51	11.17	7.58	3.59
DMW-10I	-24.27 to -34.27	11.09	7.60	3.49
DMW-11S	0.17 to -9.83	10.18	4.32	5.86
DMW-11I	-20.46 to -30.46	10.10	6.20	3.90
MW-1	-24 to -34	10.69	NA	NA
MW-2	-22 to -32	9.38	6.50	2.88
MW-3	-7 to -17	12.18	8.27	3.91
MW-4	7 to -20	11.39	7.25	4.14
MW-5	6 to -14	23.77	21.05	2.72
MW-6	3 to -17	16.79	13.97	2.82
MW-7	0.14 to -10.14	11.92	6.70	5.22

TOC – Top of Casing
NA – Not Available, Well MW-1 Was Damaged

Table B-2
Groundwater Contour Data
(Based on Field Measurements 6/25/2004)

Upper Surficial Aquifer		Intermediate Surficial Aquifer		Lower Surficial Aquifer	
Well ID	Groundwater Elevation (feet) msl	Well ID	Groundwater Elevation (feet) msl	Well ID	Groundwater Elevation (feet) msl
DMW-1S	3.84	DMW-1A	3.67	DMW-1B	3.44
DMW-2S	2.46	DMW-2A	1.96*	DMW-2B	2.35
DMW-3S	7.98*	DMW-3I	2.63	DMW-3D	2.60*
DMW-4S	1.93	DMW-4I	2.35	DMW-4D	1.98
DMW-5S	2.39	DMW-5I	2.34	DMW-5D	2.29
DMW-6S	2.08	DMW-6I	1.70	DMW-6D	1.95
DMW-7S	2.59	DMW-7I	2.53	DMW-7D	2.60
DMW-8S	3.84*	DMW-8I	2.74	DMW-8D	2.87
DMW-9S	3.39	DMW-9I	3.38	DMW-9D	3.12
DMW-10S	3.59	DMW-10I	3.49		
DMW-11S	5.85*	DMW-11I	3.90		
MW-3	3.91	MW-1	NA		
MW-4	4.14	MW-2	2.88		
MW-5	2.72				
MW-6	2.82				
MW-7	5.22				

*Data not used to in generation of groundwater contours

Table B-3
Summary of Chemical Analytical Results from Monitoring Wells (June 2004)

Well Number	Results of Chemical Analyses			
	VOCs (ug/L)	Dissolved Metals (ug/L)	Total Metals (ug/L)	SVOCs (ug/L)
DMW-1A	**Benzene: 29** Carbon Tetrachloride: 1 Chlorobenzene: 7 Chloroform: 6 1,2-Dichlorobenzene: 1 **1,2-Dichloroethane: 38** **1,1-Dichloroethene: 14** **cis-1,2-Dichloroethene: 8,000** trans-1,2-Dichloroethene: 43 Methylene Chloride: b120 Tetrachloroethene: 4 Toluene: 110 1,2,3-Trichlorobenzene: 2 1,2,4-Trichlorobenzene: 13 1,1,2-Trichloroethane: 2 **Trichloroethene: 4,900** **Vinyl Chloride: 5,900** m&p-Xylene: 5 o-Xylene: 7	As: 6.3 **Cd: 1,000** **Cr: 220** Cu: 15 **Ni: 110** Zn: 350	As: 8.0 Cd: 970 Cr: 420 Cu: 16 Hg: 2.0 Ni: 110 Se: 5.3 Zn: 330	NA
DMW-1B	**Benzene: 41** Chlorobenzene: 8 Chloroform: 3 **cis-1,2-Dichloroethene: 4,600** trans-1,2-Dichloroethene: 11 Toluene: 6 1,2,4-Trichlorobenzene: 3 **Trichloroethene: 190** **Vinyl Chloride: 6,200** o-Xylene: 7	As: 18 **Cd: 110** Cr: 19 Cu: 9.9 Ni: 35 Zn: 160	As: 210 Cd: 120 Cr: 220 Cu: 12 Pb: 5.2 Hg: 7.2 Ni: 36 Se: 5.7 Zn: 170	NA
DMW-2S	Benzene: 4 Carbon Tetrachloride: 2 Chloroform: 7 **1,2-Dichloroethane: 16** 1,1-Dichloroethene: 6 **cis-1,2-Dichloroethene: 590** trans-1,2-Dichloroethene: 5 Methylene Chloride: b11 Tetrachloroethene: 3 1,2,4-Trichlorobenzene: 15 **Trichloroethene: 2,400** **Vinyl Chloride: 120**	**Cd: 200** Cr: 5.9 Cu: 69 Pb: 11 **Ni: 96** Se: 16 Zn: 410	Cd: 210 Cu: 89 Pb: 12 Ni: 97 Se: 17 Zn: 390	NA

Table B-3
Summary of Chemical Analytical Results from Monitoring Wells (June 2004)

Well Number	Results of Chemical Analyses			
	VOCs (ug/L)	Dissolved Metals (ug/L)	Total Metals (ug/L)	SVOCs (ug/L)
DMW-2A	**Benzene: 37** n-Butylbenzene: 3 Carbon Tetrachloride: 2 Chlorobenzene: 8 **Chlorofrom: 99** 1,2-Dichlorobenzene: 7 1,4-Dichlorobenzene: 7 **1,1-Dichloroethene: 49** **cis-1,2-Dichloroethene: 4,600** trans-1,2-Dichloroethene: 33 Ethylbenzene: 20 Isopropylbenzene: 4 Methylene Chloride: b100 Naphthalene: 10 n-Propylbenzene: 6 **Tetrachloroethene: 60** Toluene: 410 1,2,3 -Trichlorobenzene: 180 **1,2,4-Trichlorobenzene: 890** **1,1,2-Trichloroethane: 10** **Trichloroethene: 23,000** 1,2,4-Trimethylbenzene: 17 1,3,5-Trimethylbenzene: 17 **Vinyl Chloride: 640** m&p-Xylene: 92 o-Xylene: 35	**Cd: 860** Cr: 9.2 Cu: 55 **Ni: 140** Se: 10 Zn: 660	Cd: 910 Cr: 8.4 Cu: 100 Ni: 150 Se: 11 Zn: 630	NA
DMW-2B	cis-1,2-Dichloroethene: 26 trans-1,2-Dichloroethene: 1 **Trichloroethene: 15**	Ni: 27	Cd: 13 Cr: 240 Cu: 84 Pb: 49 Ni: 210 Zn: 190	NA
DMW-3S	**cis-1,2-Dichloroethene: 1,900** **trans-1,2-Dichloroethene: 310** Methylene Chloride: b470 **Vinyl Chloride: 3,500**	As: 28 Cr: 5.0 Cu: 36 Se: 9.0	As: 27 Cu: 40 Se: 9.1	NA

Table B-3
Summary of Chemical Analytical Results from Monitoring Wells (June 2004)

Well Number	Results of Chemical Analyses			
	VOCs (ug/L)	Dissolved Metals (ug/L)	Total Metals (ug/L)	SVOCs (ug/L)
DMW-3I	**Benzene: 49** n-Butylbenzene: 3 Chlorobenzene: 9 **Chloroform: 120** 1,2-Dichlorobenzene: 4 **1,2-Dichloroethane: 180** **1,1-Dichloroethene: 48** **cis-1,2-Dichloroethene: 14,000** trans-1,2-Dichloroethene: 58 Ethylbenzene: 22 Isopropylbenzene: 3 4-Methyl-2-Pentanone (MIBK): 30 Naphthalene: 7 n-Propylbenzene: 4 **Tetrachloroethene: 35** Toluene: 160 1,2,3 -Trichlorobenzene: 130 **1,2,4-Trichlorobenzene: 510** **1,1,2-Trichloroethane: 9** **Trichloroethene: 13,000** 1,2,4-Trimethylbenzene: 13 1,3,5-Trimethylbenzene: 13 **Vinyl Chloride: 2,200** m&p-Xylene: 76 o-Xylene: 29	**Cd: 250** Cr: 8.8 Cu: 45 **Ni: 77** Se: 7.1 Zn: 430	Cd: 270 Cr: 28 Cu: 49 Ni: 77 Se: 7.9 Zn: 380	NA
DMW-4S	Benzene: 2 1,1-Dichloroethane: 8 **1,2-Dichloroethane: 22** **1,1-Dichloroethene: 27** **cis-1,2-Dichloroethene: 190** trans-1,2-Dichloroethene: 4 Methylene Chloride: b1 Tetrachloroethene: 3 1,1,2-Trichloroethane: 2 **Trichloroethene: E3,900** **Vinyl Chloride: 68**	Cr: 5.5 Ni: 35 Se: 5.5 Zn: 140	Cr: 46 Ni: 40 Se: 7.0 Zn: 170	NA
DMW-4I	**cis-1,2-Dichloroethene: 1,400** Methylene Chloride: b950 **Trichloroethene: 7,900**	**Be: 6.9** Cr: 16 **Ni: 76** Se: 23 Zn: 240	Be: 8.3 Cd: 55 Cr: 33 Cu: 15 Pb: 16 Ni: 88 Se: 26 Zn: 490	NA

Table B-3
Summary of Chemical Analytical Results from Monitoring Wells (June 2004)

Well Number	Results of Chemical Analyses			
	VOCs (ug/L)	Dissolved Metals (ug/L)	Total Metals (ug/L)	SVOCs (ug/L)
DMW-4D	Benzene: 1 Carbon Tetrachloride: 1 Chloroform: 2 1,1-Dichloroethane: 6 **1,2-Dichloroethane: 8** **1,1-Dichloroethene: 11** **cis-1,2-Dichloroethene: 250** trans-1,2-Dichloroethene: 6 Methylene Chloride: b12 Tetrachloroethene: 3 1,2,4-Trichlorobenzene: 3 **Trichloroethene: 4,900** 1,2,4-Trimethylbenzene: 2 1,3,5-Trimethylbenzene: 2 **Vinyl Chloride: 16**	**Cd: 17** Cr: 5.2 Cu: 59 Pb: 5.4 **Ni: 97** Se: 27 Zn: 320	Cd: 17 Cr: 8.6 Cu: 60 Pb: 5.1 Ni: 96 Se: 29 Zn: 300	NA
DMW-5S	Benzene: 2 Chloroform: 2 **1,2-Dichloroethane: 9** 1,1-Dichloroethene: 5 **cis-1,2-Dichloroethene: 2,600** trans-1,2-Dichloroethene: 18 Methylene Chloride: b6 Naphthalene: 3 **Tetrachloroethene: 14** Toluene: 1 1,2,3-Trichlorobenzene: 4 1,2,4-Trichlorobenzene: 18 **1,1,2-Trichloroethane: 8** **Trichloroethene: 14,000** 1,2,4-Trimethylbenzene: 6 1,3,5-Trimethylbenzene: 6 **Vinyl Chloride: 35** o-Xylene: 5	**Be: 5.2** Cr: 11 Ni: 55 Se: 18 Zn: 180	Be: 5.1 Cr: 79 Cu: 21 Ni: 55 Se: 19 Zn: 170	NA
DMW-5I	**cis-1,2-Dichloroethene: 170** Methylene Chloride: b19 **Trichloroethene: 730**	Cr: 11 Ni: 48 Se: 15 Zn: 150	Cr: 24 Pb: 15 Ni: 60 Se: 22 Zn: 220	NA
DMW-7S	**1,1-Dichloroethane: 810** **1,2-Dichloroethane: 150** **cis-1,2-Dichloroethene: 26,000** **trans-1,2-Dichloroethene: 470** Ethylbenzene: 170 Methylene Chloride: b940 **Toluene: 3,100** **Trichloroethene: 36,000** **Vinyl Chloride: 180** m&p-Xylene: 350	**Be: 6.9** **Cd: 13** Cr: 10 Cu: 66 Pb: 7.1 **Ni: 90** Se: 36 Zn: 250	Be: 6.7 Cd: 13 Cu: 68 Pb: 8.0 Ni: 89 Se: 39 Zn: 250	NA

Table B-3
Summary of Chemical Analytical Results from Monitoring Wells (June 2004)

Well Number	Results of Chemical Analyses			
	VOCs (ug/L)	Dissolved Metals (ug/L)	Total Metals (ug/L)	SVOCs (ug/L)
DMW-7I	Chlorobenzene: 1 **cis-1,2-Dichloroethene: 120** trans-1,2-Dichloroethene: 5 1,2,4-Trichlorobenzene: 2 **Trichloroethene: 150** **Vinyl Chloride: 12**	**Cd: 5.3** Cr: 17 **Pb: 18** **Ni: 87** Se: 15 Zn: 350	Cd: 100 Cr: 30 Cu: 130 Pb: 310 Ni: 94 Se: 18 Zn: 460	NA
DMW-8I	Benzene: 3 Chloroform: 4 1,1-Dichloroethene: 3 **cis-1,2-Dichloroethene: 600** trans-1,2-Dichloroethene: 3 Methylene Chloride: b35 **Trichloroethene: 1,000** **Vinyl Chloride: 120**	**Be: 8.8** **Cd: 86** Cr: 7.7 Cu: 29 Pb: 7.5 **Ni: 130** Se: 24 Zn: 390	Be: 9.1 Cd: 110 Cr: 360 Cu: 47 Pb: 11 Ni: 140 Se: 26 Zn: 390	NA
DMW-8D	Benzene: 1 1,1-Dichloroethene: 4 **cis-1,2-Dichloroethene: 180** trans-1,2-Dichloroethene: 1 Methylene Chloride: b3 **Trichloroethene: 140** **Vinyl Chloride: 85**	**Cd: 16** Ni: 41 Zn: 150	Cd: 190 Cu: 5.1 Ni: 44 Zn: 240	NA
DMW-9S	**Benzene: 610** **Chloroform: 310** **cis-1,2-Dichloroethene: 36,000** trans-1,2-Dichloroethene: 98 **Ethylbenzene: 2,700** Isopropylbenzene: 28 Methylene Chloride: b56 **Naphthalene: 68** n-Propylbenzene: 30 **Toluene: 5,500** **1,1,2-Trichloroethane: 110** **Trichloroethene: 2,500** 1,2,4-Trimethylbenzene: 210 1,3,5-Trimethylbenzene: 210 **Vinyl Chloride: 18,000** **m&p-Xylene: 21,000** o-Xylene: 3,000	As: 5.7	As: 5.1 Cu: 10	2,4-Dimethylphenol: 13 **Naphthalene: 20**
DMW-9I	**Benzene: 87** Chloroform: 44 **cis-1,2-Dichloroethene: 9,300** trans-1,2-Dichloroethene: 50 Ethylbenzene: 99 Toluene: 53 **Trichloroethene: 1,400** **Vinyl Chloride: 3,000** m&p-Xylene: 210	ND	Cr: 17 Cu: 26 Pb: 37 Ni: 19 Zn: 180	NA

Table B-3
Summary of Chemical Analytical Results from Monitoring Wells (June 2004)

Well Number	Results of Chemical Analyses			
	VOCs (ug/L)	Dissolved Metals (ug/L)	Total Metals (ug/L)	SVOCs (ug/L)
DMW-9D	**Chloroform: 400** **cis-1,2-Dichloroethene: 560** Methylene Chloride: b140 **Trichloroethene: 4,300** m&p-Xylene: 72	Ni: 39 Zn: 64	As: 9.4 Cr: 15 Cu: 18 Pb: 28 Ni: 52 Zn: 230	NA
DMW-10I	**Carbon Tetrachloride: 390** Chloroform: 13 cis-1,2-Dichloroethene: 24 Methylene Chloride: b2 1,1,2-Trichloroethane: 3 **Trichloroethene: 730**	ND	ND	NA
DMW-11S	Acetone: 15 **Benzene: 22** Carbon disulfide: 2 **Carbon Tetrachloride: 190** **Chloroform: 1,700** **1,1-Dichloroethene: 84** **cis-1,2-Dichloroethene: E31,000** **trans-1,2-Dichloroethene: 190** Ethylbenzene: 16 Isopropylbenzene: 28 Methylene Chloride: b23 Naphthalene: 6 n-Propylbenzene: 2 **1,1,2,2-Tetrachloroethane: 16** **Tetrachloroethene: 14** Toluene: 900 **1,1,2-Trichloroethane: 72** **Trichloroethene: E31,000** 1,2,4-Trimethylbenzene: 26 1,3,5-Trimethylbenzene: 7 **Vinyl Chloride: 1,500** m&p-Xylene: 49 o-Xylene: 41	Ni: 24 Zn: 120	Ni: 28 Zn: 140	NA
DMW-11I	cis-1,2-Dichloroethene: 4 Trichloroethene: 2	ND	Hg: 2.5	NA
MW-3	**cis-1,2-Dichloroethene: 140** **Trichloroethene: 130** **Vinyl Chloride: 4**	Zn: 75	Zn: 83	NA

Table B-3
Summary of Chemical Analytical Results from Monitoring Wells (June 2004)

Well Number	Results of Chemical Analyses			
	VOCs (ug/L)	Dissolved Metals (ug/L)	Total Metals (ug/L)	SVOCs (ug/L)
MW-5	**Benzene: 160** **1,1-Dichloroethane: 1,200** **1,2-Dichloroethane: 600** **1,1-Dichloroethene: 1,700** **cis-1,2-Dichloroethene: 110,000** **trans-1,2-Dichloroethene: 1,800** Ethylbenzene: 430 Methylene Chloride: b1,300 **Toluene: 9,900** **Trichloroethene: 35,000** 1,2,4-Trimethylbenzene: 480 1,3,5-Trimethylbenzene: 140 **Vinyl Chloride: 550** m&p-Xylene: 610	**Be: 7.2** **Cd: 6.6** Cr: 41 Cu: 48 Pb: 5.9 **Ni: 110** **Se: 51** Zn: 270	Be: 7.4 Cd: 7.4 Cr: 110 Cu: 70 Pb: 15 Ni: 130 Se: 74 Zn: 310	NA

ND = Not Detected at a Concentration Greater Than the Practical Quantitation Limit (PQL)

Bold Font = Chemicals and Dissolved Metals Detected Above MDE Groundwater Cleanup Standards

E = Estimated Value, Exceeds Calibration Range

b = Found in the Method Blank

NA = Not Analyzed

VOCs Were Not Detected in the 4 Trip Blanks

Table B-4a
Summary of Chemicals of Concern in the Upper Surficial Aquifer

Upper Surficial Aquifer				
Well ID	**TCE (µg/L)**	**cis-1,2-DCE (µg/L)**	**Vinyl Chloride (µg/L)**	**Dissolved Cadmium (µg/L)**
DMW-2S	2,400	590	120	200
DMW-3S	ND	1,900	3,500	ND
DMW-4S	3,900	190	68	ND
DMW-5S	14,000	2,600	35	ND
DMW-7S	36,000	26,000	180	13
DMW-9S	2,500	36,000	18,000	ND
DMW-11S	31,000	31,000	1,500	ND
MW-3	130	140	4	ND
MW-5	35,000	110,000	550	6.6

Note: Wells DMW-1S, DMW-6S, DMW-8S, DMW-10S, MW-4, MW-6, and MW-7 were not sampled.

Table B-4b
Summary of Chemicals of Concern in the Intermediate Surficial Aquifer

Intermediate Surficial Aquifer				
Well ID	**TCE (µg/L)**	**cis-1,2-DCE (µg/L)**	**Vinyl Chloride (µg/L)**	**Dissolved Cadmium (µg/L)**
DMW-1A	4,900	8,000	5,900	1,000
DMW-2A	23,000	4,600	640	860
DMW-3I	13,000	14,000	2,200	250
DMW-4I	7,900	1,400	ND	ND
DMW-5I	730	170	ND	ND
DMW-7I	150	120	12	5.3
DMW-8I	1,000	600	120	86
DMW-9I	1,400	9,300	1,400	ND
DMW-10I	730	24	ND	ND
DMW-11I	2	4	ND	ND

Note: Wells DMW-6I, and MW-2 were not sampled. Well MW-1 was scheduled for sampling, but the well was damaged and could not be sampled.

Table B-4c
Summary of Chemicals of Concern in the Lower Surficial

Lower Surficial Aquifer				
Well ID	**TCE (μg/L)**	**cis-1,2-DCE (μg/L)**	**Vinyl Chloride (μg/L)**	**Dissolved Cadmium (μg/L)**
DMW-1B	190	4,600	6,200	110
DMW-2B	15	26	ND	ND
DMW-4D	4,900	250	16	17
DMW-8D	140	180	85	16
DMW-9D	4,300	560	ND	ND

Note: Wells DMW-3D, DMW-5D, DMW-6D, DMW-7D were not sampled.

Table B-5a
Summary of Analytical Results for Wells Screened in the Upper Surficial Aquifer

Upper Surficial Aquifer					
Well ID	Date Sampled	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)	Dissolved Cadmium (µg/L)
DMW-1S	Sep-03	ND	4	15	ND
	Dec-03	ND	ND	ND	ND
	Mar-04	ND	3	31	ND
DMW-2S	Sep-03	2,300	2,300	2,000	10
	Dec-03	740	7,700	12,000	ND
	Mar-04	3,600	910	170	200
	Jun-04	2,400	590	120	200
DMW-3S	Sep-03	87	1,300	3,800	ND
	Dec-03	48	2,300	4,800	ND
	Mar-04	76	3,800	7,700	ND
	Jun-04	ND	1,900	3,500	ND
DMW-4S	Sep-03	2,000	190	63	ND
	Dec-03	2,700	260	67	ND
	Mar-04	3,300	190	57	ND
	Jun-04	3,900	190	68	ND
DMW-5S	Sep-03	30,000	1,900	26	ND
	Dec-03	11,000	1,800	28	ND
	Mar-04	11,000	1,900	42	ND
	Jun-04	14,000	2,600	35	ND
DMW-6S	Sep-03	ND	3	ND	ND
	Dec-03	ND	2	ND	ND
	Mar-04	ND	ND	ND	ND
DMW-7S	Sep-03	34,000	31,000	480	6.2
	Dec-03	41,000	30,000	420	8.9
	Mar-04	45,000	29,000	190	12.0
	Jun-04	36,000	26,000	180	13
DMW-8S	Sep-03	2	1	ND	ND
	Dec-03	ND	ND	ND	ND
	Mar-04	ND	1	ND	ND
DMW-9S	Sep-03	1,100	32,000	27,000	ND
	Dec-03	2,800	61,000	30,000	ND
	Mar-04	2,000	37,000	20,000	ND
	Jun-04	2,500	36,000	18,000	ND
DMW-10S	Sep-03	ND	1	36	ND
	Dec-03	ND	1	49	ND
	Mar-04	ND	ND	93	ND
DMW-11S	Sep-03	22,000	28,000	1,300	ND
	Dec-03	20,000	29,000	1,200	ND
	Mar-04	52,000	53,000	2,400	ND
	Jun-04	31,000	31,000	1,500	ND

Table B-5a (continued)
Summary of Analytical Results for Wells Screened in the Upper Surficial Aquifer

Upper Surficial Aquifer					
Well ID	**Date Sampled**	**TCE (µg/L)**	**cis-1,2-DCE (µg/L)**	**Vinyl Chloride (µg/L)**	**Dissolved Cadmium (µg/L)**
MW-3	Aug-95	1,430	468	16	NA
	Feb-96	710	270	ND	NA
	Mar-99	380	91	ND	ND
	Jun-02	650	510	36	ND
	Sep-03	370	200	6	ND
	Dec-03	370	260	12	ND
	Mar-04	110	100	ND	ND
	Jun-04	130	140	4	ND
MW-4	Feb-96	ND	6	32	NA
	Mar-99	ND	8	34	ND
	Jun-02	ND	8	27	ND
	Sep-03	39	26	38	ND
	Dec-03	ND	ND	ND	20
	Mar-04	ND	1	ND	8.7
MW-5	Feb-96	63,000	38,000	100	NA
	Mar-99	56,000	55,000	ND	23
	Jun-02	20,000	110,000	260	ND
	Sep-03	34,000	110,000	490	8.2
	Dec-03	6,100	140,000	360	ND
	Mar-04	31,000	120,000	350	6.8
	Jun-04	35,000	110,000	550	6.6
MW-6	Feb-96	61	36	ND	NA
	Mar-99	41	43	ND	1.4
	Jun-02	ND	ND	ND	ND
	Sep-03	ND	ND	ND	6.7
	Dec-03	ND	ND	ND	5.8
	Mar-04	ND	ND	ND	ND
MW-7	Sep-03	6	4	ND	ND
	Dec-03	ND	ND	ND	ND
	Mar-04	ND	ND	ND	ND

ND = Not Detected

NA = Not Analyzed

Table B-5b
Summary of Analytical Results for Wells Screened in the Intermediate Surficial Aquifer

Well ID	Date Sampled	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)	Dissolved Cadmium (µg/L)
DMW-1A	Jun-02	9,000	6,200	3,500	1200
	Sep-03	9,000	10,000	5,500	910
	Dec-03	12,000	14,000	10,000	790
	Mar-04	9,000	12,000	8,500	790
	Jun-04	4,900	8,000	5,900	1000
DMW-2A	Jun-02	12,000	1,800	250	5
	Sep-03	29,000	3,100	840	1600
	Dec-03	34,000	4,700	650	800
	Mar-04	51,000	7,600	910	760
	Jun-04	23,000	4,600	640	860
DMW-3I	Sep-03	23,000	13,000	1,800	220
	Dec-03	27,000	19,000	3,000	240
	Mar-04	16,000	14,000	3,400	250
	Jun-04	13,000	14,000	2,200	250
DMW-4I	Sep-03	8,200	1,400	110	ND
	Dec-03	7,100	1,100	81	ND
	Mar-04	12,000	1,300	100	ND
	Jun-04	7,900	1,400	ND	ND
DMW-5I	Sep-03	230	62	4	ND
	Dec-03	210	61	3	ND
	Mar-04	460	120	ND	ND
	Jun-04	730	170	ND	ND
DMW-6I	Sep-03	11	ND	ND	ND
	Dec-03	ND	ND	ND	ND
	Mar-04	ND	ND	ND	ND
DMW-7I	Sep-03	670	260	32	ND
	Dec-03	230	170	28	ND
	Mar-04	220	140	19	ND
	Jun-04	150	120	12	5.3
DMW-8I	Sep-03	1,100	470	140	28
	Dec-03	920	320	73	60
	Mar-04	1,200	500	83	86
	Jun-04	1,000	600	120	86
DMW-9I	Sep-03	1,400	6,800	1,700	ND
	Dec-03	1,400	8,400	2,400	ND
	Mar-04	1,900	19,000	6,400	ND
	Jun-04	1,400	9,300	3,000	ND
DMW-10I	Sep-03	600	18	1	ND
	Dec-03	440	15	ND	ND
	Mar-04	480	23	ND	ND
	Jun-04	730	24	ND	ND
DMW-11I	Sep-03	19	35	2	ND
	Dec-03	3	7	ND	ND
	Mar-04	2	4	ND	ND
	Jun-04	2	4	ND	ND

Table B-5b (continued)
Summary of Analytical Results for Wells Screened in the Intermediate Surficial Aquifer

Well ID	Date Sampled	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)	Dissolved Cadmium (µg/L)
MW-1	Aug-95	56	ND	ND	NA
	Feb-96	84	1	ND	NA
	Mar-99	36	ND	ND	ND
	Jun-02	320	26	5	ND
	Sep-03	110	1	ND	ND
	Dec-03	52	2	ND	ND
	Mar-04	100	ND	ND	ND
MW-2	Aug-95	699	275	86	NA
	Feb-96	180	110	13	NA
	Mar-99	16	8	ND	17
	Jun-02	19	13	ND	14
	Sep-03	4	3	ND	16
	Dec-03	2	2	ND	14
	Mar-04	ND	ND	ND	ND

ND = Not Detected

NA = Not Analyzed

Table B-5c
Summary of Analytical Results for Wells Screened in the Lower Surficial Aquifer

Well ID	Date Sampled	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)	Dissolved Cadmium (µg/L)
DMW-1B	Jun-02	2,800	4,500	5	390
	Sep-03	360	4,700	7,700	110
	Dec-03	320	7,200	9,800	90
	Mar-04	250	6,700	8,500	86
	Jun-04	190	4,600	6,200	110
DMW-2B	Jun-02	120	42	3	ND
	Sep-03	34	59	2	13
	Dec-03	23	26	ND	ND
	Mar-04	13	18	ND	ND
	Jun-04	15	26	ND	ND
DMW-3D	Sep-03	ND	ND	ND	ND
	Dec-03	ND	ND	ND	ND
	Mar-04	ND	ND	ND	ND
DMW-4D	Sep-03	3,200	190	17	ND
	Dec-03	4,000	170	17	14
	Mar-04	8,400	210	19	14
	Jun-04	4,900	250	16	17
DMW-5D	Sep-03	2	1	ND	ND
	Dec-03	1	ND	ND	ND
	Mar-04	2	ND	ND	ND
DMW-6D	Sep-03	ND	ND	ND	ND
	Dec-03	ND	ND	ND	ND
	Mar-04	ND	ND	ND	ND
DMW-7D	Sep-03	1	ND	ND	ND
	Dec-03	ND	ND	ND	ND
	Mar-04	ND	ND	ND	ND
DMW-8D	Sep-03	170	230	110	130
	Dec-03	210	280	120	ND
	Mar-04	150	140	62	ND
	Jun-04	140	180	85	16
DMW-9D	Sep-03	5,200	600	38	ND
	Dec-03	3,300	360	24	ND
	Mar-04	6,300	760	ND	ND
	Jun-04	4,300	560	ND	ND

ND = Not Detected

Table B-6
Rationale for Exclusion of Proposed Wells From Future Monitoring

Groundwater Zone	Well ID	Rationale for Proposed Exclusion of Wells from Future Sampling
Upper Surficial Aquifer	DMW-3S	The well screen is surrounded by clay, and groundwater will be sampled at DMW-2S to monitor the migration of Plume No.2.
	DMW-7S	The distance between well MW-7S and MW-5 is approximately 15 to 20 feet, therefore well MW-5 will be used for monitoring.
	DMW-11S	The well screen is surrounded by clay, and isolated from groundwater movement.
	MW-3	The well screen is surrounded by clay, and no significant concentrations of the primary chemicals of concern (COCs) have been detected.
Intermediate Surficial Aquifer	DMW-3I	Groundwater will be sampled at DMW-2I to monitor the migration of Plume No.2.
	DMW-5I	No significant concentrations of COCs have been detected.
	DMW-7I	No significant concentrations of COCs have been detected.
	DMW-8I	No significant concentrations of COCs have been detected.
	DMW-10I	No significant concentrations of COCs have been detected.
	DMW-11I	The well screen is surrounded by clay, and isolated from groundwater movement.
	MW-1	The well is not located on the migration pathway of the plumes, and no significant concentrations of COCs have been detected.
Lower Surficial Aquifer	DMW-2B	No significant concentrations of COCs have been detected.
	DMW-8D	No significant concentrations of COCs have been detected.

APPENDIX C
GROUNDWATER
SAMPLE LOGS

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-1A-062104
Sample Location: DMW-1A
Sampled By: CL/WP
C.O.C. No.: PSC Detail 6/21/04
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Other NA
Date: 6/21/04								
Time: 1234								
Method: Bladder Pump	Slightly Cloudy	5.11	0.992	16.56	70	1.19	168.9	—

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 6/21/04								
Method: Bladder Pump								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC		See Low Flow Purge						
Total Well Depth (TD): 53.66'		Detail Sheet						
Static Water Level (WL): 9.35'								
One Casing Volume (gal/L): 7.23								
Start Purge (hrs): 1130								
End Purge (hrs): 1224								
Total Purge Time (min): 54								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
Nitrate & Sulfate (300)	Ice	1 - 250 mL Poly	1
Iron III (6020)	HCL	2 - 40 mL VOAs	2
Iron III (6020)	HNO_3	1 - 250 mL Poly	1
Ethene/Ethane	ICE	2 - 40 mL VOAs	2

OBSERVATIONS / NOTES:

N/A

$$\begin{array}{r} 53.66 \\ -\ 9.35 \\ \hline 44.31 \end{array} \times (2)^2 \times 0.0408 = 7.23$$

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7539-0677D

WELL ID.: DMW-1A (I well)
DATE: 6/21/04
Partly cloudy, 80°F; 30.16 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. uS/cm ~~mS/cm~~	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1130	9.35'	—	—	—	—	—	—	—	Initial Reading
1134	9.56'	340	4.15	1003	100	7.19	16.03	237.8	Slightly cloudy water
1139	9.39'	130	5.97	999	90	4.55	15.78	159.1	" " "
1144	9.39'	130	5.67	1030	170	3.01	16.79	74.5	" " "
1149	9.39'	130	5.41	995	160	2.13	17.08	85.7	" " "
1154	9.39'	130	5.27	973	130	1.80	16.91	110.4	" " "
1159	9.39'	130	5.20	976	95	1.59	16.51	129.0	" " "
1204	9.39'	130	5.16	986	75	1.47	16.29	141.6	" " "
1209	9.39'	130	5.14	992	60	1.35	16.10	154.6	" " "
1214	9.39'	130	5.12	993	50	1.40	16.34	158.3	" " "
1219	9.39'	130	5.12	992	45	1.24	16.55	164.6	" " "
1224	9.39'	130	5.11	992	40	1.19	16.56	168.9	" " "
←				Well	Parameters	Stabilize	—	→	
←					Sampling	Begins	—	→	

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-1B-062104
Sample Location: DMW-1B
Sampled By: CCL/WP
C.O.C. No.: PSS - Dated 6/21/04
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Date: 6/21/04	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Time: 1114	Cloudy	5.25	1.022	14.91	400	0.75	130.4	—
Method: Bladder Pump								

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 6/21/04								
Method: Bladder Pump								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC			Well	Parameters	Stabilize			
Total Well Depth (TD): 90.36'		See	Low	Flow	Purge			
Static Water Level (WL): 9.57'		Data	Sheet					
One Casing Volume (gal/L): 13.18								
Start Purge (hrs): 1014								
End Purge (hrs): 1114								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
Nitrate & Sulfate (300)	Ice	1 - 250 mL Poly	1
Iron III (6020)	HCL	2 - 40 mL VOAs	2
Iron III (6020)	HNO_3	1 - 250 mL Poly	1
Ethene/Ethane	ICE	2-40mL VOAS	2

OBSERVATIONS / NOTES:

90.36
−9.57
80.79 × (2)² × 0.0408 = 13.18

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-Φ677D

WELL ID.: DMW-1B (Deep Well)
DATE: 6/21/Φ4
Sunny, 80°F; 3Φ.1Φ in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1Φ14	9.57'	—	—	—	—	—	—	—	Initial Reading
1Φ19	1Φ.11'	13Φ	3.8Φ	1Φ47	85	3.Φ7	18.18	315.6	Slightly cloudy water
1Φ24	1Φ.38'	27Φ	4.8Φ	1Φ15	7Φ	1.4Φ	16.Φ4	233.1	" " "
1Φ29	1Φ.75'	27Φ	5.13	1Φ28	31Φ	Φ.9Φ	14.94	175.8	Cloudy water
1Φ34	11.Φ8'	27Φ	5.23	1Φ27	35Φ	Φ.77	14.86	154.6	" "
1Φ39	11.Φ9'	27Φ	5.25	1Φ26	19Φ	Φ.76	14.74	146.4	" "
1Φ44	11.15'	27Φ	5.25	1Φ25	12Φ	Φ.74	14.73	142.9	Slightly cloudy water
1Φ49	11.15'	27Φ	5.25	1Φ25	15Φ	Φ.73	14.75	14Φ.7	" " "
1Φ54	11.15'	27Φ	5.26	1Φ25	17Φ	Φ.73	14.74	139.1	" " "
1Φ59	11.15'	27Φ	5.26	1Φ25	25Φ	Φ.74	14.82	137.9	Cloudy water
11Φ4	11.15'	27Φ	5.26	1Φ22	37Φ	Φ.75	14.9Φ	135.1	" "
11Φ9	11.15'	27Φ	5.26	1Φ25	4ΦΦ	Φ.76	14.89	133.Φ	" "
11 14	11.15'	27Φ	5.25	1Φ22	4ΦΦ	Φ.75	14.91	13Φ.4	" "
←				Well Parameters Stabilize					→
←					Sampling Begins				→

SIGNATURE(S): [signature]

2.Φ gallons out

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-2S-ϕ618ϕ4
Sample Location: DMW-2S
Sampled By: CCL/WP
C.O.C. No.: FSS-Dated 6/21/04
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Date: 6/18/ϕ4								
Time: 1155								
Method: Bladder Pump	Clear	4.2ϕ	1.2ϕ3	18.82	14	1.36	3ϕ7.7	—

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 6/18/ϕ4								
Method: Bladder Pump								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC		See	Low	Flow				
Total Well Depth (TD): 32.76'		Purge	Data	Sheet				
Static Water Level (WL): 20.49'								
One Casing Volume (gal/L): 2.ϕ								
Start Purge (hrs): 1124								
End Purge (hrs): 1155								
Total Purge Time (min): 31								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	ϕ

OBSERVATIONS / NOTES:

32.76
-20.49
12.27 × (2)² × ϕ.ϕ4ϕ8 = 2.ϕ

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Clark C. Ley III

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-Φ677D

WELL ID.: DMW-2S
DATE: 6/18/Φ4

Partly Cloudy, 85°F, Humid, 30.03 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. uS/cm ~~(mS/cm)~~	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1124	2Φ.49'	—	—	—	—	—	—	—	Initial Reading
113Φ	2Φ.6Φ'	36Φ	4.48	1197	2Φ	8.23	17.11	257.6	Clear Water
1135	2Φ.5Φ'	12Φ	4.26	12Φ2	2Φ	3.59	16.74	289.3	Clear Water
114Φ	2Φ.5Φ'	12Φ	4.2Φ	12Φ6	15	2.22	18.Φ4	3ΦΦ.4	Clear Water
1145	2Φ.5Φ'	12Φ	4.22	1211	11	1.74	18.52	3Φ4.1	Clear Water
115Φ	2Φ.5Φ'	12Φ	4.21	12Φ7	13	1.5Φ	18.64	3Φ5.5	Clear Water
1155	2Φ.5Φ'	12Φ	4.2Φ	12Φ3	14	1.36	18.82	3Φ7.7	Clear Water
←					Well Parameters		Stabilize	→	
←					Sampling Begins			→	

SIGNATURE(S): [signature]

1.5 gallons out

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-2A-0616Ø4
Sample Location: DMW-2A
Sampled By: CCL/WP
C.O.C. No.: PSS - Dated 6/17/04
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Date: 6/16/Ø4	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Time: 16Ø5								
Method: Bladder Pump	Cloudy	4.28	1.6Ø2	16.92	95.2	Ø.8Ø	221.6	—

PURGE DATA:

Date: 6/16/Ø4	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC			See Low Flow		Purge			
Total Well Depth (TD): 62.16'			Data	Sheet				
Static Water Level (WL): 2Ø.75'								
One Casing Volume (gal/L): 6.75								
Start Purge (hrs): 15ØØ								
End Purge (hrs): 16Ø5								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	Ø

OBSERVATIONS / NOTES:

62.16
−2Ø.75
41.41 × (2)² × Ø.ØYØ8 ≈ 6.75 gallons

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-0677D

WELL ID.: DMW-2A
DATE: 6/16/04

Overcast, 90°F, Humid; 30.18 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. uS/cm ~~mS/cm~~	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1500	20.75'	—	—	—	—	—	—	—	—	Initial Reading
1510	20.80'	220	3.75	1519	162	6.88	19.14	319.4	N/A	Cloudy Water
1515	20.80'	220	3.78	1515	368	4.28	18.60	306.9	N/A	Cloudy Water
1520	20.80'	220	4.15	1514	443	2.19	18.01	258.2	N/A	Cloudy Water
1525	20.80'	220	4.32	1585	344	1.38	17.72	234.4	N/A	Cloudy Water
1530	20.80'	220	4.33	1643	235	1.05	17.60	229.2	N/A	Cloudy Water
1535	20.80'	220	4.31	1666	190	0.91	17.23	227.8	N/A	Cloudy Water
1540	20.80'	220	4.30	1662	166	0.84	17.19	226.6	N/A	Cloudy Water
1545	20.80'	220	4.30	1655	121	0.83	17.18	225.5	N/A	Cloudy Water
1550	20.80'	220	4.29	1641	108	0.81	17.05	224.2	N/A	Cloudy Water
1555	20.80'	220	4.29	1631	95.4	0.79	16.98	223.3	N/A	Cloudy Water
1600	20.80'	220	4.28	1613	93.2	0.79	16.99	222.4	N/A	Cloudy Water
1605	20.80'	220	4.28	1602	95.2	0.80	16.92	221.6	N/A	Cloudy Water
				WELL	Parameters	Stabilize				
					Sampling	Begins				

SIGNATURE(S): Chris C. Ty III

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: Dmw-28-Ø616Ø4
Sample Location: 6/16/Ø4
Sampled By: CCL / WP
C.O.C. No.: PSS-Dated 6/16/Ø4
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Other NA
Date: 6/16/Ø4								
Time: 1451								
Method: Bladder Pump	Cloudy	6.21	.Ø87	16.66	>999	2.52	213.4	—

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 6/16/Ø4								
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC			See	Low Flow	Purge			
Total Well Depth (TD): 95.16'			Data	Sheet				
Static Water Level (WL): 2Ø.35'								
One Casing Volume (gal/L): 12.2								
Start Purge (hrs): 14ØØ								
End Purge (hrs): 1451								
Total Purge Time (min): 51								
Total Vol. Purged (gal/L): 2.Ø								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
~~SVOCs (8270C)~~	Ice	1 - 1 L Amber	Ø

OBSERVATIONS / NOTES:

95.16
−2Ø.35
74.81 x(2)² x Ø.ØØ4Ø8 = 12.2 gallons

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-0677D

WELL ID.: DMW-2B
DATE: 6/16/04
Overcast, 90°F, Humid, 30.23 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. mS/cm (~~mS/cm~~)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1400	20.35'	–	–	–	–	–	–	–	–	INITIAL Reading
1411	20.90'	240	6.08	87	275	8.10	19.84	141.6	N/A	Cloudy water
1416	20.90'	180	6.05	75	768	3.79	17.53	184.3	N/A	Cloudy water
1421	20.90'	180	5.98	74	>999	3.01	17.20	199.6	N/A	Cloudy water
1426	20.90'	180	5.98	76	>999	2.58	16.97	198.2	N/A	Cloudy water
1431	20.90'	180	6.11	81	>999	2.54	16.85	201.4	N/A	Cloudy water
1436	20.90'	180	6.17	87	>999	2.57	16.72	205.9	N/A	Cloudy water
1441	20.90'	180	6.22	89	>999	2.56	16.62	208.3	N/A	Cloudy water
1446	20.90'	180	6.22	88	>999	2.53	16.70	211.1	N/A	Cloudy water
1451	20.90'	180	6.21	87	>999	2.52	16.66	213.4	N/A	Cloudy water
←				WELL	Parameters	stabilize				→
←					Sampling	Begins				→

SIGNATURE(S): [signature]

2.0 gallons Removal.

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-3S-061804
Sample Location: DMW-3S
Sampled By: CCL
C.O.C. No.: PSG-Dated 6/21/04
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Other NA
Date: 6/18/04								
Time: 0942								
Method: Bladder Pump	clear	7.89	5.878	15.76	18	0.37	-164.3	—

PURGE DATA:

Date: 6/18/04	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC			See	Low Flow				
Total Well Depth (TD): 26.96'		Purge	Data	Sheet				
Static Water Level (WL): 9.63'								
One Casing Volume (gal/L): 2.82								
Start Purge (hrs): 0837								
End Purge (hrs): 0942								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 3.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	0

OBSERVATIONS / NOTES:

26.96
− 9.63
17.33 × (2)² × 0.0408 = 2.82 gallons

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Chad C. Gill III

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7~~2~~59-Φ677D

WELL ID.: DMW-3S
DATE: 6/18/Φ4
Partly Cloudy, 80°F, 30.00 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. uS/cm ~~mS/cm~~	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
Φ837	9.63'	–	–	–	–	–	–	–	INITIAL Reading
Φ847	1Φ.47'	47Φ	7.65	697Φ	24	2.79	15.53	-147.2	clear water
Φ852	11.96'	35Φ	7.91	6827	27	Φ.4Φ	13.75	-181.Φ	clear water
Φ857	12.93'	17Φ	8.13	6482	19	Φ.31	14.Φ3	-196.Φ	clear water
Φ9Φ2	13.35'	17Φ	8.11	64Φ8	7.9	Φ.3Φ	14.31	-186.1	clear water
Φ9Φ7	13.85'	17Φ	8.Φ9	6367	12	Φ.29	14.32	-181.Φ	clear water
Φ912	14.5Φ'	17Φ	8.Φ9	63Φ9	7.6	Φ.28	14.29	-18Φ.Φ	clear water
Φ917	15.ΦΦ'	17Φ	8.Φ6	62Φ9	11	Φ.27	14.28	-179.6	clear water
Φ922	15.6Φ'	17Φ	8.ΦΦ	6Φ7Φ	17	Φ.28	14.25	-178.3	clear water
Φ927	16.ΦΦ'	11Φ	7.95	5989	12	Φ.28	14.5Φ	-176.Φ	clear water
Φ932	16.27'	8Φ	7.93	593Φ	15	Φ.34	15.12	-17Φ.9	clear water
Φ937	16.41'	8Φ	7.9Φ	59Φ9	17	Φ.36	15.58	-166.7	clear water
Φ942	16.65'	8Φ	7.89	5878	18	Φ.37	15.76	-164.3	clear water
←			Well Parameters Stabilize						→
←				Sampling Begins					→

SIGNATURE(S): [signature]

3.0 gallons out

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-3I-061804
Sample Location: DMW-3I
Sampled By: CCL/WP
C.O.C. No.: RSS — Dated 6/21/04
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Date: 6/18/04	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Time: 1058								
Method: Bladder Pump	clear	4.85	1.50	14.97	9.5	1.01	182.7	—

PURGE DATA:

Date: 6/18/04	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC		See	Low	Flow	Purge			
Total Well Depth (TD): 58.26'		Data	Sheet					
Static Water Level (WL): 14.90'								
One Casing Volume (gal/L): 7.07								
Start Purge (hrs): 1006								
End Purge (hrs): 1058								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	Ø

OBSERVATIONS / NOTES:

58.26
-14.90
43.36 x (2)² x 0.0408 = 7.07 gallons

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Mark C. Ly III

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-0677D

WELL ID.: DMW-3I
DATE: 6/18/04
Cloudy, 80°F, 30.02 IN Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. ~~(mS/cm)~~ uS/cm	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1006	14.90'	—	—	—	—	—	—	—	INITIAL Reading
1018	14.95'	130	3.94	1604	30	8.60	16.65	246.8	Slightly Cloudy
1023	14.95'	130	3.51	1587	34	5.47	15.71	328.8	Slightly Cloudy
1028	14.95'	130	3.55	1552	36	3.19	15.33	346.1	Slightly Cloudy
1033	14.95'	130	4.09	1504	40	2.07	15.19	297.8	Slightly Cloudy
1038	14.95'	130	4.64	1503	29	1.45	15.04	219.6	Slightly Cloudy
1043	14.95'	130	4.76	1496	19	1.28	14.96	200.1	Clear water
1048	14.95'	130	4.81	1498	14	1.19	15.00	189.7	Clear water
1053	14.95'	130	4.84	1498	11	1.08	14.94	185.0	Clear water
1058	14.95'	130	4.85	1500	9.5	1.01	14.97	182.7	Clear water
←				Well Parameters Stabilize					→
←					Sampling Begins				→

2.0 gallons O.J.

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-4S-062504
Sample Location: DMW-4S
Sampled By: CCL
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6/25/04	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time: 1456	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Method: Bladder Pump	Clear	5.20	1.939	17.41	15	1.03	68.0	—

PURGE DATA:

Date: 6/25/04	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC			See	Low Flow				
Total Well Depth (TD): 32.76'		Purge	Data	Sheet				
Static Water Level (WL): 19.60'								
One Casing Volume (gal/L): 2.14								
Start Purge (hrs): 1400								
End Purge (hrs): 1456								
Total Purge Time (min): 56								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	0

OBSERVATIONS / NOTES:

32.76
−19.60
13.16 x (2)² x 0.0408 = 2.14 gallons

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Charles C. Fry III

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-0677D

WELL ID.: Dmw-4S
DATE: 6/25/04
Hazy, 85°F, Humid; 30.12 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. us/cm ~~ms/cm~~	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1400	19.60'	–	–	–	–	–	–	–	Initial Reading
1406	19.70'	130	3.21	2116	75	8.29	17.79	432.9	Slightly cloudy water
1411	19.70'	130	3.61	2000	80	6.22	18.12	398.6	" " "
1416	19.70'	130	4.81	1934	90	3.56	17.79	240.0	" " "
1421	19.70'	130	5.06	1934	60	2.10	17.45	180.6	" " "
1426	19.70'	130	5.12	1934	45	1.56	17.44	155.5	" " "
1431	19.70'	130	5.15	1937	31	1.30	17.32	118.6	" " "
1436	19.70'	130	5.15	1933	21	1.19	17.40	98.5	" " "
1441	19.70'	130	5.16	1935	17	1.13	17.44	84.6	Clear water
1446	19.70'	130	5.17	1943	15	1.12	17.58	76.7	" "
1451	19.70'	130	5.18	1937	15	1.08	17.66	70.4	" "
1456	19.70'	130	5.20	1939	15	1.03	17.41	68.0	" "
←			Well	Parameters	Stabilize				→
←				Sampling	Begins				→

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-4I-0617Ø4
Sample Location: DMW-4I
Sampled By: 6/17/Ø4
C.O.C. No.: PSS-Dated 6/17/Ø4
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Other NA
Date: 6/17/Ø4								
Time: 1126								
Method: Bladder Pump	Cloudy	4.85	1.659	15.76	27Ø	Ø.79	1.4	—

PURGE DATA:

Date: 6/17/Ø4	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC			See Low	Flow	Purge			
Total Well Depth (TD): 59.36'			Data	Sheet				
Static Water Level (WL): 19.12'								
One Casing Volume (gal/L): 6.56								
Start Purge (hrs): 1Ø28								
End Purge (hrs): 26								
Total Purge Time (min): 58								
Total Vol. Purged (gal/L): 2.Ø								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
Nitrate & Sulfate (300)	Ice	1 - 250 mL Poly	1
Iron III (6020)	HCL	2 - 40 mL VOAs	2
Iron III (6020)	HNO_3	1 - 250 mL Poly	1
Ethene/Ethane	ICE	2-40 mL VOAs	2

OBSERVATIONS / NOTES:

59.36
−19.12
40.24 x (2)² x 0.0408 = 6.56 gallons

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s): [illegible] C. [illegible] III

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-Φ677D
WELL ID.: DMW-4I
DATE: 6/17/Φ4
Overcast, 80°F, Humid, 3Φ 12 in HS

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1Φ28	19.12'	—	—	—	—	—			INITIAL Readings
1Φ36	19.16'	25Φ	4.Φ5	1643	18Φ	7.Φ4	18.78	3Φ4.5	Cloudy water
1Φ41	19.21'	25Φ	4.34	1614	36Φ	2.41	16.16	319.5	Cloudy water
1Φ46	19.26'	25Φ	4.75	162Φ	>999	1.29	15.53	176.3	Milky, Cloudy water
1Φ51	19.26'	25Φ	4.82	1622	>999	Φ.88	15.48	7Φ.4	" "
1Φ56	19.26'	25Φ	4.83	1633	>999	Φ.76	15.56	42.1	" "
11Φ1	19.26'	25Φ	4.86	1636	55Φ	Φ.78	15.59	27.6	" "
11Φ6	19.26'	25Φ	4.91	1643	34Φ	Φ.76	15.47	12.2	Cloudy water
1111	19.26'	25Φ	4.91	1649	3ΦΦ	Φ.76	15.49	5.8	" "
1116	19.26'	25Φ	4.89	165Φ	27Φ	Φ.77	15.62	2.9	" "
1121	19.26'	25Φ	4.87	1656	25Φ	Φ.8Φ	15.68	1.7	" "
1126	19.26'	25Φ	4.85	1659	27Φ	Φ.79	15.76	1.4	" "
←				WELL	Parameters	Stabilize			→
←					Sampling	Begins			→

SIGNATURE(S): Chuck C. Ty III

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-4D-Ø618Ø4
Sample Location: DMW-4D
Sampled By: CCL/WP
C.O.C. No.: PSS - Dated - 6/21/Ø4
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Other NA
Date: 6/21/Ø4								
Time: 1438								
Method: Bladder Pump	Slightly Cloudy	4.36	1.253	18.66	65	Ø.89	289.4	—

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 6/21/Ø4								
Method: Bladder Pump								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC			See Low	Flow	Purge			
Total Well Depth (TD): [redacted] 83.26'			Data	Sheet				
Static Water Level (WL): 19.50'								
One Casing Volume (gal/L): 1Ø.4								
Start Purge (hrs): 1355								
End Purge (hrs): 1438								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	Ø

OBSERVATIONS / NOTES:

83.26
-19.50
63.76 x (2)² x Ø.ØØ4Ø8 = 1Ø.4 gallons

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s): [signature]

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7539-Ø67ZD

WELL ID.: DMW-4D
DATE: 6/18/Ø4
Cloudy, 90°F, Humid, 29.97 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. uS/cm ~~mS/cm~~	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1355	19.5Ø'	—	—	—	—	—	—	—	INITIAL Reading.
14Ø1	19.66'	21Ø	4.Ø9	1228	16	5.28	19.76	241.4	clear water.
14Ø6	19.56'	14Ø	4.2Ø	12Ø7	4Ø	3.53	18.3Ø	252.9	Slightly cloudy water.
1411	19.57'	14Ø	4.21	12Ø4	75	2.31	18.2Ø	27Ø.4	Slightly cloudy water. Rain.
1418	19.6Ø'	14Ø	4.27	1219	85	1.53	17.83	285.6	" " "
1423	19.63'	14Ø	4.33	1237	7Ø	1.2Ø	17.84	286.6	" "
1428	19.63'	14Ø	4.35	1244	65	1.Ø2	18.34	287.4	" "
1433	19.63'	14Ø	4.36	1248	7Ø	Ø.93	18.44	288.5	" "
1438	19.63'	14Ø	4.36	1253	65	Ø.89	18.66	289.4	" "
				WELL Parameters Stable →					
				Sampling Begins →					

SIGNATURE(S): Charles C. Gatti

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-SS-Ø617Ø4
Sample Location: DMW-SS
Sampled By: CCL/WP
C.O.C. No.: PSS-Dated 6/17/Ø4
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Other NA
Date: 6/17/Ø4								
Time: Ø958								
Method: Bladder Pump	Clear	4.42	1.522	15.64	15	Ø.88	227.6	—

PURGE DATA:

Date: 6/17/Ø4	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC		See Low Flow Purge						
Total Well Depth (TD): 33.Ø1'		Data Sheet						
Static Water Level (WL): 2Ø.Ø2'								
One Casing Volume (gal/L): 2.12								
Start Purge (hrs): Ø91Ø								
End Purge (hrs): Ø958								
Total Purge Time (min): 48								
Total Vol. Purged (gal/L): 2.Ø								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
Nitrate & Sulfate (300)	Ice	1 - 250 mL Poly	1
Iron III (6020)	HCL	2 - 40 mL VOAs	2
Iron III (6020)	HNO_3	1 - 250 mL Poly	1
Ethene/Ethane	ICE	2 - 40mL VOAs	2

OBSERVATIONS / NOTES:

33.Ø1
−2Ø.Ø2
12.99 x (2)² x Ø.ØØ4Ø8 = 2.12 gallons

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s): Chuck C. Pyle III

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-0677D

WELL ID.: DMW-5S
DATE: 6/17/04
Overcast, 80°F, 30.08 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. ~~(mS/cm)~~ µS/cm	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
0910	20.02'	—	—	—	—	—	—	—	INITIAL Reading
0913	20.81'	380	5.77	1515	75	4.85	16.38	131.2	Slightly cloudy water
0918	20.92'	320	4.87	1510	160	1.22	14.80	34.3	cloudy water
0923	20.85'	210	4.66	1521	70	0.93	15.00	87.2	Slightly cloudy water
0928	20.85'	210	4.58	1528	40	0.92	15.36	130.0	Slightly cloudy water
0933	20.85'	210	4.53	1527	24	0.92	15.45	167.7	Clear water
0938	20.85'	210	4.50	1527	16	0.90	15.43	192.6	Clear water
0943	20.85'	210	4.47	1524	18	0.89	15.51	208.3	Clear water
0948	20.85'	210	4.45	1524	15	0.89	15.60	219.4	Clear water
0953	20.85'	210	4.43	1518	15	0.87	15.62	224.9	Clear water
0958	20.85'	210	4.42	1522	15	0.88	15.64	227.6	Clear water
←				Well	Parameters	Stabilize			→
←					Sampling	Begins			→

SIGNATURE(S): Clark C. Fry III

2.0 gallons out.

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-SI-062504
Sample Location: DMW-SI
Sampled By: CCL
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6/25/04	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time: 1554	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Method: Bladder Pump	Slight Cloudy	4.59	1.325	16.18	40	0.84	56.0	—

PURGE DATA:

Date: 6/25/04	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC		For	Well	Parameters				
Total Well Depth (TD): 59.16'		See	Low	Flow				
Static Water Level (WL): 20.15'		Purge	Data	Sheet				
One Casing Volume (gal/L): 6.36								
Start Purge (hrs): 1515								
End Purge (hrs): 1554								
Total Purge Time (min): 39								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	0

OBSERVATIONS / NOTES:

59.16
-20.15
39.01 x (2)² x 0.0408 = 6.36 gallons

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Chuck C. Smith III

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-0677D

WELL ID.: DMW-5I
DATE: 6/25/04
Hazy, 85°F, Humid ; 30.00 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. uS/cm (~~mS/cm~~)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1515	20.15'	—	—	—	—	—	—	—	INITIAL Reading
1524	20.21'	170	3.37	1410	14	3.73	18.96	435.8	Clear WATER
1529	20.21'	170	4.00	1330	70	1.80	17.31	241.0	Slightly cloudy water
1534	20.21'	170	4.46	1324	45	1.23	16.53	102.4	" " "
1539	20.21'	170	4.57	1326	45	1.02	16.23	75.5	" " "
1544	20.21'	170	4.59	1325	40	0.92	16.23	64.9	" " "
1549	20.21'	170	4.59	1328	40	0.89	16.28	60.0	" " "
1554	20.21'	170	4.59	1325	40	0.84	16.18	56.0	" " "
←				Well	Parameters	Stabilize			→
←					Sampling	Begins			→

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-7S-062104
Sample Location: DMW-7S
Sampled By: CCL/WP
C.O.C. No.: PS - Dated 6/21/04
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6/21/04	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time: 0924	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Method: Bladder Pump	Clear	7.08	4.104	15.80	7.2	1.52	270.4	—

PURGE DATA:

Date: 6/21/04	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC			See	Low Flow	Purge			
Total Well Depth (TD): 32.16'			Data	Sheet				
Static Water Level (WL): 20.20'								
One Casing Volume (gal/L): 1.95								
Start Purge (hrs): 0855								
End Purge (hrs): 0924								
Total Purge Time (min): 49								
Total Vol. Purged (gal/L): 10								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
Nitrate & Sulfate (300)	Ice	1 - 250 mL Poly	1
Iron III (6020)	HCL	2 - 40 mL VOAs	2
Iron III (6020)	HNO_3	1 - 250 mL Poly	1
Ethane / Ethene	Ice	2 - 40 mL VOAs	2

OBSERVATIONS / NOTES:

32.16
-20.20
11.96 x (2)² x 0.0408 = 1.95

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7531-06770

WELL ID.: DMW-7S
DATE: 6/21/04
Clear, 80°F, 30.01 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. ~~(mS/cm)~~ uS/cm	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
		—	—	—	—	—	—	—	—	Initial Reading
0835	20.20'	—	—	—	—	—	—	—	—	
0844	20.22'	120	4.13	4070	140	2.24	15.66	176.1	N/A	Slightly cloudy water
0849	20.22'	100	4.05	4083	85	1.70	15.33	260.6	N/A	" " "
0854	20.22'	100	4.06	4106	55	1.60	15.15	268.2	N/A	" " "
0859	20.22'	100	4.06	4105	45	1.54	15.01	269.8	N/A	" " "
0904	20.22'	100	4.07	4121	27	1.53	15.18	270.6	N/A	" " "
0909	20.22'	100	4.07	4128	17	1.50	15.36	270.7	N/A	Clear water
0914	20.22'	100	4.08	4123	12	1.50	15.50	270.6	N/A	" "
0919	20.22'	100	4.07	4112	11	1.49	15.73	270.9	N/A	" "
0924	20.22'	100	4.08	4104	7.2	1.52	15.80	270.4	N/A	" "
				Well Parameters		Stabilized				
				Sampling		Begins				

1.0 gallon OUT.

SIGNATURE(S): [illegible]

PAGE 1 OF 2

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-7I-0624Ø4
Sample Location: DMW-7I
Sampled By: CCL/WP
C.O.C. No.: PSS - Dated 6/24/04
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6/24/Ø4	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time: 1226	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Method: Bladder Pump	Slightly Cloudy	4.23	1.426	15.34	27	Ø.69	86.8	—

PURGE DATA:

Date: 6/24/Ø4	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC		See Low Flow Purge						
Total Well Depth (TD): 56.81'			Data Sheet					
Static Water Level (WL): 2Ø.47'								
One Casing Volume (gal/L): 5.93								
Start Purge (hrs): 1142								
End Purge (hrs): 1226								
Total Purge Time (min): 44								
Total Vol. Purged (gal/L): 2.Ø								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	Ø

OBSERVATIONS / NOTES:

56.81
−20.47
36.34 x (2)² x Ø.Ø4Ø8 = 5.93 gallons

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Arnt C. Ty III

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-Φ677D

WELL ID.: DMW-7I
DATE: 6/24/Φ4
Partly Cloudy; 80°F; 3Φ.1Φ in Hg.

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. ~~(mS/cm)~~ uS/cm C	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1142	2Φ.47'	–	–	–	–	–	–	–	INITIAL Reading
1151	2Φ.48'	29Φ	3.19	16Φ5	45	4.13	18.41	4Φ5.7	Slightly cloudy water
1156	2Φ.47'	29Φ	3.92	1462	18	1.27	15.98	269.Φ	Clear water
12Φ1	2Φ.47'	29Φ	4.15	142Φ	2Φ	Φ.92	15.52	154.3	Clear water
12Φ6	2Φ.47'	29Φ	4.18	1424	31	Φ.81	15.29	122.Φ	Slightly cloudy water
1211	2Φ.47'	29Φ	4.2Φ	1426	34	Φ.73	15.23	1Φ8.6	" " "
1216	2Φ.47'	29Φ	4.21	1425	3Φ	Φ.7Φ	15.33	1Φ1.1	" " "
1221	2Φ.47'	29Φ	4.22	1426	29	Φ.7Φ	15.39	93.5	" " "
1226	2Φ.47'	29Φ	4.23	1426	27	Φ.69	15.34	86.8	" " "
←				WELL	Parameters	Stabilize			→
←					Sampling	Begins			→

SIGNATURE(S): Mark C. Ly III

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-8I-Ø616Ø4
Sample Location: DMW-8I
Sampled By: CCL/WP
C.O.C. No.: PSS-Dated 6/17/Ø4
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6/16/Ø4	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time: 1334	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Method: Bladder Pump	cloudy	3.97	1.4Ø3	15.76	167	Ø.93	344.3	—

PURGE DATA:

Date: 6/16/Ø4	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC		For	Well	Parameters	See			
Total Well Depth (TD): 47.96'		Low	Flow	Purge				
Static Water Level (WL): 14.45'		Data	Sheet					
One Casing Volume (gal/L): 5.46								
Start Purge (hrs): 1246								
End Purge (hrs): 1334								
Total Purge Time (min): 48								
Total Vol. Purged (gal/L): 2.Ø								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	Ø

OBSERVATIONS / NOTES:

47.96
−14.45
33.51 × (2)² × Ø.Ø4Ø8 = 5.46 gallons

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Charles C. Fry III

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport - Quarterly Sampling
PROJECT NUMBER: N7339-0670

WELL ID.: DMW-8I
DATE: 6/16/04

Overcast, 85°F Humid, 30.25 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. uS/cm ~~mS/cm~~	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1246	14.45'	—	—	—	—	—	—	—	—	INITIAL Reading
1249	14.47'	200	3.60	1407	28.7	7.29	17.78	418.8	N/A	Slightly cloudy water
1254	14.47'	200	4.12	1361	104	4.69	16.77	335.0	N/A	Cloudy water
1259	14.47'	200	4.07	1429	99.3	2.43	16.36	319.0	N/A	Cloudy water
1304	14.47'	200	4.01	1450	94.8	1.38	16.01	335.0	N/A	Cloudy water
1309	14.47'	200	3.99	1452	126	1.04	15.82	340.6	N/A	Cloudy water
1314	14.47'	200	3.98	1448	121	0.98	15.75	343.0	N/A	Cloudy water
1319	14.47'	200	3.98	1437	146	0.94	15.74	344.2	N/A	Cloudy water
1324	14.47'	200	3.98	1424	160	0.90	15.76	344.3	N/A	Cloudy water
1329	14.47'	200	3.98	1417	164	0.95	15.84	344.5	N/A	Cloudy water
1334	14.47'	200	3.97	1403	167	0.93	15.76	344.3	N/A	cloudy water
←				Well Parameters Stabilize						→
←					Sampling Begins					→

2.0 gallons out

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-8D-Ø616Ø4
Sample Location: DMW-8D
Sampled By: CCL/WP
C.O.C. No.: PSS- Dated 6/17/Ø4
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6/16/Ø4	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time: 1227	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Method: Bladder Pump	Clear	4.53	Ø.265	16.98	6.Ø5	Ø.87	122.Ø	—

PURGE DATA:

Date: 6/16/Ø4	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC			See Low Flow		Purge			
Total Well Depth (TD): 72.66'			Data	Sheet				
Static Water Level (WL): 14.36'								
One Casing Volume (gal/L): 9.5								
Start Purge (hrs): 1135								
End Purge (hrs): 1227								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 2.Ø								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
~~SVOCs (8270C)~~	~~Ice~~	~~1 - 1 L Amber~~	Ø

OBSERVATIONS / NOTES:

72.66
-14.36
58.30 x (2)² x Ø.Ø4Ø8 = 9.5 gallons

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport - Quarterly Sampling
PROJECT NUMBER: N7339-0647D

WELL ID.: DMW-8D
DATE: 6/16/04
Overcast, 85°F, Humid. 30.23 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. ~~mS/cm~~ uS/cm	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1135	14.36'	–	–	–	–	–	–	–	–	INITIAL Reading
1142	14.51'	280	4.80	241	0.0	6.27	17.27	244.2	N/A	Clear Water
1147	14.51'	260	4.59	238	4.4	2.77	14.97	148.0	N/A	Clear Water
1152	14.45'	170	4.54	300	24.0	1.16	14.98	107.6	N/A	Clear Water
1157	14.41'	160	4.54	304	27.6	1.00	15.86	111.6	N/A	Clear Water
1202	14.45'	160	4.51	295	20.0	1.10	16.23	122.1	N/A	Clear Water
1207	14.45'	160	4.53	288	18.9	0.99	16.36	123.6	N/A	Clear Water
1212	14.45'	160	4.53	283	16.5	0.94	16.60	125.1	N/A	Clear Water
1217	14.45'	160	4.53	285	12.5	0.90	17.05	127.2	N/A	Clear Water
1222	14.45'	160	4.53	286	8.19	0.89	17.00	125.0	N/A	Clear Water
1227	14.45'	160	4.53	285	6.05	0.87	16.98	122.0	N/A	Clear Water
←				Well	Parameters	Stabilize				→
←					Sampling	Begins				→

2.0 Gallons Removed

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-9S-062404
Sample Location: DMW-9S
Sampled By: CCL/WP
C.O.C. No.: PSS. Dated 6/24/04
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6/24/04	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time: 0844	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Method: Bladder Pump	Clear	6.20	1.558	15.17	9.1	1.09	-114.8	—

PURGE DATA:

Date: 6/24/04	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC		See	Low	Flow	Purge			
Total Well Depth (TD): 22.11'		Data	Sheet					
Static Water Level (WL): 9.10'								
One Casing Volume (gal/L): 2.12								
Start Purge (hrs): 0800								
End Purge (hrs): 0844								
Total Purge Time (min): 44								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	1

OBSERVATIONS / NOTES:

22.11
− 9.10
13.01 x $(2)^2$ x 0.0408 = 2.12 gallons

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s): Robert C. Cy III

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-0677-D

WELL ID.: DMW-9S
DATE: 6/24/04
Partly Cloudy, 77°F, 30.06 IN (Hg)

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. uS/cm² (~~mS/cm~~)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
0800	9.10'	—	—	—	—	—	—	—	INITIAL Reading
0804	9.10'	160	6.33	1551	NA	4.82	17.60	36.1	Clear Water
0809	9.10'	160	6.22	1542	NA	3.24	15.98	-64.5	" "
0814	9.10'	160	6.20	1545	NA	2.55	15.60	-77.4	" "
0819	9.10'	160	6.20	1547	32	1.39	15.14	-99.4	Slightly cloudy Water
0824	9.10'	160	6.20	1549	28	1.20	15.06	-106.2	Clear Water
0829	9.10'	160	6.21	1552	20	1.12	15.07	-109.5	" "
0834	9.10'	160	6.21	1556	15	1.10	15.06	-112.1	" "
0839	9.10'	160	6.21	1557	14	1.08	15.13	-113.6	" "
0844	9.10'	160	6.20	1558	9.1	1.09	15.17	-114.8	" "
←				Well Parameters Stabilize					→
←					Sampling	Begins			→

SIGNATURE(S): [signature]

1.5 gallons out
SVOCs

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-9I-Ø624Ø4
Sample Location: DMW-9I
Sampled By: CCL/WP
C.O.C. No.: PSS-Dated 6/24/04
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6/24/Ø4	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time: 1119	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Method: Bladder Pump	Cloudy	5.92	1.269	17.44	55Ø	Ø.92	-1Ø1.8	—

PURGE DATA:

Date: 6/24/Ø4	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC			See Low Flow		Purge			
Total Well Depth (TD): 47.31'			Data	Sheet				
Static Water Level (WL): 9.11'								
One Casing Volume (gal/l): 6.23								
Start Purge (hrs): 1Ø28								
End Purge (hrs): 1119								
Total Purge Time (min): 51								
Total Vol. Purged (gal/l): 2.Ø								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
Nitrate & Sulfate (300)	Ice	1 - 250 mL Poly	1
Iron III (6020)	HCL	2 - 40 mL VOAs	2
Iron III (6020)	HNO_3	1 - 250 mL Poly	1
Ethane/Ethene	ICE	2-40mL VOAs	2

OBSERVATIONS / NOTES:

47.31
- 9.11
38.20 x (2)² x Ø.Ø4Ø8 = 6.23 gallons

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [illegible]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-06770

WELL ID.: DMW-9I
DATE: 6/24/04
Partly cloudy, 80°F, 30.11 inHg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. uS/cm ~~mS/cm~~	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
										INITIAL Reading
1028	9.11'	—	—	—	—	—	—	—	—	Cloudy WATER
1029	9.30'	100	5.87	1245	>999	2.61	15.62	29.7	N/A	" "
1034	9.18'	100	5.90	1242	>999	1.53	16.75	-1.3	N/A	" "
1039	9.18'	140	5.91	1278	>999	1.17	16.74	-55.4	N/A	" "
1044	9.18'	140	5.92	1299	>999	0.98	16.91	-76.8	N/A	" "
1049	9.18'	140	5.93	1304	>999	0.91	16.96	-86.4	N/A	" "
1054	9.18'	140	5.93	1305	>999	0.88	16.94	-91.6	N/A	" "
1059	9.18'	140	5.93	1302	750	0.89	16.86	-94.8	N/A	" "
1104	9.18'	140	5.93	1294	600	0.90	17.08	-96.7	N/A	" "
1109	9.18'	140	5.93	1282	550	0.93	17.20	-98.7	N/A	" "
1114	9.18'	140	5.93	1275	500	0.93	17.24	-100.3	N/A	" "
1119	9.18'	140	5.92	1269	550	0.92	17.44	-101.8	N/A	" "
←				WELL Parameters		Stabilize				→
←				Sampling Begins						→

SIGNATURE(S): [signature]

PAGE 2 OF 2

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-9D-Ø624Ø4
Sample Location: DMW-9D
Sampled By: CCL/WP
C.O.C. No.: PSS - Dated 6/24/Ø4
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Date: 6/24/Ø4	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Time: 1Ø11								
Method: Bladder Pump	Cloudy	5.11	Ø.362	14.66	75Ø	Ø.66	-14.2	—

PURGE DATA:

Date: 6/24/Ø4	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): 72.81'		See	Low	Flow Purge				
Static Water Level (WL): 9.37'		Data	Sheet					
One Casing Volume (gal/L): 1Ø.35								
Start Purge (hrs): Ø911								
End Purge (hrs): 1Ø11								
Total Purge Time (min): 6Ø								
Total Vol. Purged (gal/L): 3.Ø								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	Ø

OBSERVATIONS / NOTES:

72.81
− 9.37
63.44 x (2)² x Ø.Ø4Ø8 = 1Ø.35 gallons

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-Φ677D

WELL ID.: DMW-9D
DATE: 6/24/Φ4
Partly cloudy, 77°F; 3Φ.Φ7 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. uS/cm ~~mS/cm~~	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
										INITIAL Reading
Φ911	9.37'	—	—	—	—	—	—	—	—	
Φ916	9.45'	21Φ	5.29	3Φ6	27	4.19	15.84	1Φ8.2	N/A	Slightly cloudy WATER
Φ921	9.37'	21Φ	4.94	3Φ5	25Φ	2.21	14.9Φ	116.5	N/A	Cloudy WATER
Φ926	9.37'	21Φ	5.19	322	65Φ	1.28	14.78	61.8	N/A	" "
Φ931	9.37'	21Φ	5.29	348	>999	1.ΦΦ	14.94	6.8	N/A	" "
Φ936	9.37'	21Φ	5.29	355	>999	1.Φ1	15.51	-5.6	N/A	" "
Φ941	9.37'	21Φ	5.27	358	>999	1.Φ5	16.Φ9	-9.2	N/A	" "
Φ946	9.37'	21Φ	5.19	361	>999	Φ.82	14.77	-7.7	N/A	" "
Φ951	9.37'	21Φ	5.13	362	>999	Φ.72	14.58	-7.1	N/A	" "
Φ956	9.37'	21Φ	5.14	363	>999	Φ.68	14.49	-9.4	N/A	" "
1ΦΦ1	9.37'	21Φ	5.12	363	75Φ	Φ.65	14.56	-1Φ.4	N/A	" "
1ΦΦ6	9.37'	21Φ	5.11	363	75Φ	Φ.66	14.59	-12.4	N/A	" "
1Φ11	9.37'	21Φ	5.11	362	75Φ	Φ.66	14.66	-14.2	N/A	" "
←				WELL	Parameters	Stabilize				→
←					Sampling	Begins				→

3.0 gallons out

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-10I-Ø625Ø4
Sample Location: DMW-10I
Sampled By: CCL/WP
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Date: 6/25/Ø4	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Time: 1341								
Method: Bladder Pump	Clear	4.75	Ø.Ø67	15.72	6.Ø	Ø.6Ø	243.6	—

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 6/25/Ø4								
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC			See Low Flow					
Total Well Depth (TD): 44.96'		Purge Data Sheet						
Static Water Level (WL): 7.6Ø'								
One Casing Volume (gal/L): 6.Ø9								
Start Purge (hrs): 13Ø5								
End Purge (hrs): 1341								
Total Purge Time (min): 36								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	Ø

OBSERVATIONS / NOTES:

44.96
− 7.60
37.36 × (2)² × Ø.Ø4Ø8 = 6.09 gallons

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Chuck C. Ly III

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-0677D

WELL ID.: DMW-10I
DATE: 6/25/04
Hazy, 85°F; 30.13 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1305	7.60'	—	—	—	—	—	—	—	Initial Reading
1311	7.70'	270	5.10	73	5.8	4.84	19.66	169.7	Clear Water
1316	7.70'	240	4.95	70	11.0	1.33	16.73	192.8	" "
1321	7.80'	240	4.85	71	14.0	0.85	16.20	207.6	" "
1326	7.80'	240	4.78	69	7.1	0.70	15.86	221.9	" "
1331	7.80'	240	4.76	68	15.0	0.65	15.75	232.4	" "
1336	7.80'	240	4.75	67	8.1	0.62	15.71	239.4	" "
1341	7.80'	240	4.75	67	6.0	0.60	15.72	243.6	" "
←				Well Parameters Stabilize					→
←				Sampling Begins					→

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-11S-062504
Sample Location: DMW-11S
Sampled By: CCL
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Date: 6/25/04	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Time: 1015								
Method: Bladder Pump	Slightly cloudy	4.77	0.445	16.38	55	0.91	212.5	—

PURGE DATA:

Date: 6/25/04	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC			See	Low Flow	Purge			
Total Well Depth (TD): 20.01'			Data	Sheet				
Static Water Level (WL): 4.32'								
One Casing Volume (gal/L): 2.56								
Start Purge (hrs): 0940								
End Purge (hrs): 1015								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	0

OBSERVATIONS / NOTES:

20.01
- 4.32
15.69 x (2)² x 0.0408 = 2.56 gallons

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s): Paul C. Ray III

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-06770

WELL ID.: DMW-11S
DATE: 6/25/04
Cloudy, 75°F; 30.13 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. ~~(mS/cm)~~ uS/cm	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
0940	4.32'	—	—	—	—	—	—	—	INITIAL Reading
0945	4.68'	200	4.97	448	70	7.28	17.39	231.7	Slightly cloudy water
0950	4.70'	200	4.83	429	100	3.35	16.69	225.5	" " "
0955	4.76'	200	4.79	421	85	1.46	16.63	217.8	" " "
1000	4.76'	200	4.78	417	60	0.93	16.41	214.5	" " "
1005	4.76'	200	4.77	416	55	0.83	16.37	213.7	" " "
1010	4.76'	200	4.76	427	50	0.88	16.33	213.6	" " "
1015	4.76'	200	4.77	445	55	0.91	16.38	212.5	" " "
←			Well	Parameters		Stabilize			→
←				Sampling	Begins				→

SIGNATURE(S): Chuck C. Fry III

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-11I-Ø625Ø4
Sample Location: DMW-11I
Sampled By: CCL/WP
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6/25/Ø4	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time: Ø925	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Method: Bladder Pump	Cloudy	5.Ø2	Ø.Ø2Ø	15.45	13Ø	Ø.79	73.6	—

PURGE DATA:

Date: 6/25/Ø4	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC		See	Low	Flow	Purge			
Total Well Depth (TD): 4Ø.56'		Data	Sheet					
Static Water Level (WL): 6.2Ø'								
One Casing Volume (gal/L): 5.6								
Start Purge (hrs): Ø835								
End Purge (hrs): Ø925								
Total Purge Time (min): 5Ø								
Total Vol. Purged (gal/L): 2.Ø								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	Ø

OBSERVATIONS / NOTES:

40.56
− 6.20
34.36 × (2)² × Ø.Ø448 = 5.6 gallons

Circle if Applicable:

MS/MSD — Duplicate ID No.: —

Signature(s): [signature]

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-0677D

WELL ID.: DMW-11 I
DATE: 6/25/04
Cloudy, 75°F; 30.15 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. uS/cm ~~mS/cm~~	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
0835	6.20'	–	–	–	–	–	–	–	Initial Reading
0845	6.50'	400	5.45	22	45	7.99	15.24	170.9	Slightly cloudy water
0850	6.35'	190	5.08	20	290	4.09	15.14	209.4	Cloudy water
0855	6.35'	190	5.06	20	270	2.32	15.48	206.6	" "
0900	6.35'	190	5.03	20	260	1.56	15.54	184.0	" "
0905	6.35'	190	5.00	20	190	1.17	15.55	128.6	" "
0910	6.35'	190	5.00	20	150	1.00	15.55	99.8	" "
0915	6.35'	190	5.01	20	130	0.90	15.56	86.1	" "
0920	6.35'	190	5.03	20	120	0.83	15.49	77.8	" "
0925	6.35'	190	5.02	20	130	0.79	15.45	73.6	" "
←				Well Parameters Stabilize					→
←				Sampling Begins					→

SIGNATURE(S): [signature]

2.0 gallons

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: N7339/0677D

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MW-3-Ø625Ø4
Sample Location: MW-3
Sampled By: CCL
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6/25/Ø4	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time: 1117	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	NA
Method: Bladder Pump	Clear	6.Ø4	Ø.152	15.78	3.9	Ø.59	145.1	—

PURGE DATA:

Date: 6/25/Ø4	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Bladder Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 4" PVC		See	Low	Flow	Purge			
Total Well Depth (TD): 29.46'			Data	Sheet				
Static Water Level (WL): 8.27'								
One Casing Volume (gal/L): 13.8								
Start Purge (hrs): 1Ø3Ø								
End Purge (hrs): 1117								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 2.Ø								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260B)	HCL	2 - 40 mL VOAs	2
Priority Pollutant Metals (Total)	HNO_3	1 - 500 mL Poly	1
Priority Pollutant Metals (Filtered)	HNO_3	1 - 500 mL Poly	1
SVOCs (8270C)	Ice	1 - 1 L Amber	Ø

OBSERVATIONS / NOTES:

29.46
− 8.27
21.19 × $(4)^2$ × Ø.ØØ4Ø8 = 13.8 gallons

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Charles C. Lyle III

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: N7339-0677D

WELL ID.: MW-3
DATE: 6/25/04
Cloudy, 80°F; 30.22 in Hg

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. uS/cm ~~mS/cm~~	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1030	8.27'	—	—	—	—	—	—	—	Initial Reading
1037	8.45'	180	6.06	126	9.0	5.15	18.03	146.4	Clear Water
1042	8.55'	180	5.97	125	3.9	3.82	17.09	165.0	" "
1047	8.70'	180	6.02	141	4.4	2.16	16.38	167.1	" "
1052	8.77'	180	6.03	146	6.3	1.20	16.41	164.1	" "
1057	8.80'	180	6.03	149	3.0	0.84	16.11	161.8	" "
1102	8.86'	180	6.03	149	3.6	0.71	16.00	160.1	" "
1107	8.92'	180	6.05	150	4.8	0.64	15.88	156.4	" "
1112	8.92'	180	6.04	151	4.8	0.61	15.79	151.0	" "
1117	8.92'	180	6.04	152	3.9	0.59	15.78	145.1	" "
←			Well	Parameters	Stabilize				→
←				Sampling	Begins				→

2.0 gallons OUT.

SIGNATURE(S): [signature]

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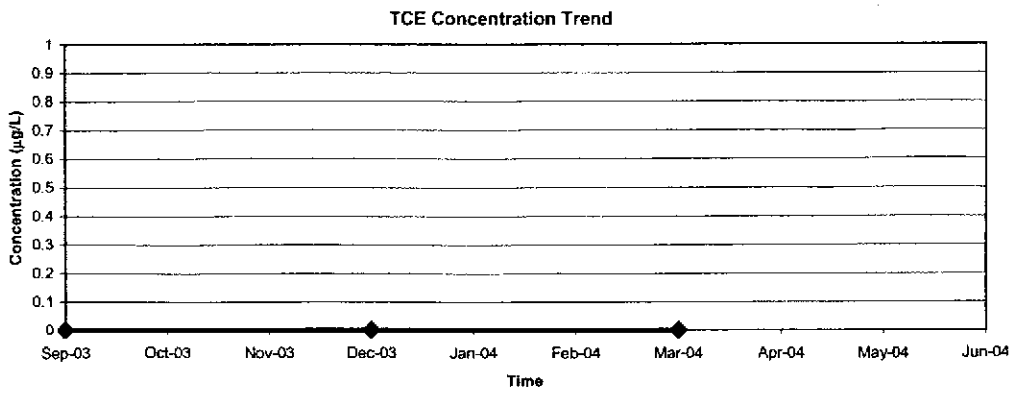
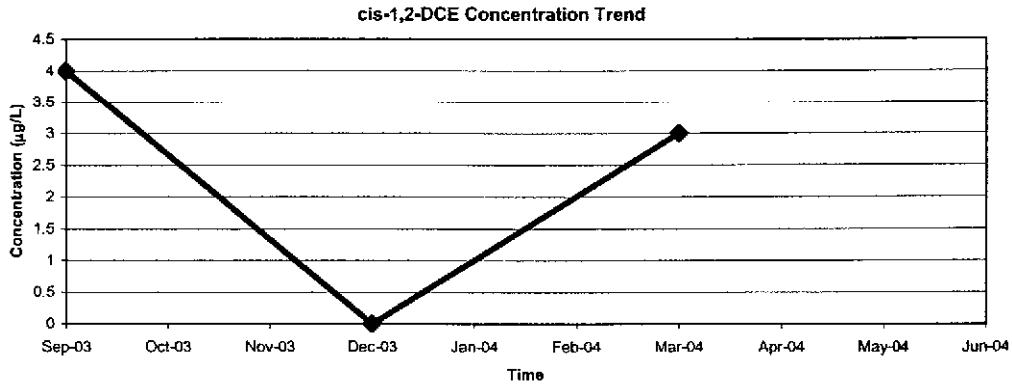
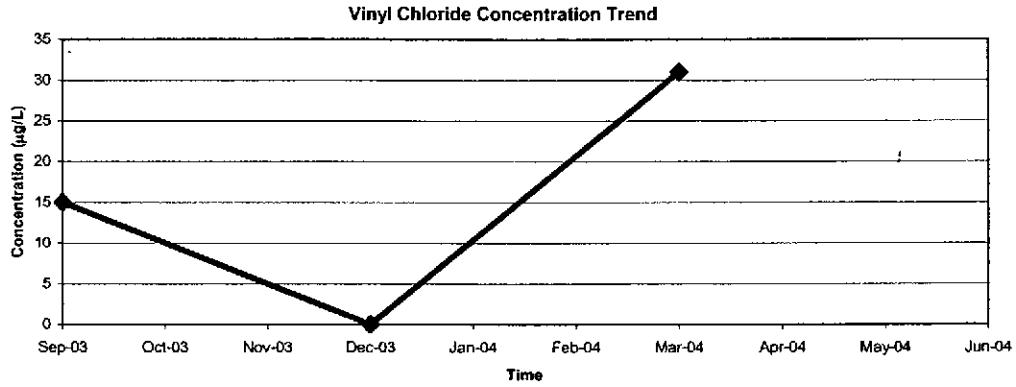
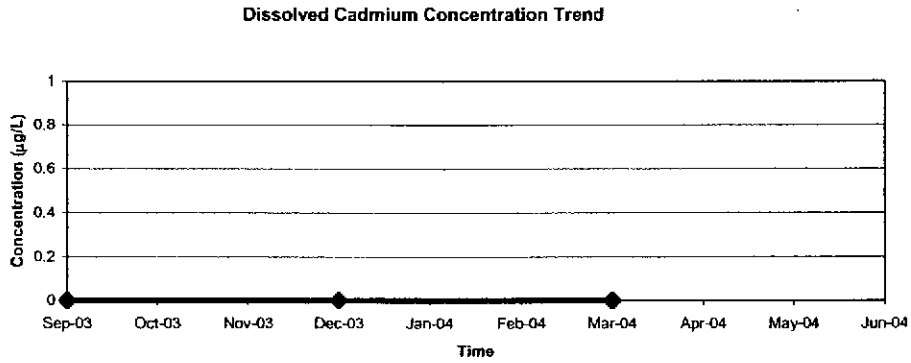
APPENDIX D
GRAPHS

Monitoring Well --- DMW-1S

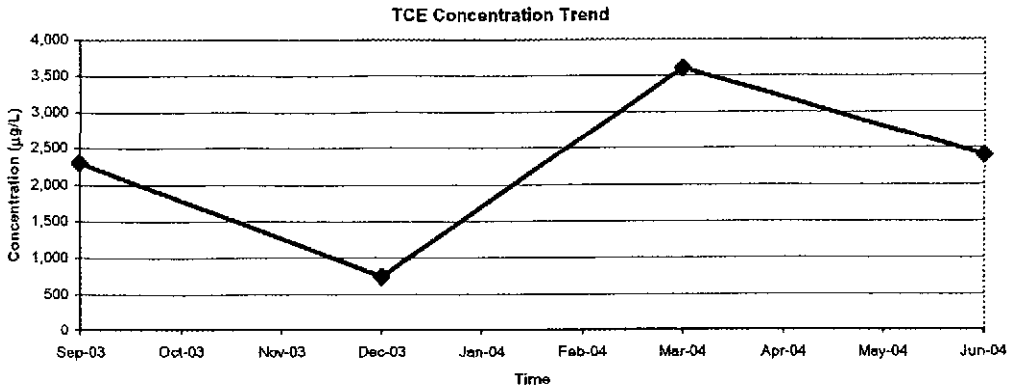


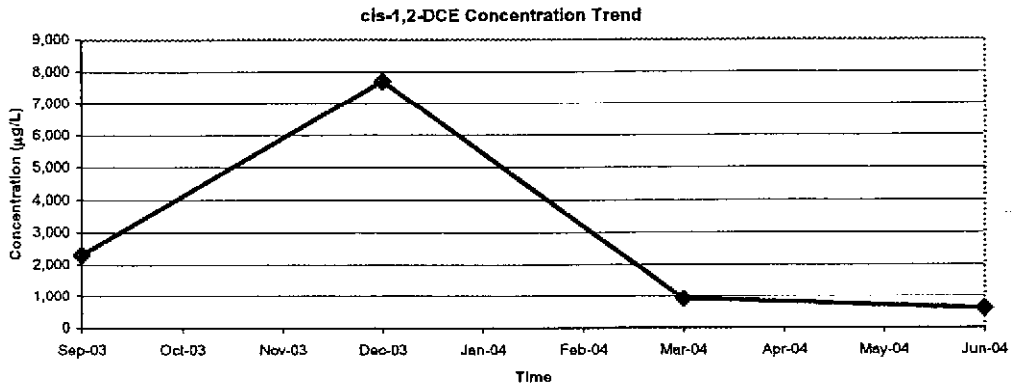


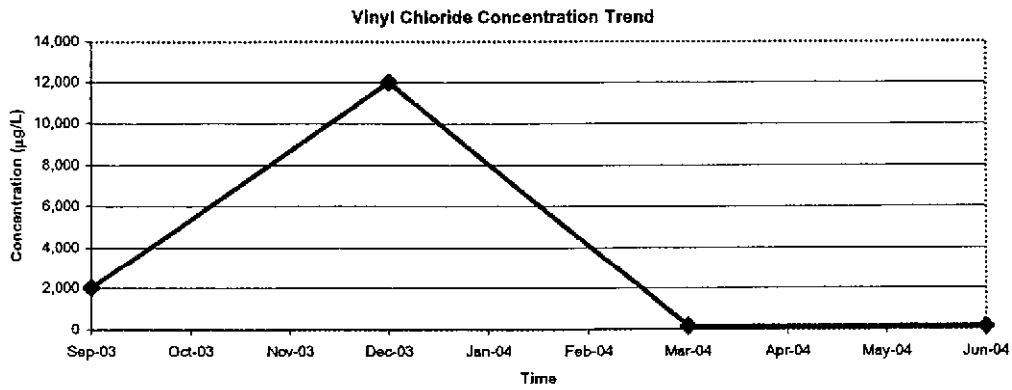


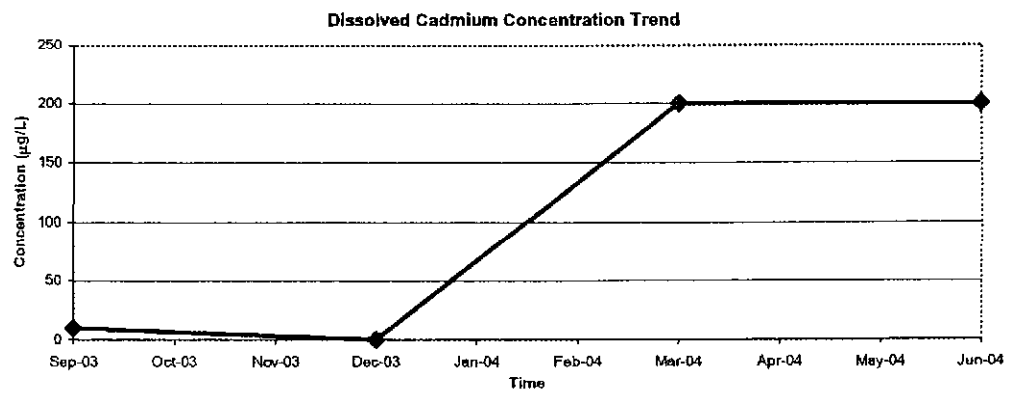


Monitoring Well --- DMW-2S

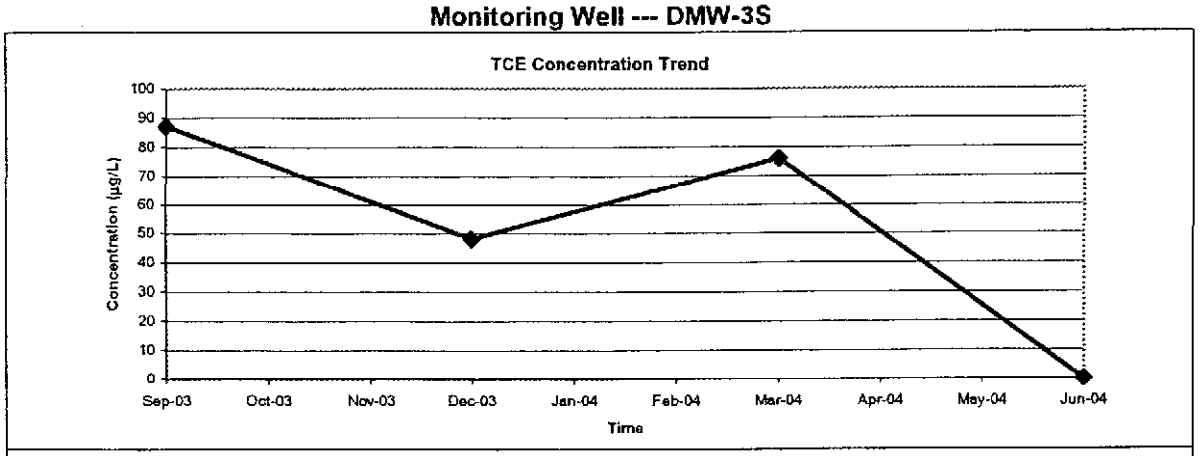


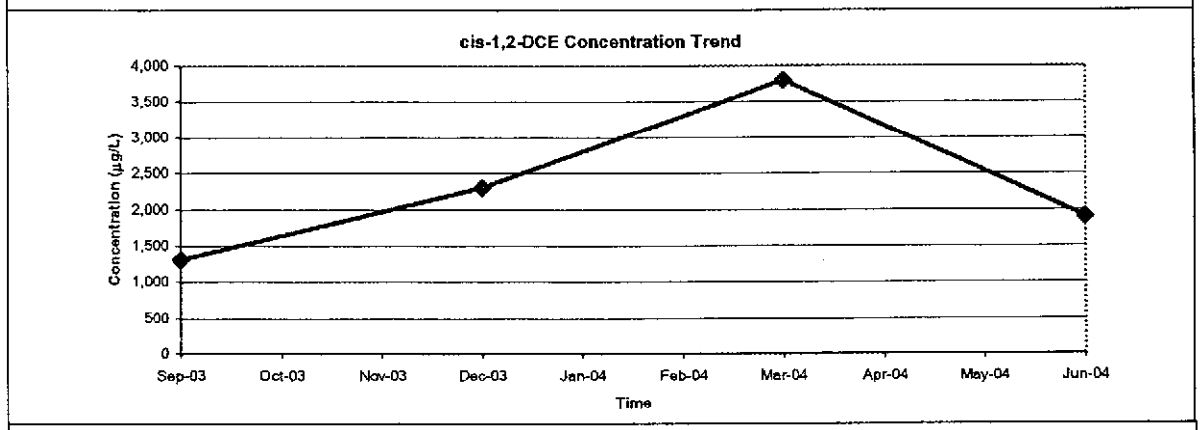


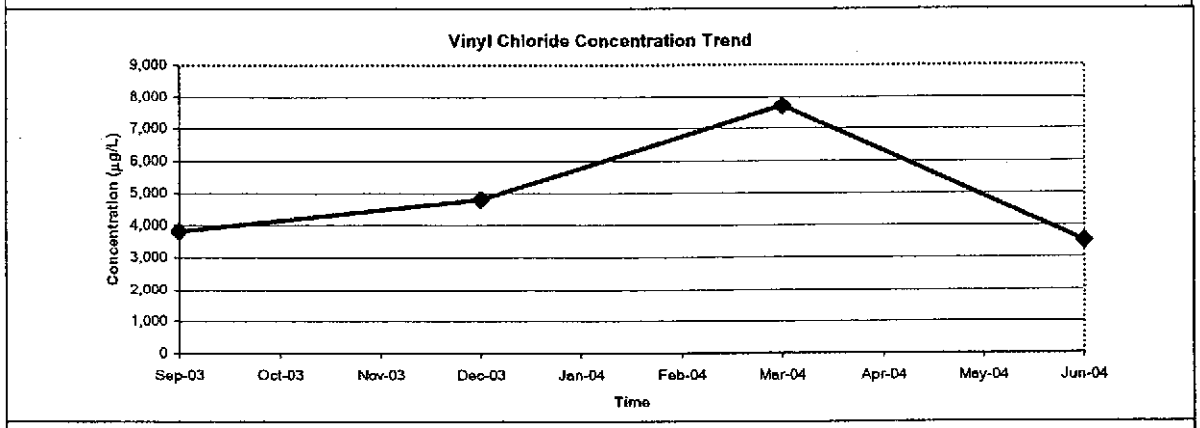


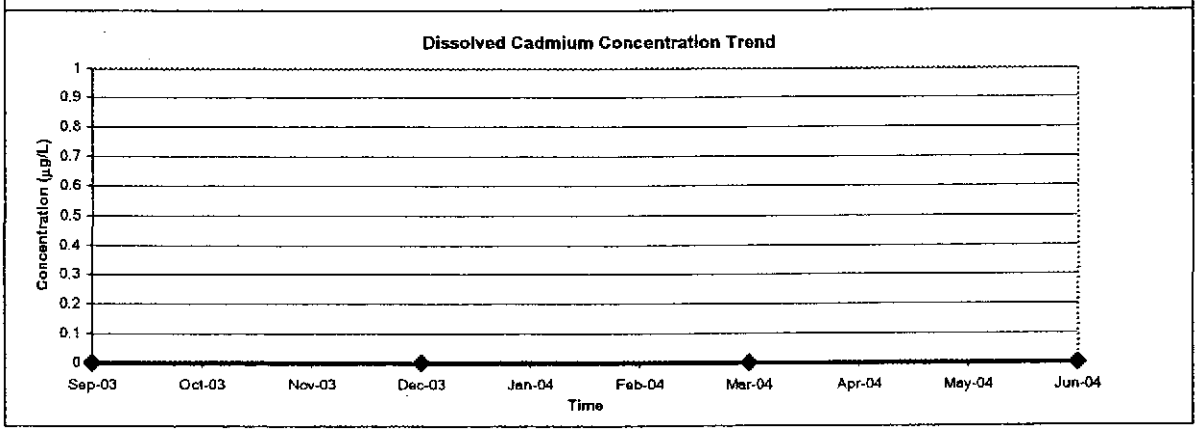


Monitoring Well --- DMW-3S

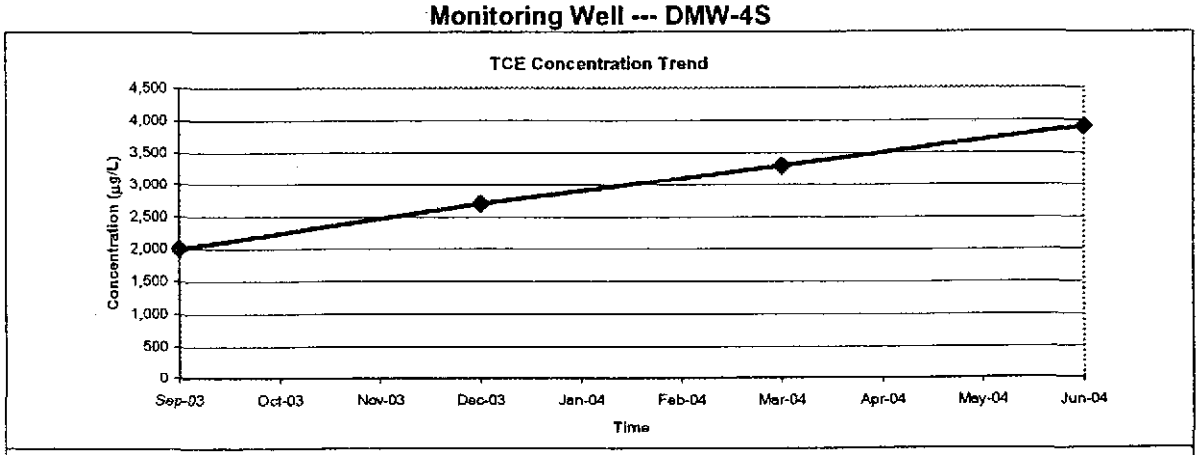


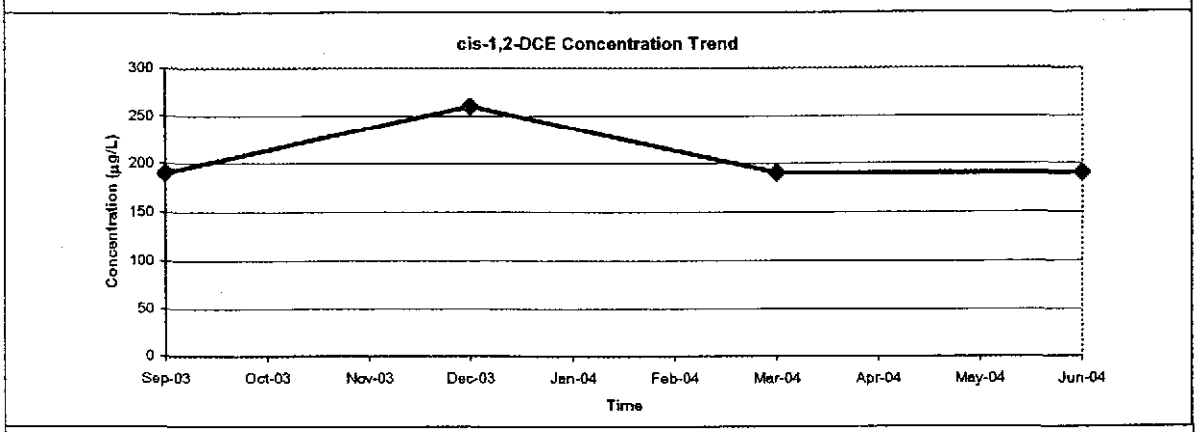


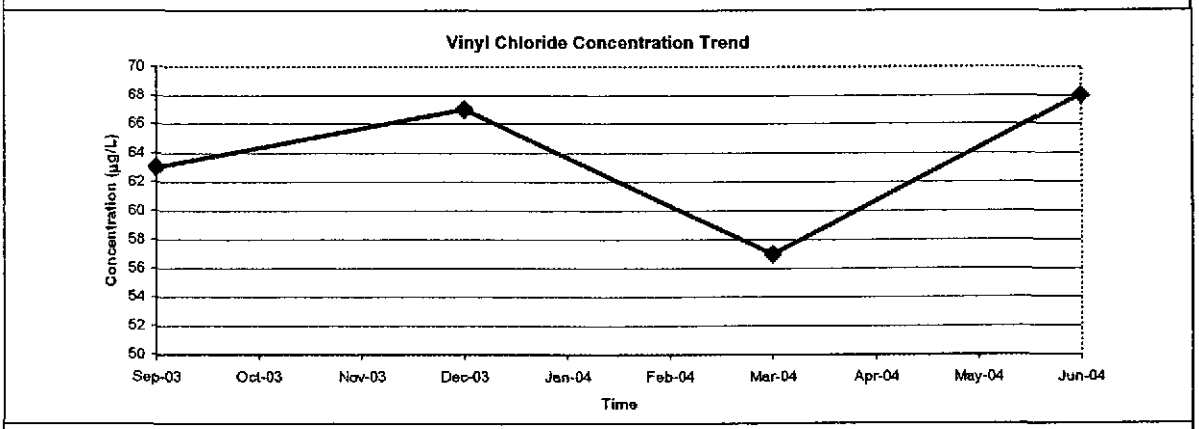


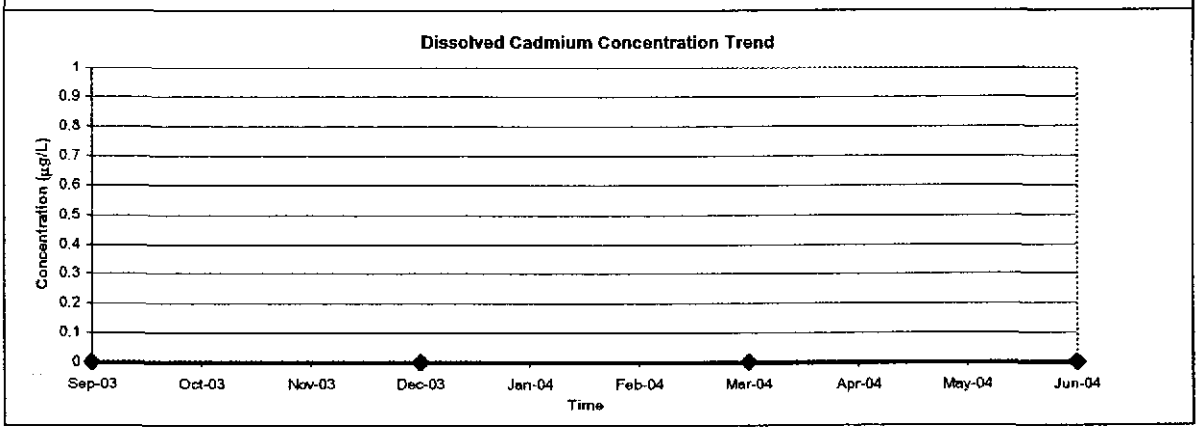


Monitoring Well --- DMW-4S

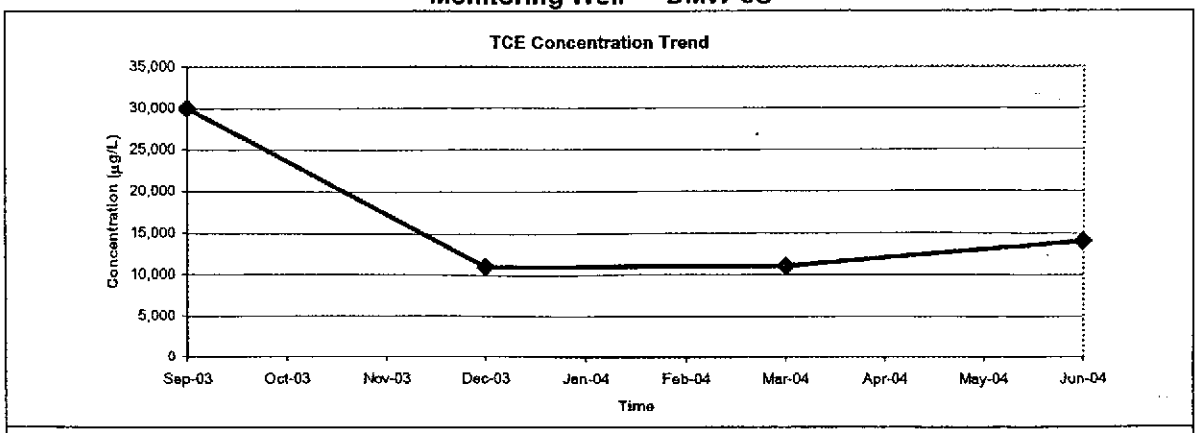


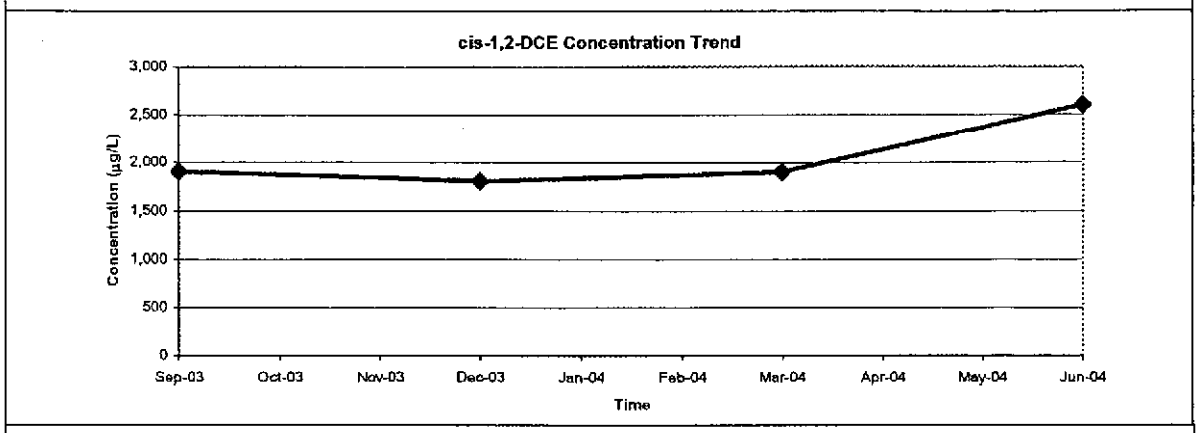


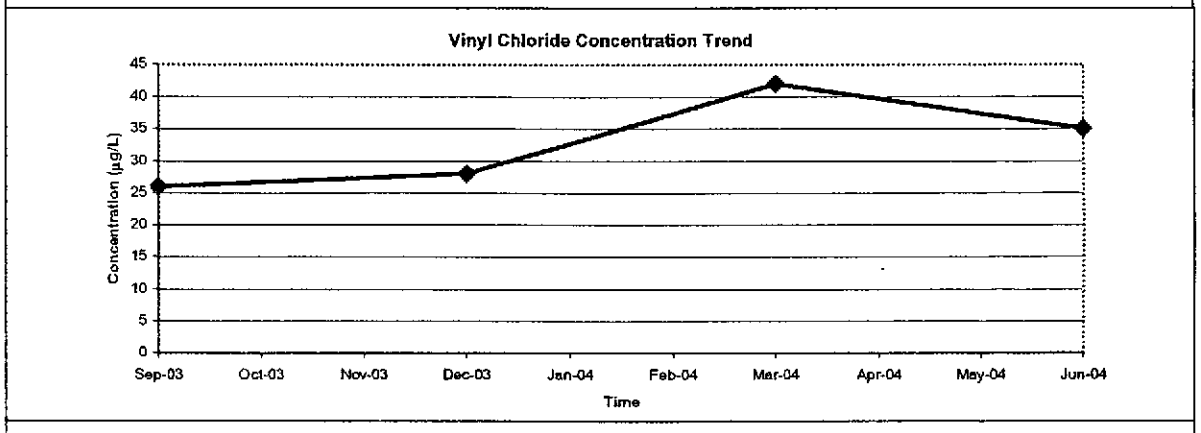


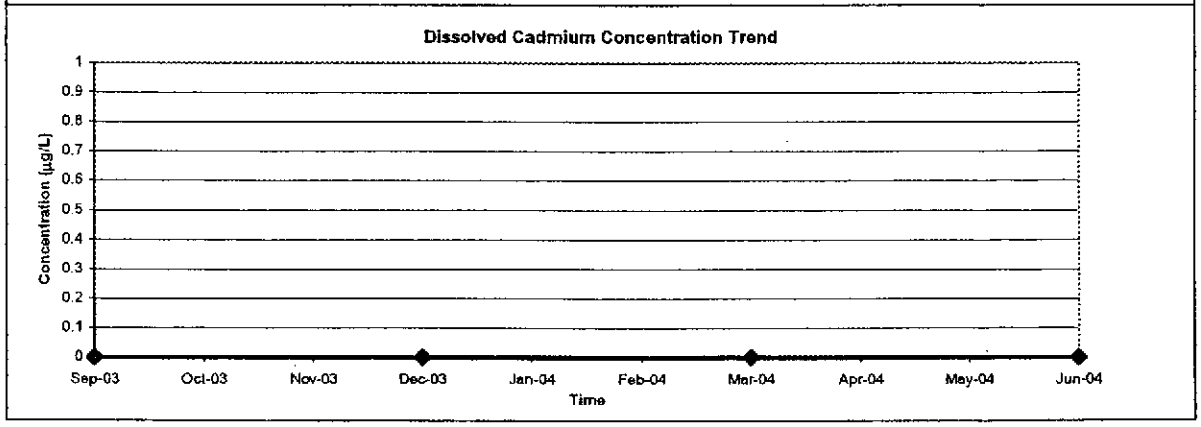


Monitoring Well --- DMW-5S

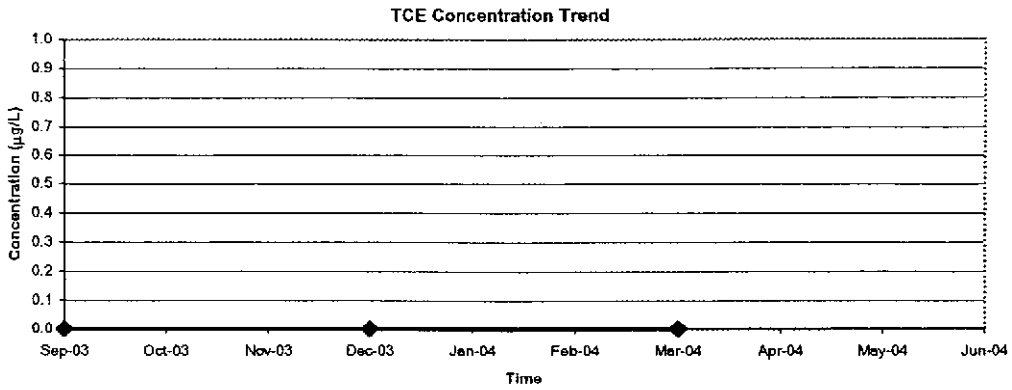


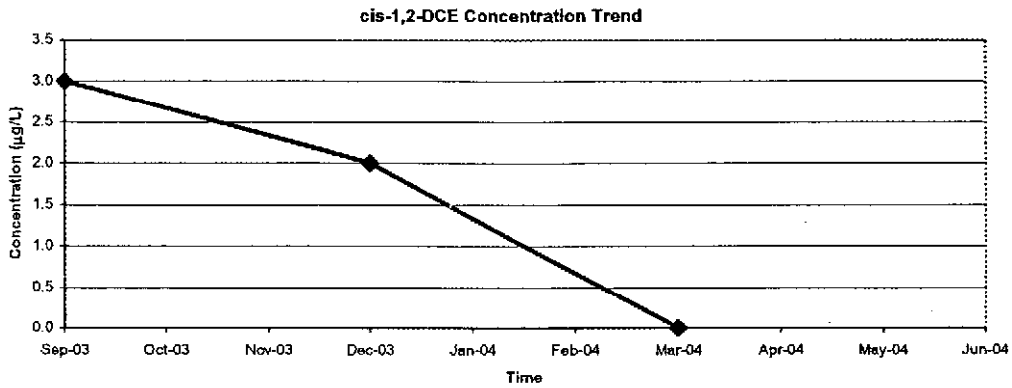


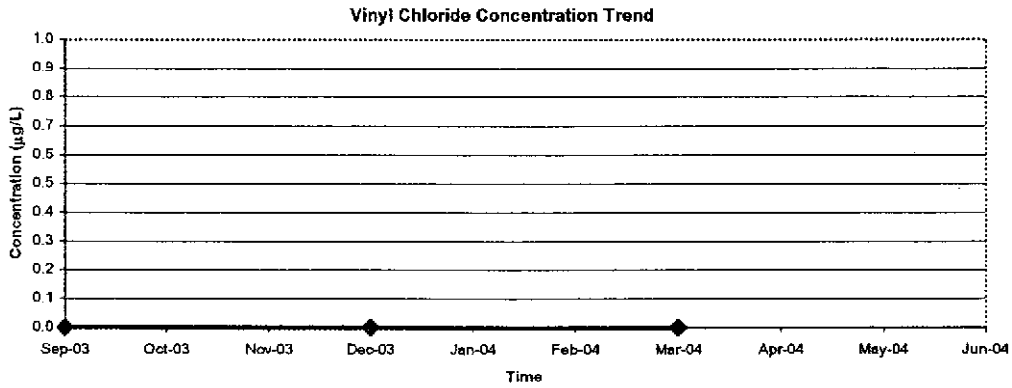


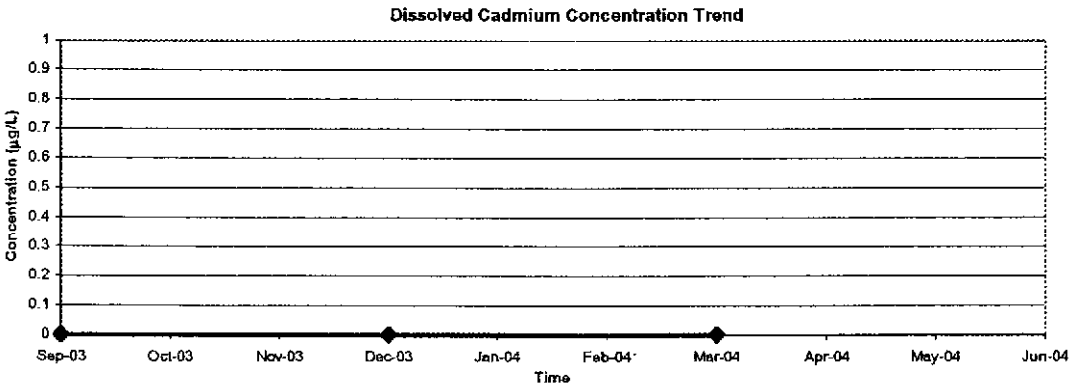


Monitoring Well --- DMW-6S

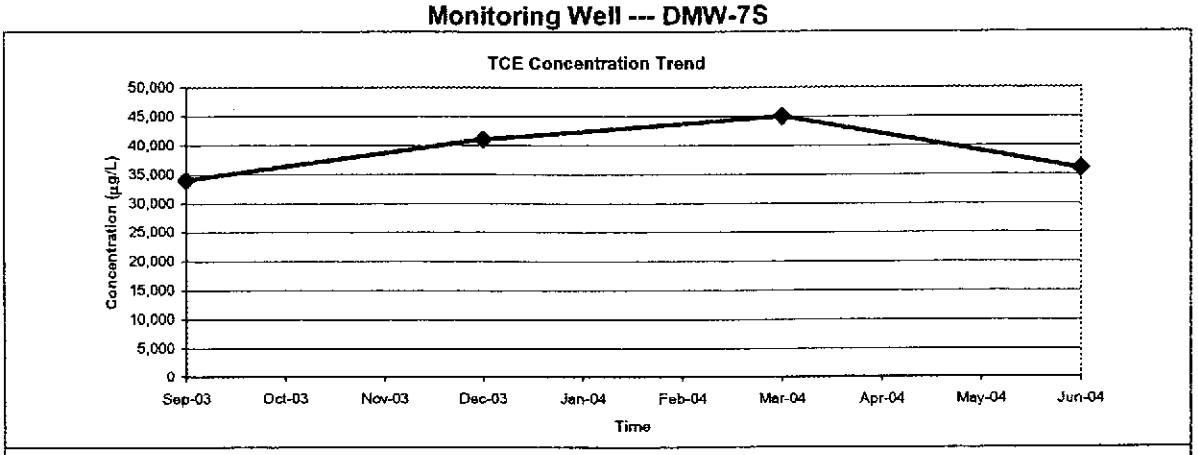


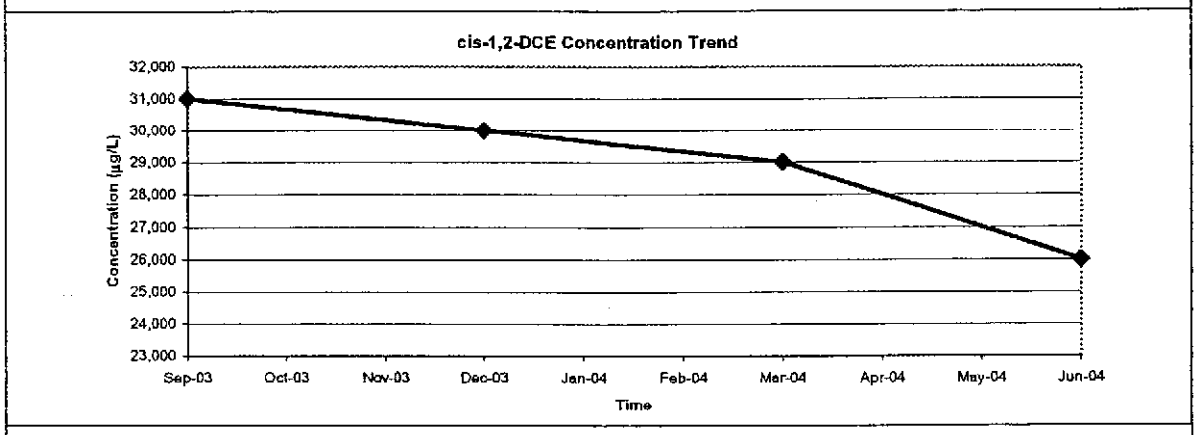


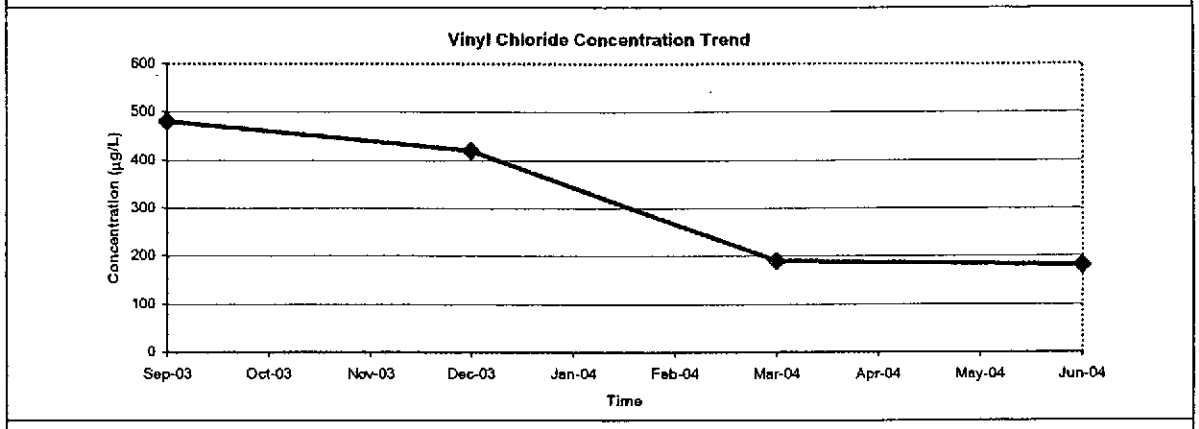


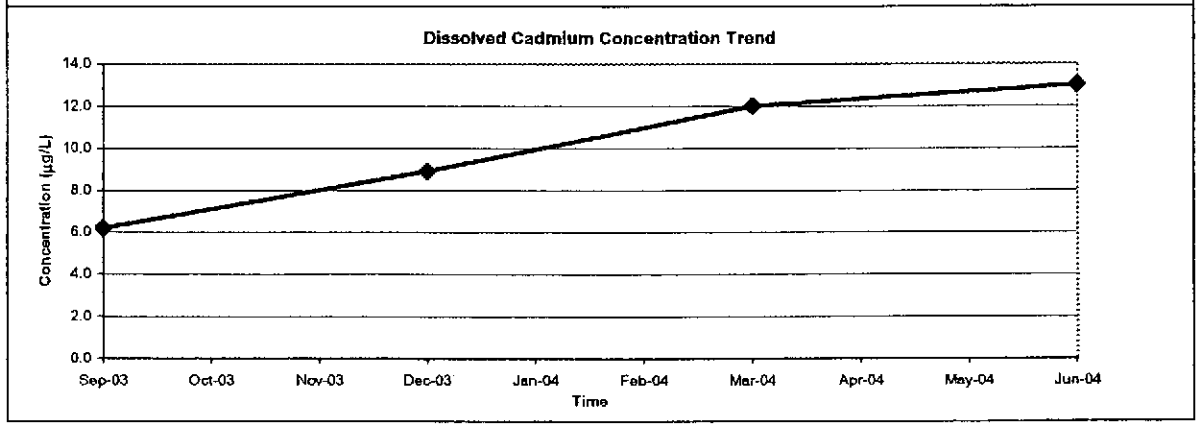


Monitoring Well --- DMW-7S

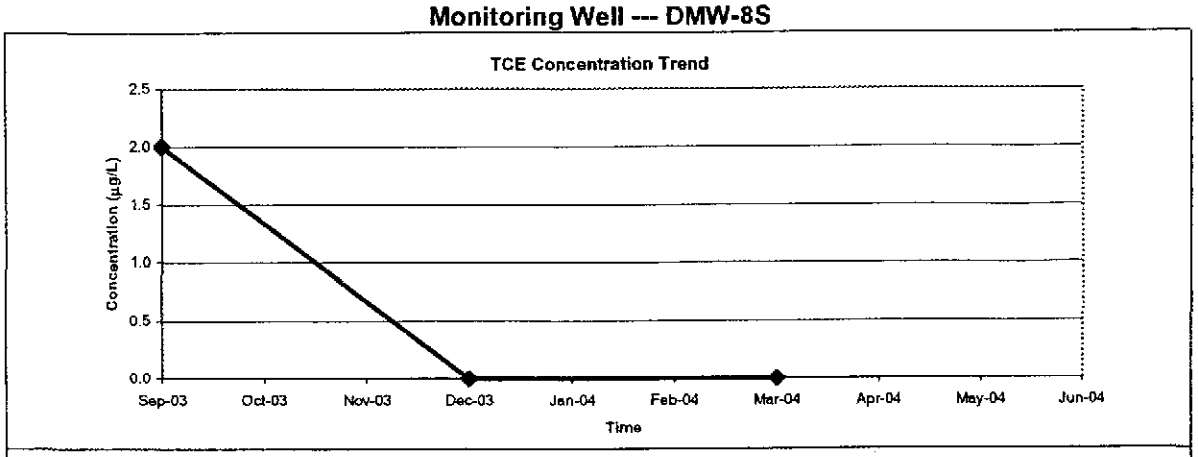


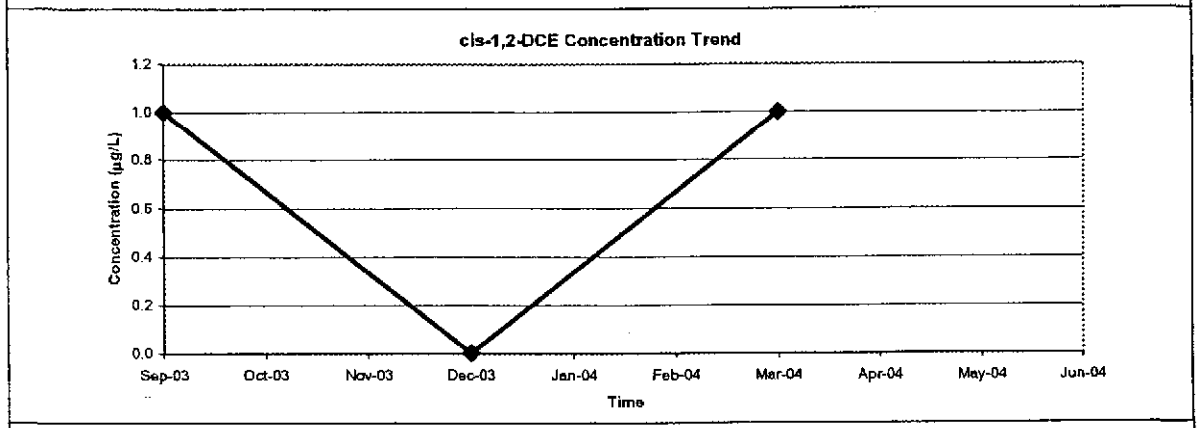


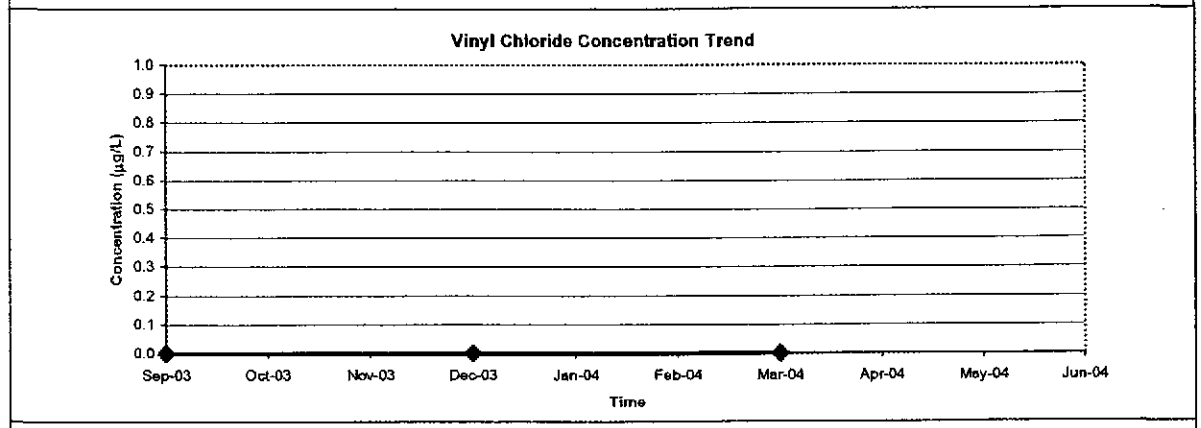


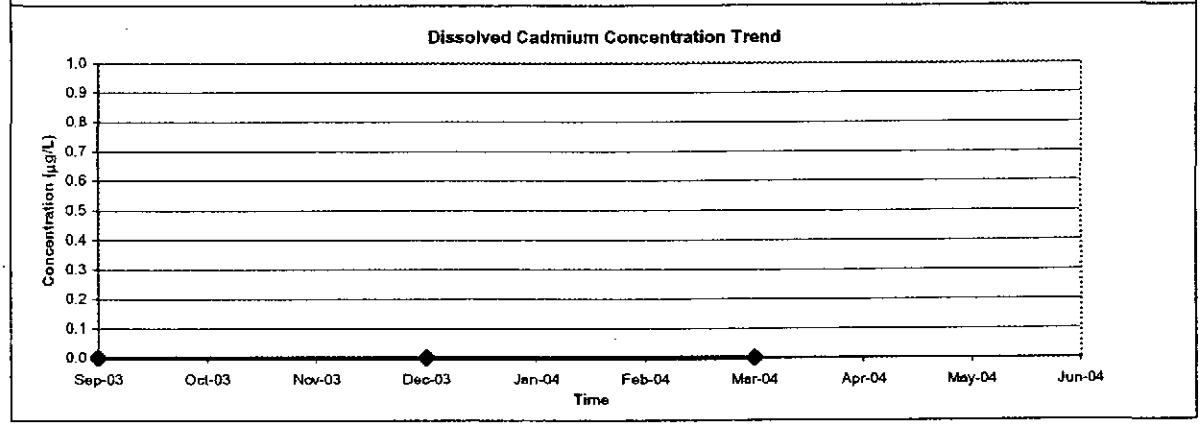


Monitoring Well --- DMW-8S

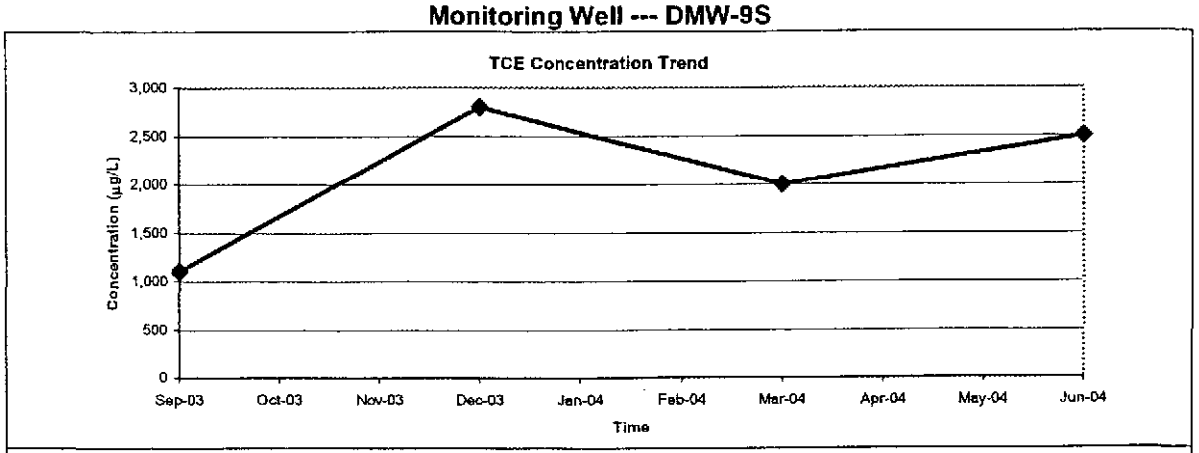


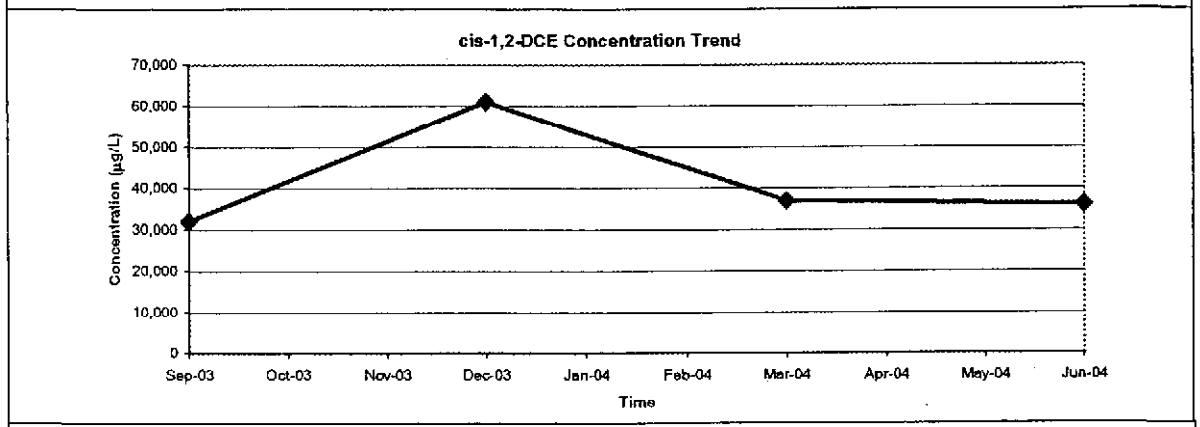


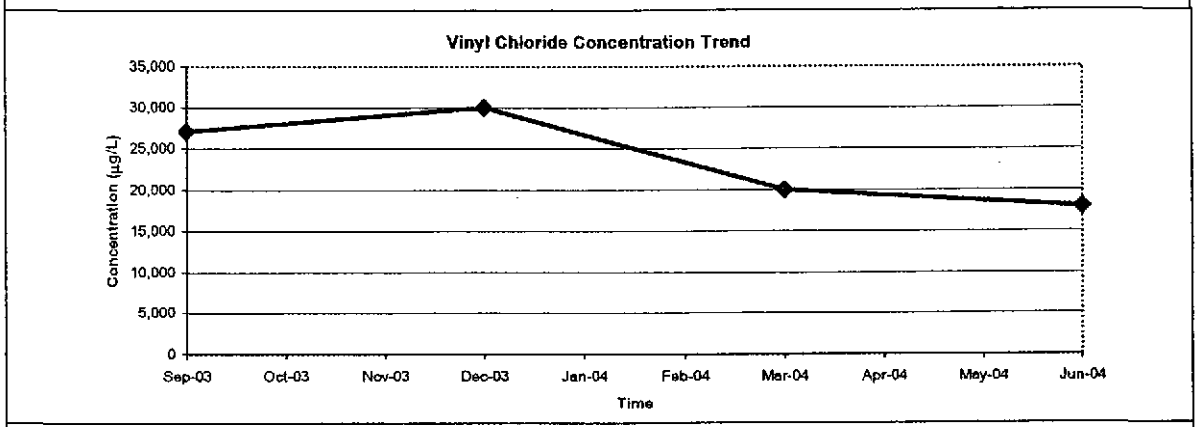


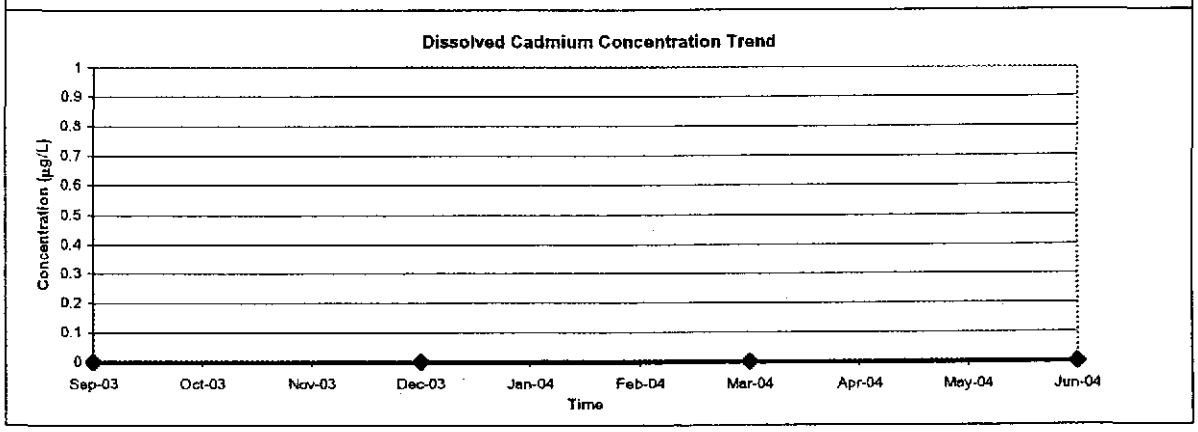


Monitoring Well --- DMW-9S

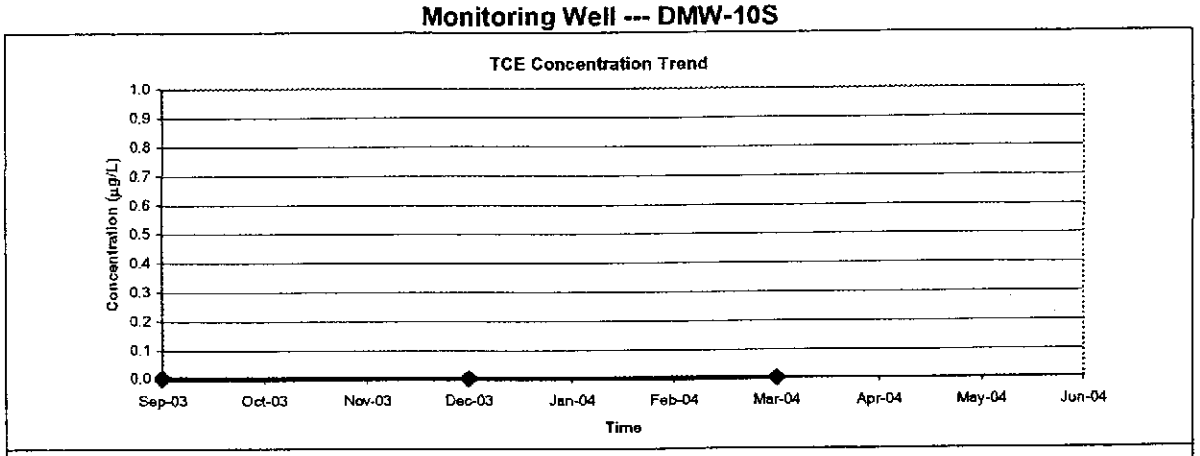


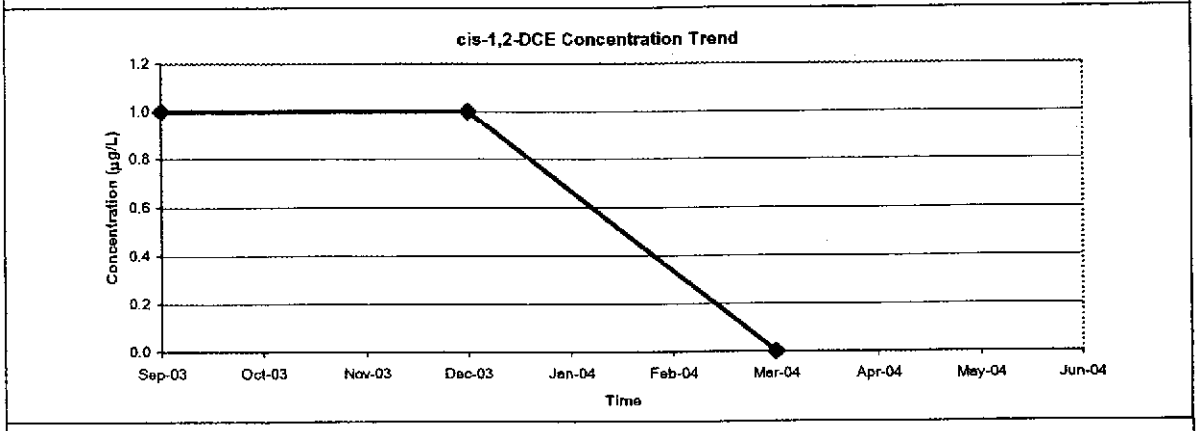


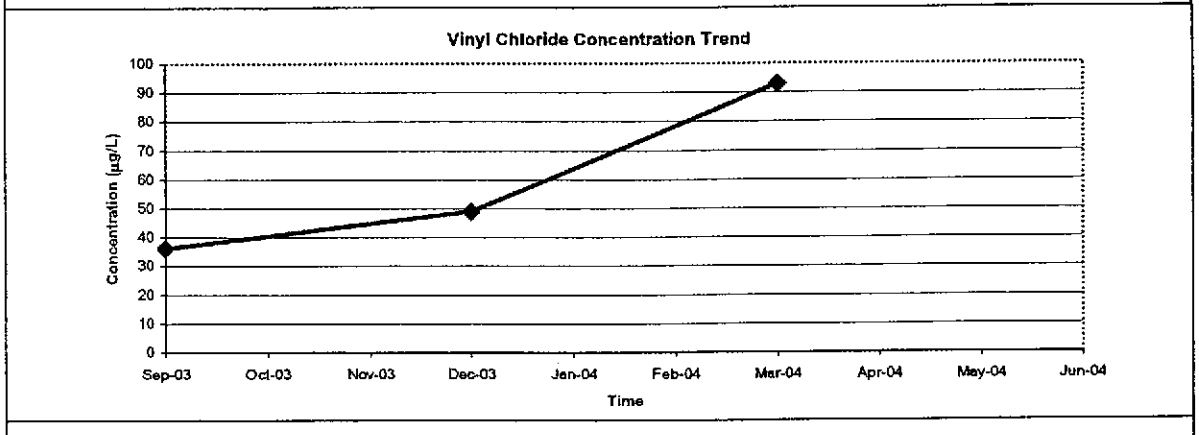


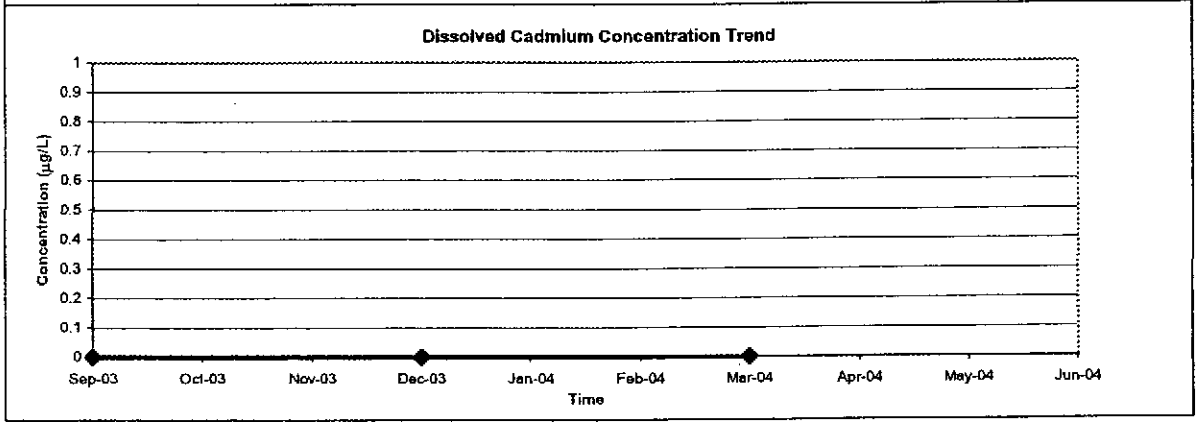


Monitoring Well --- DMW-10S

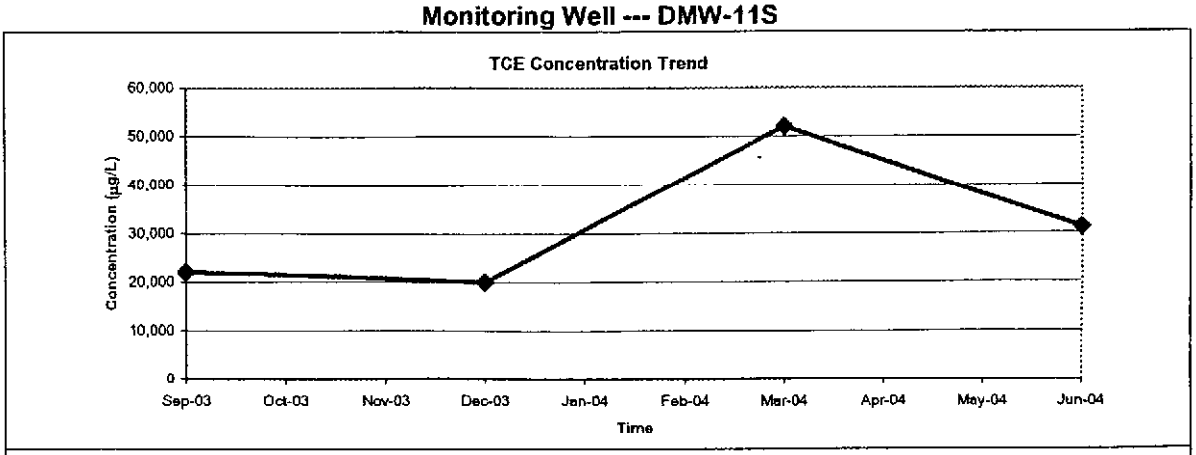


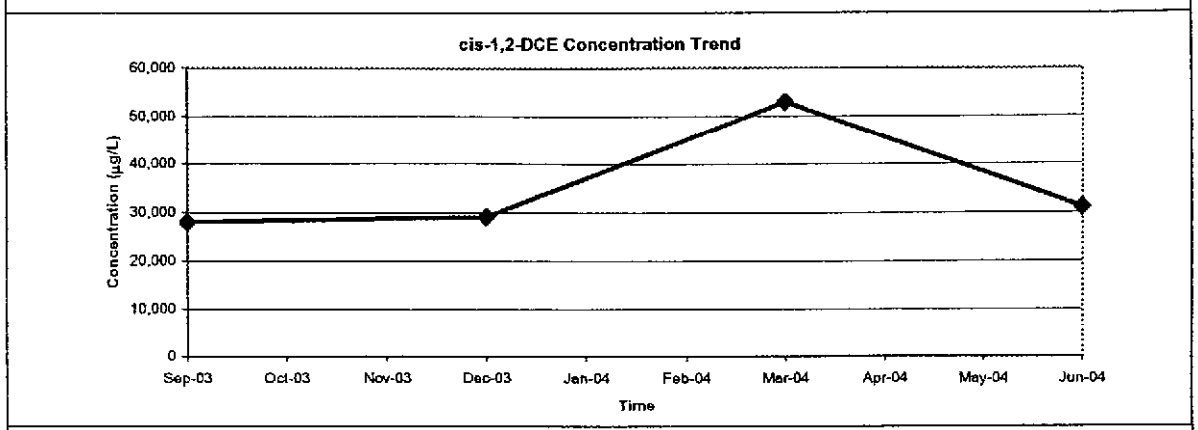


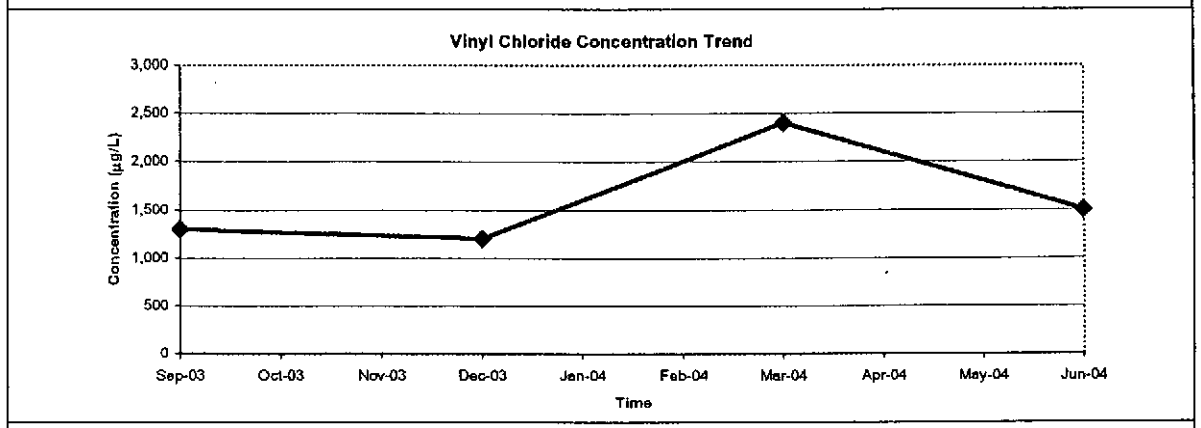


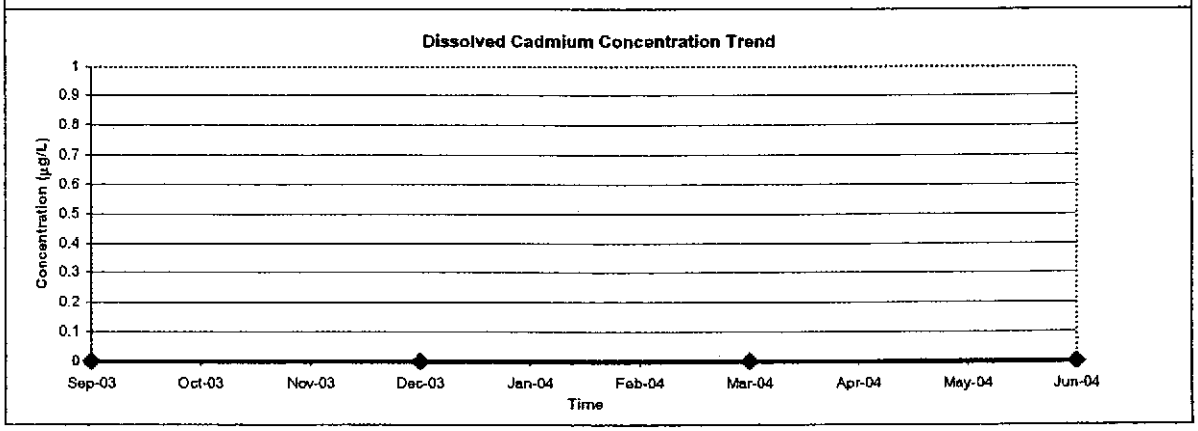


Monitoring Well --- DMW-11S

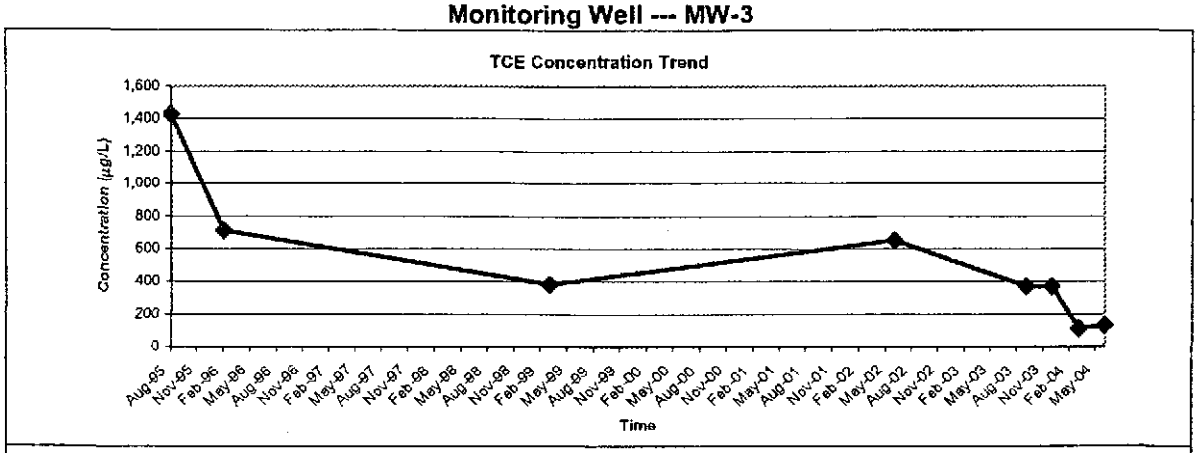


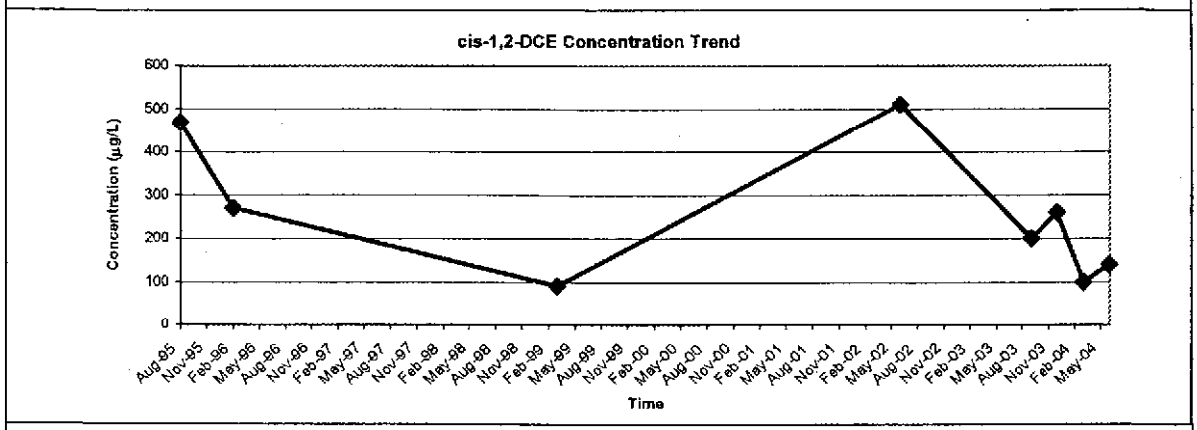


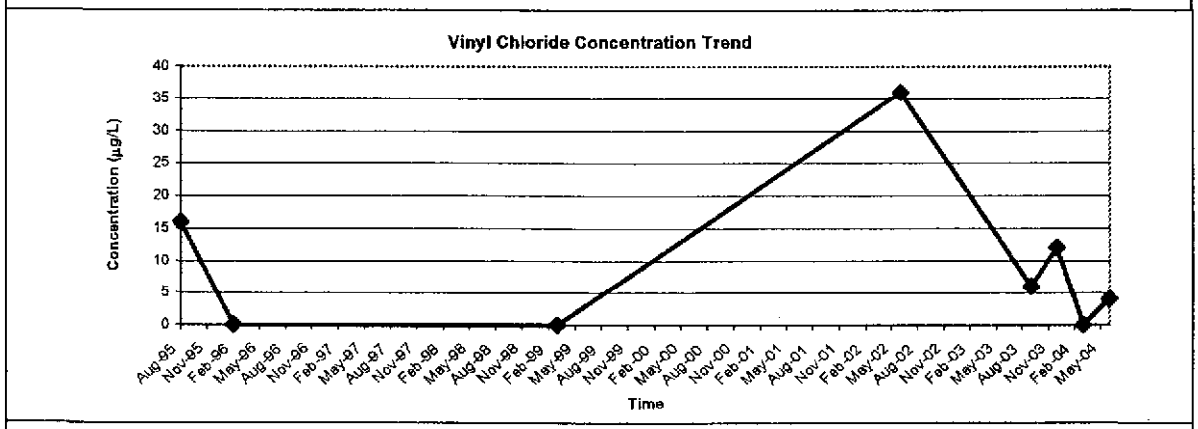


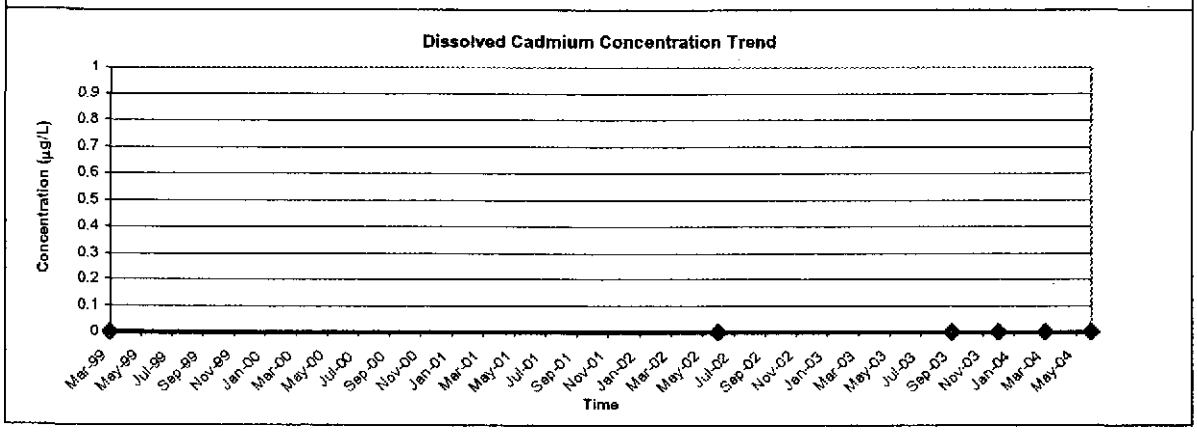


Monitoring Well --- MW-3

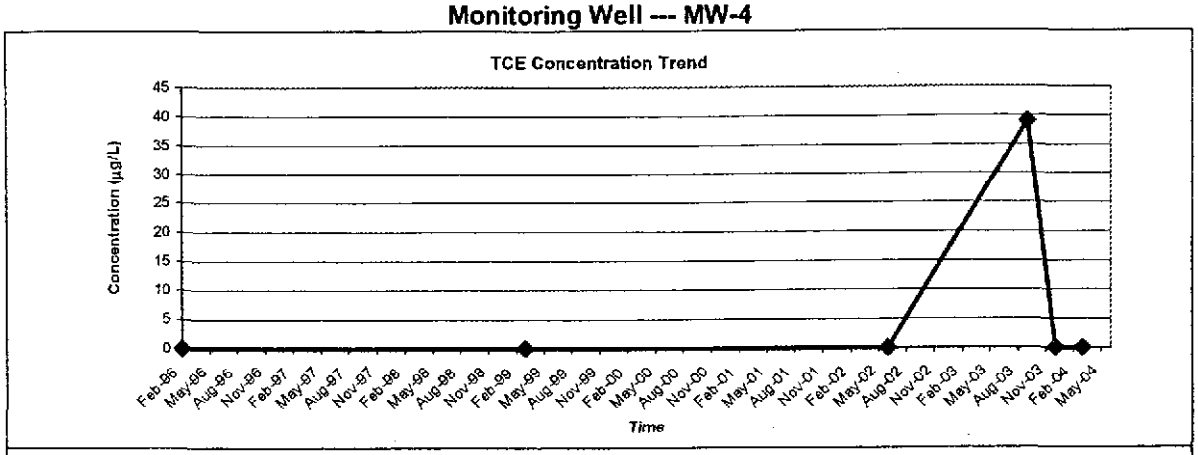


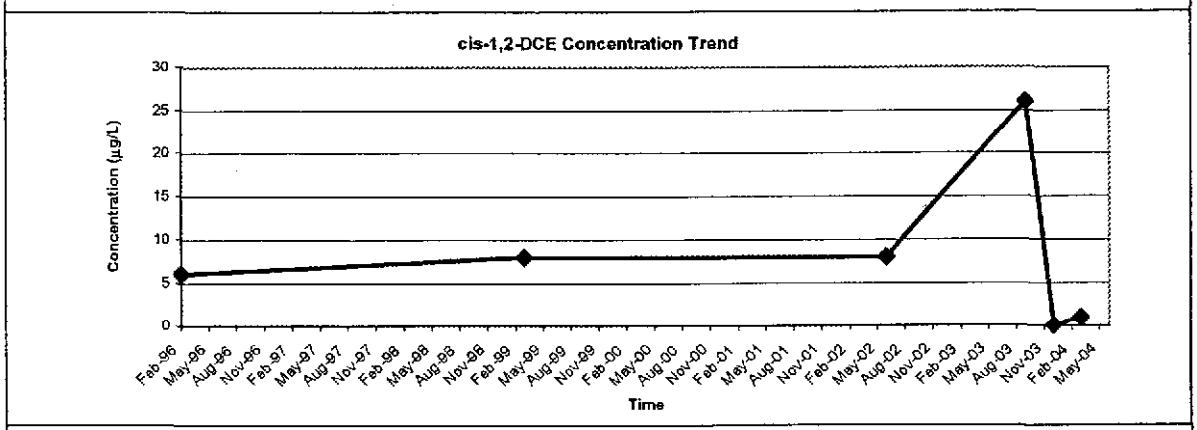


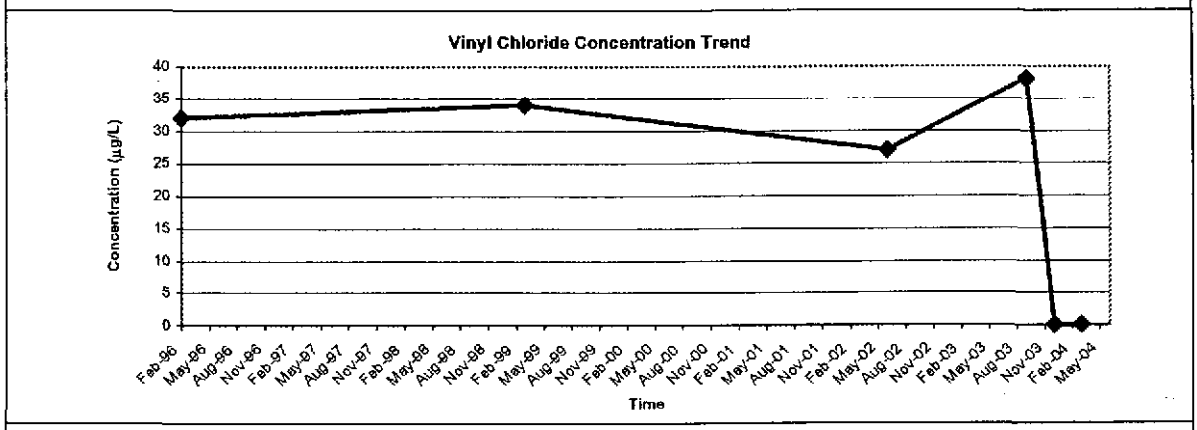


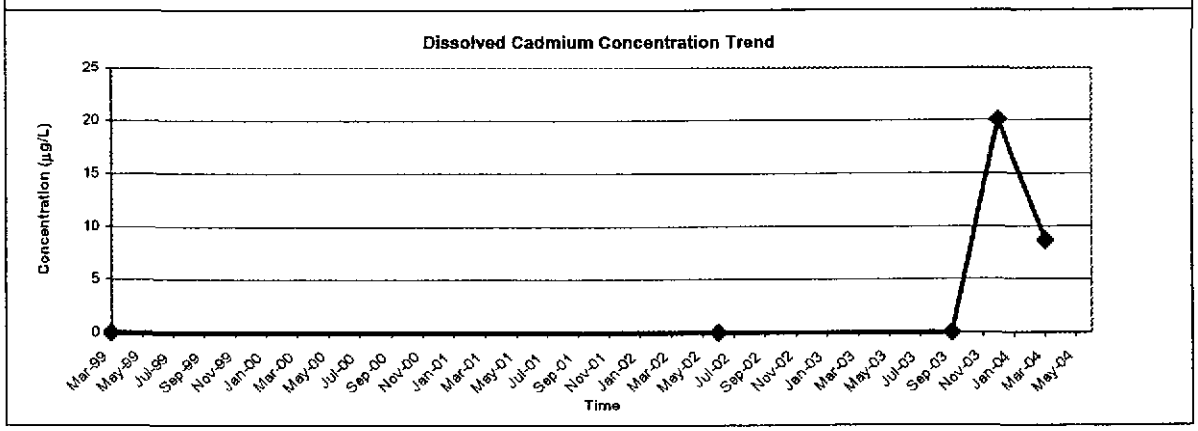


Monitoring Well --- MW-4

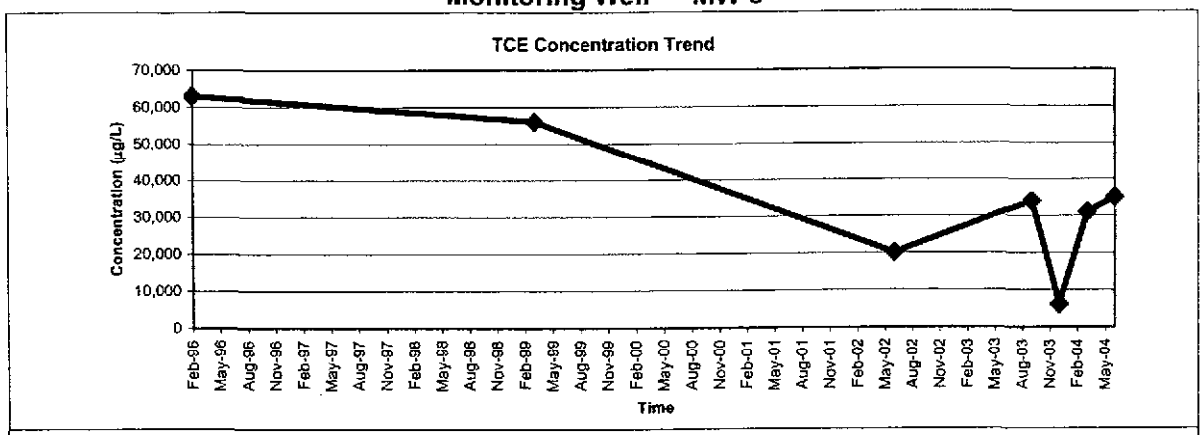


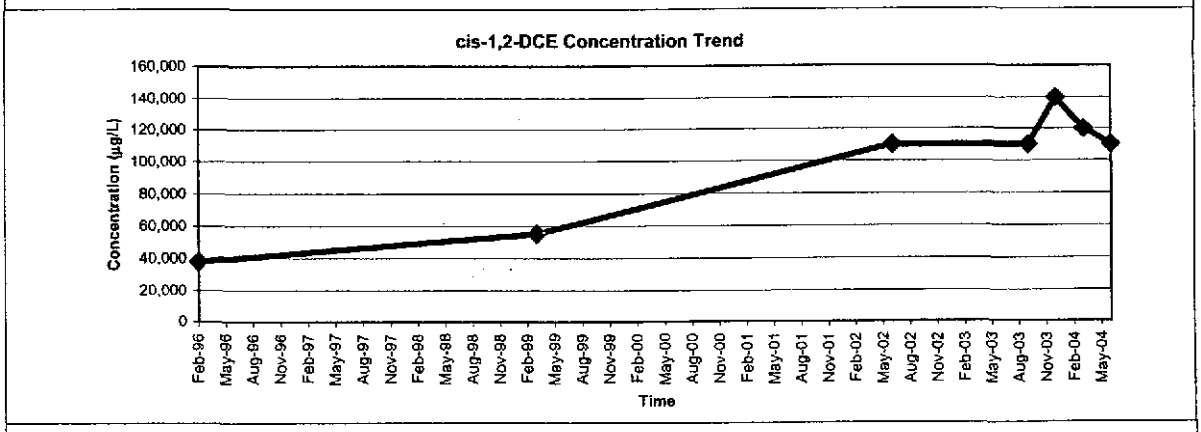


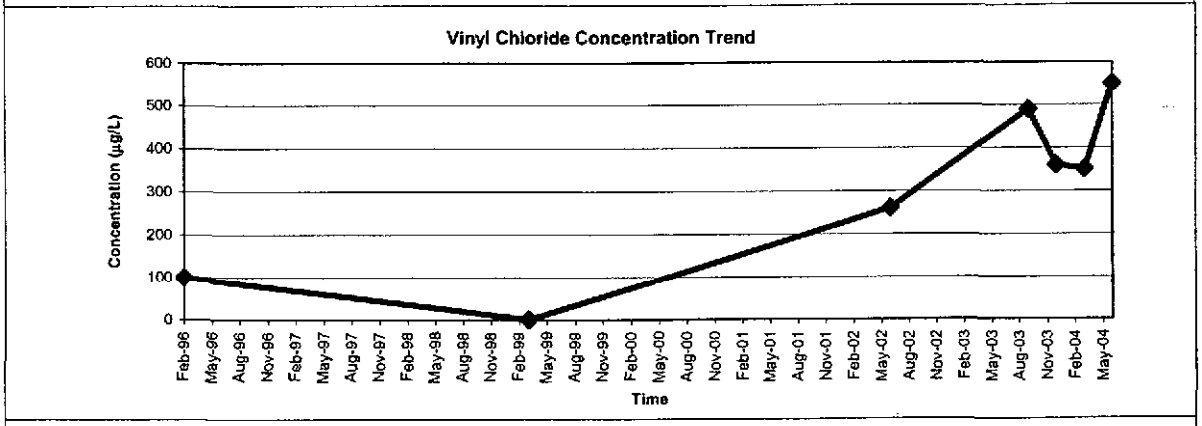


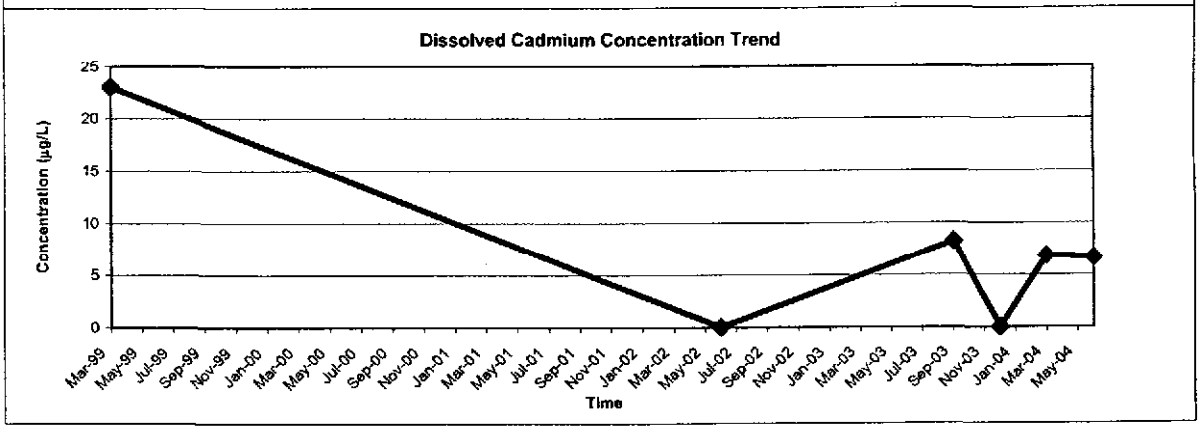


Monitoring Well --- MW-5

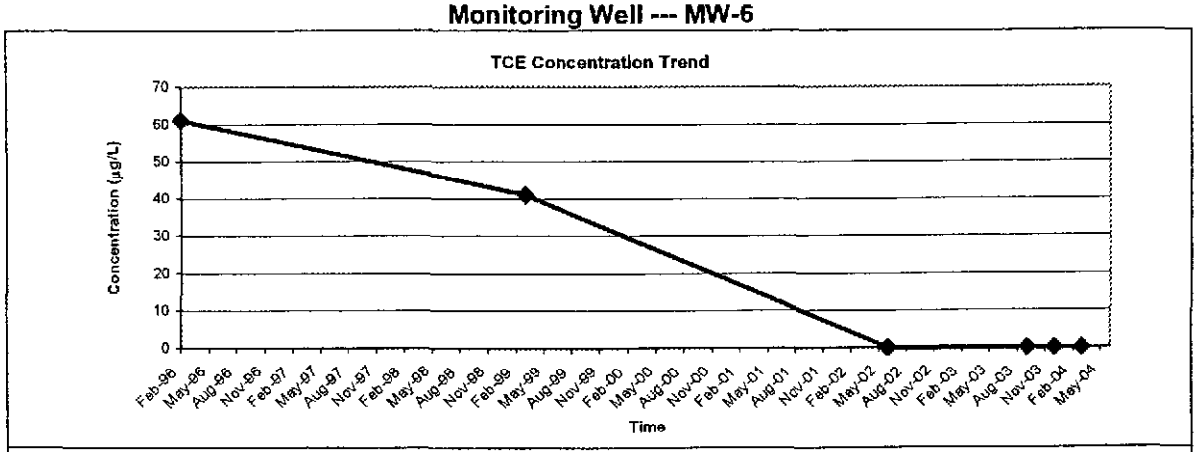


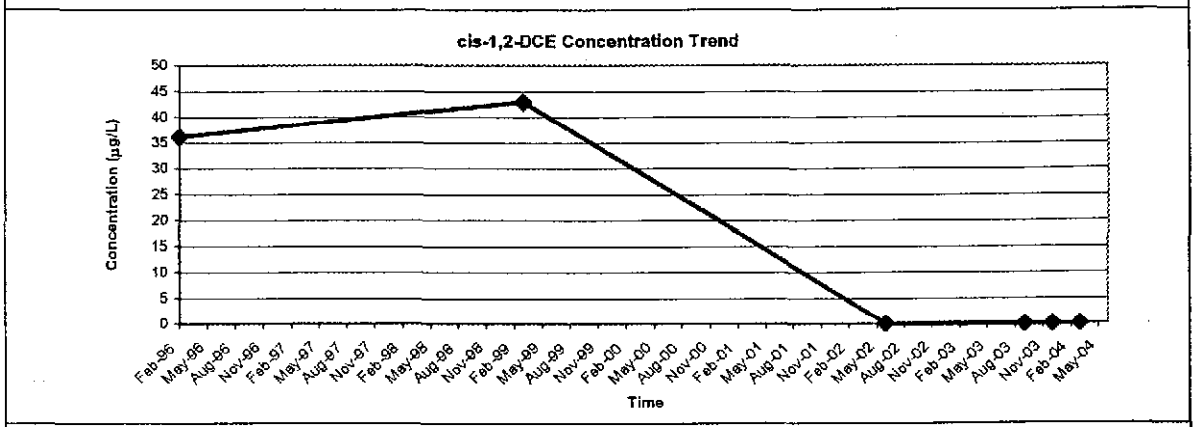


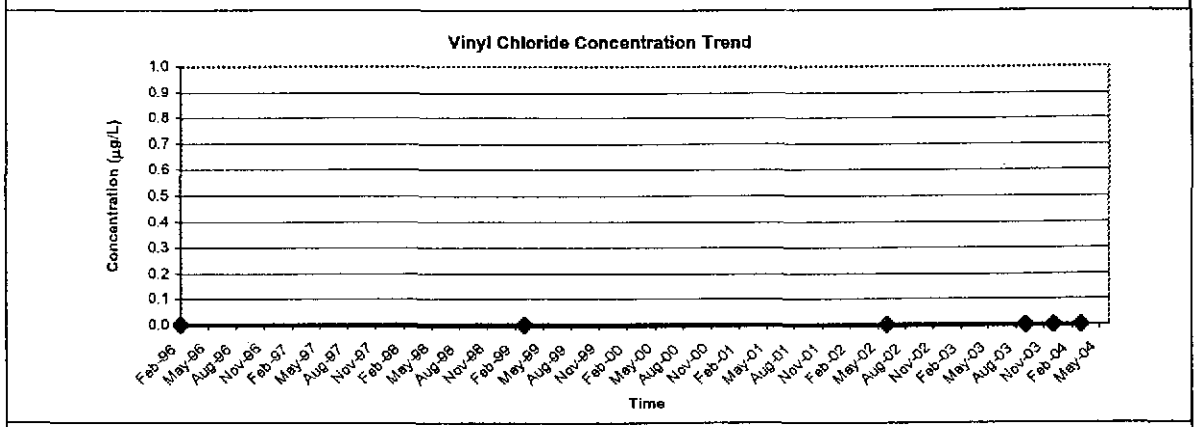


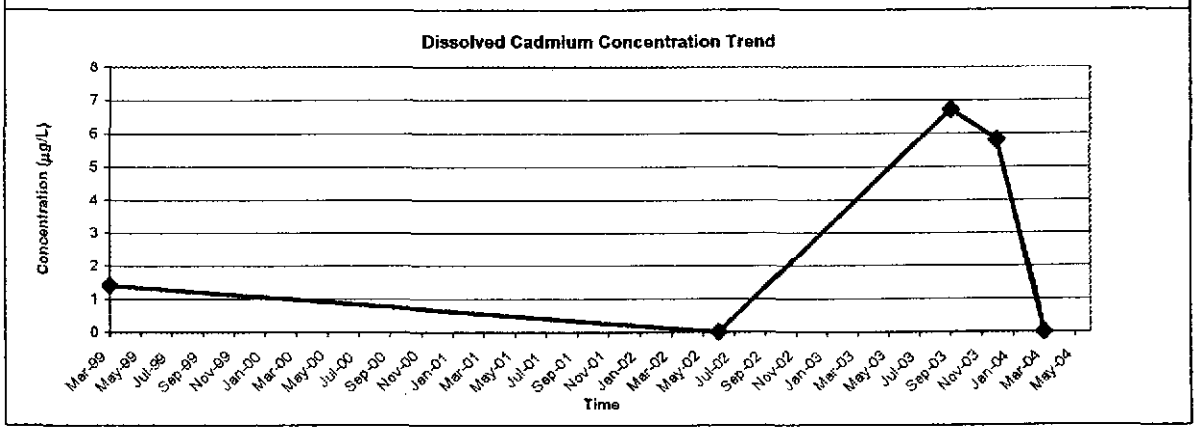


Monitoring Well --- MW-6

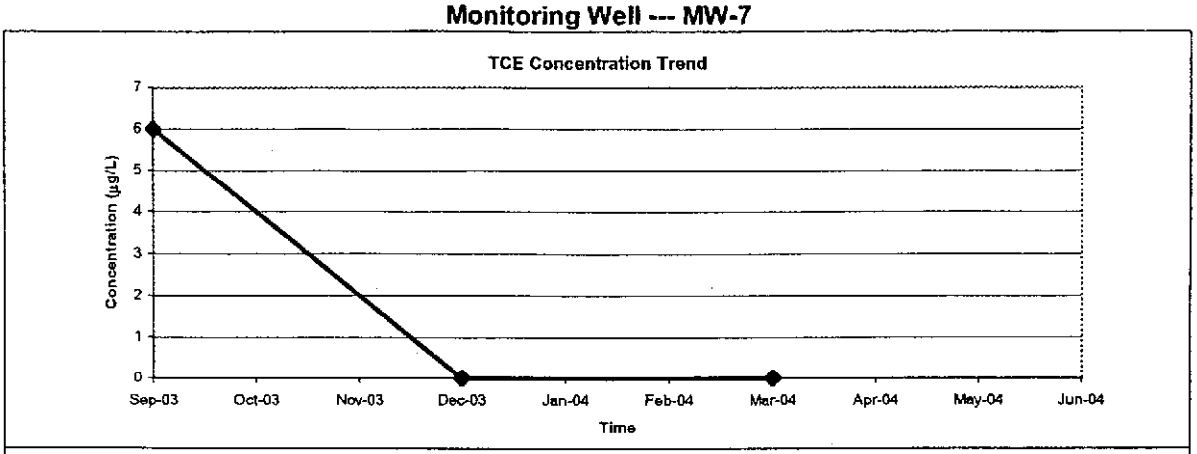


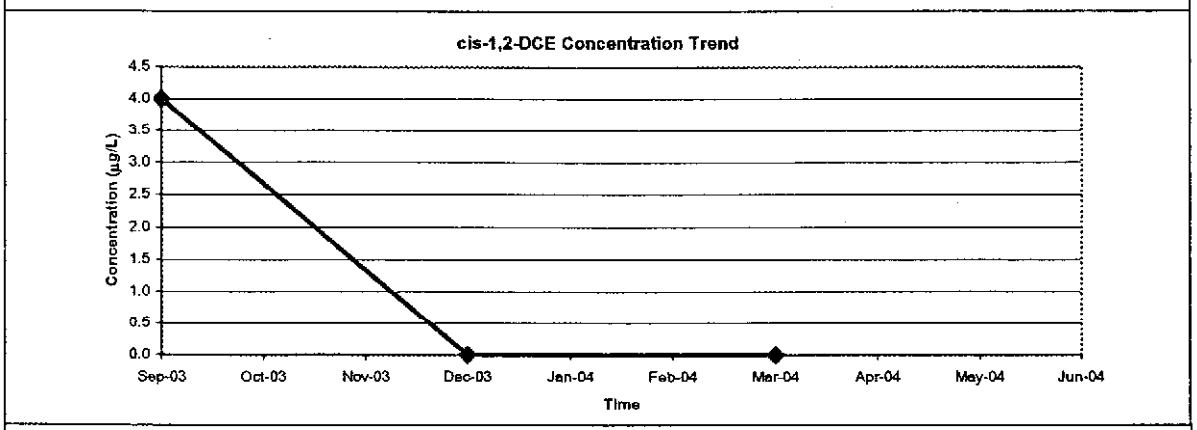


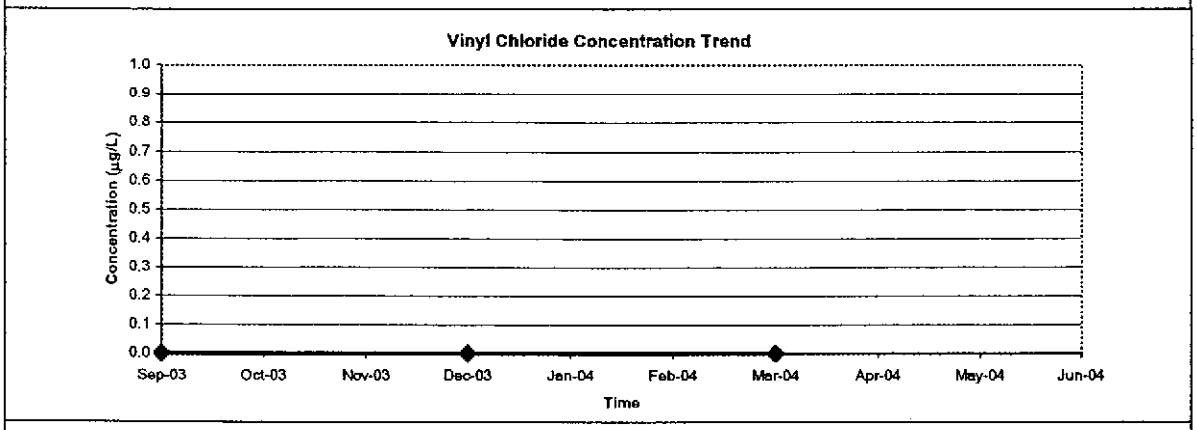


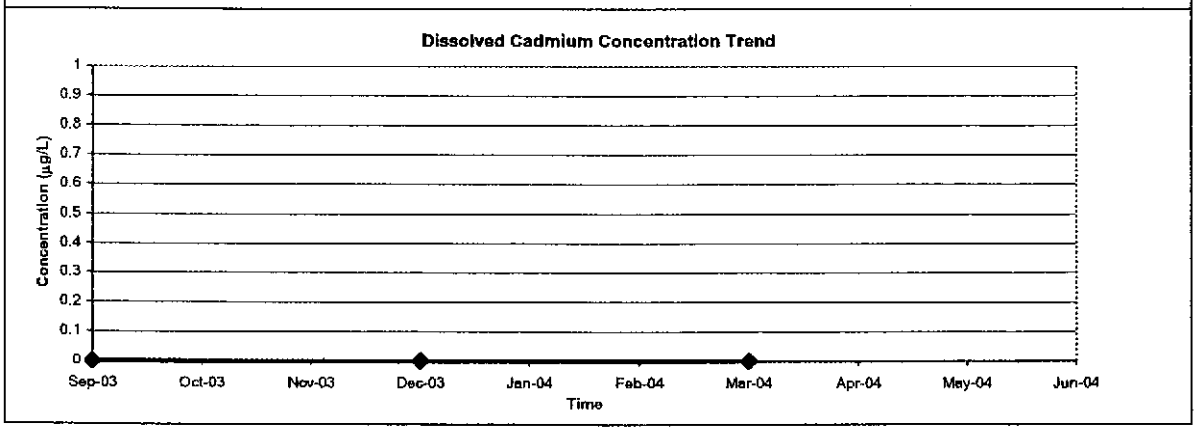


Monitoring Well --- MW-7

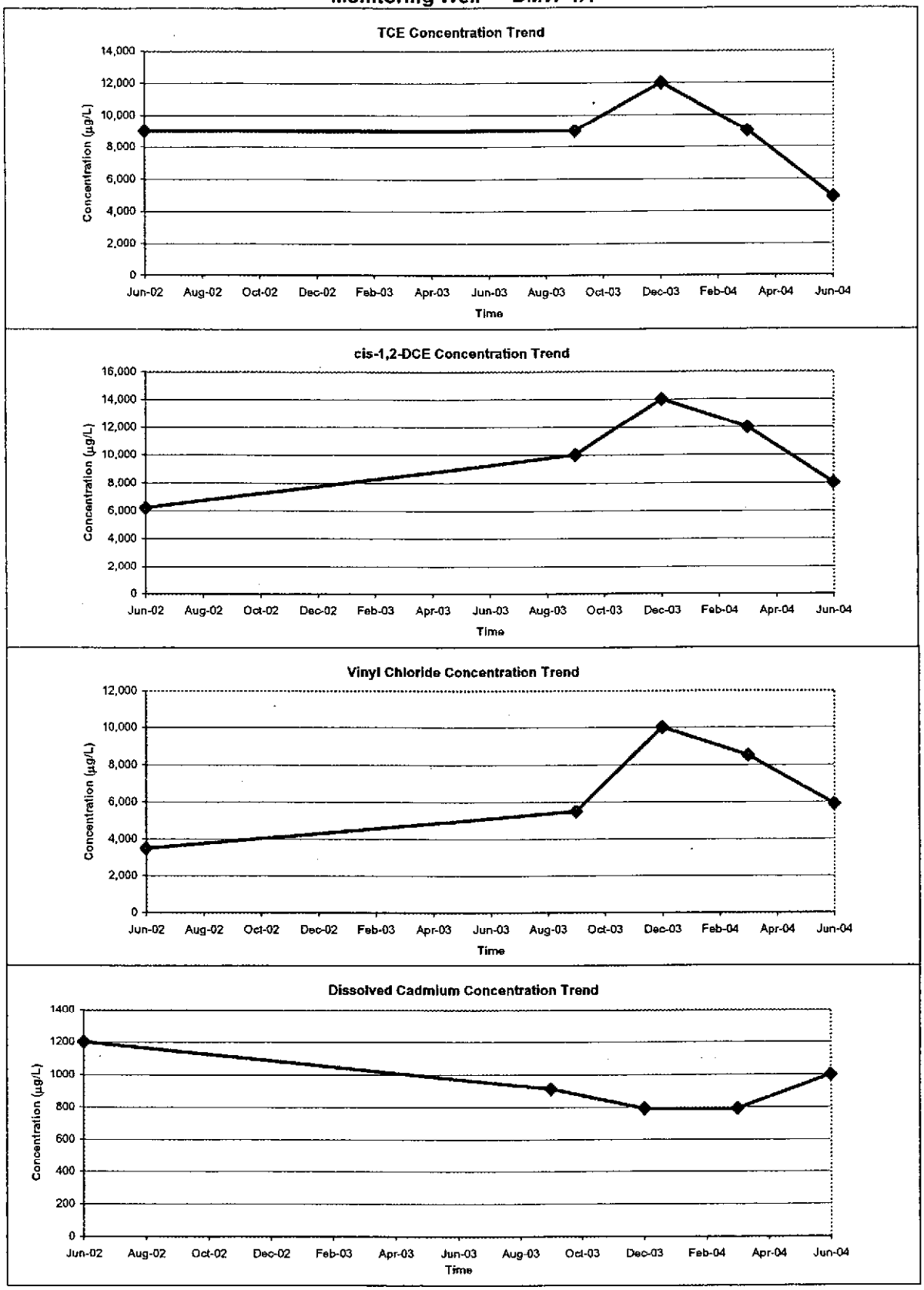




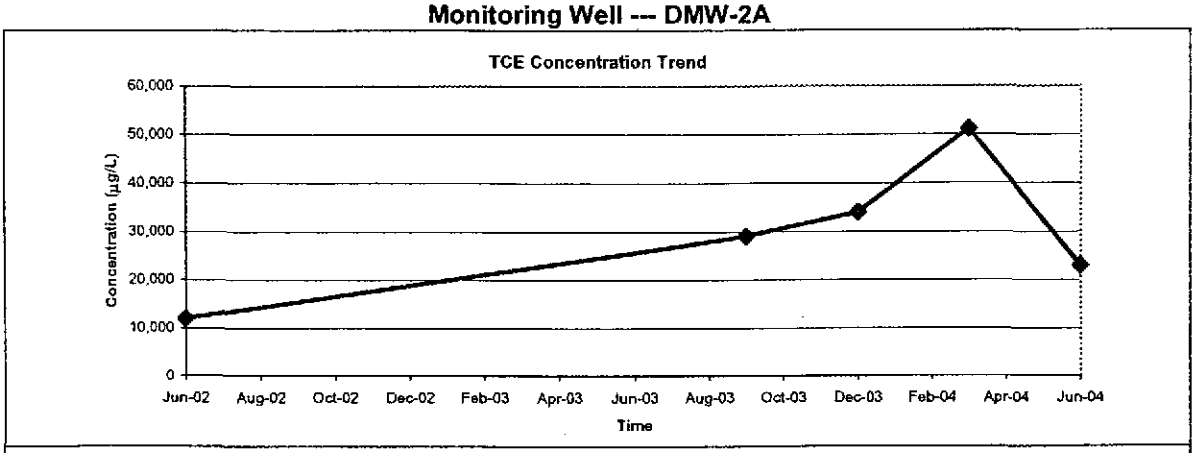


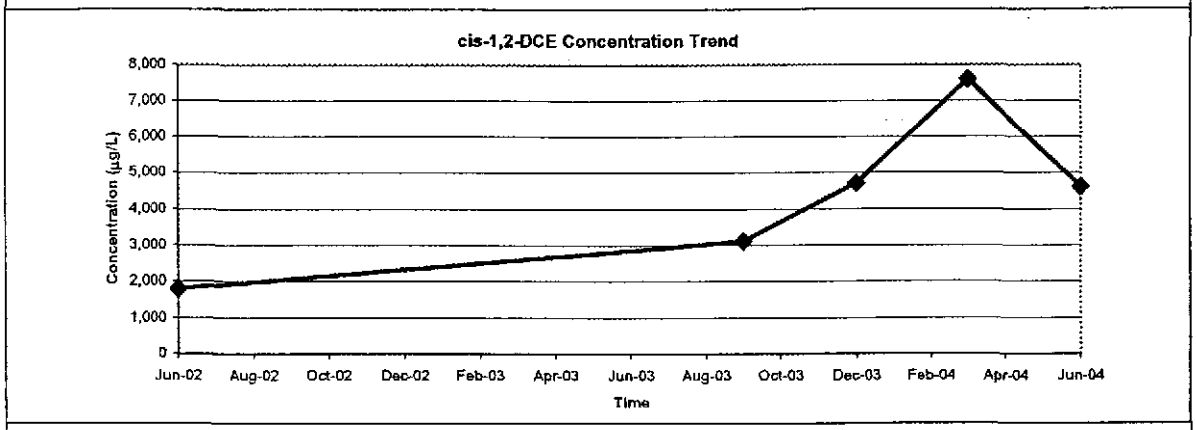


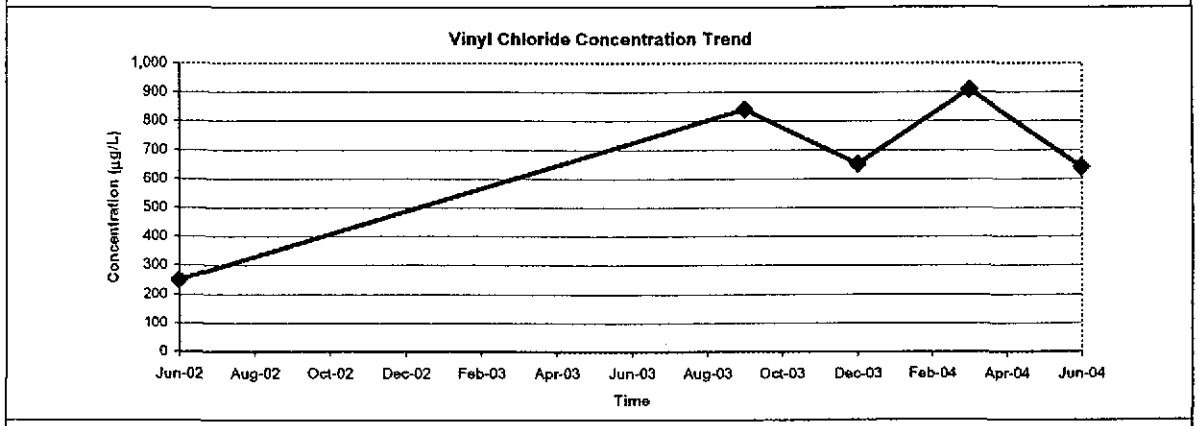
Monitoring Well --- DMW-1A

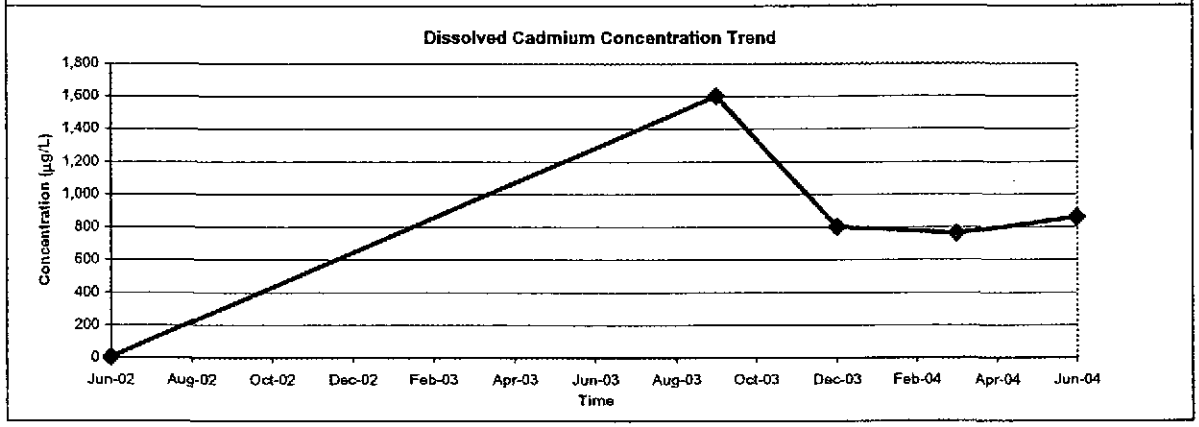


Monitoring Well --- DMW-2A

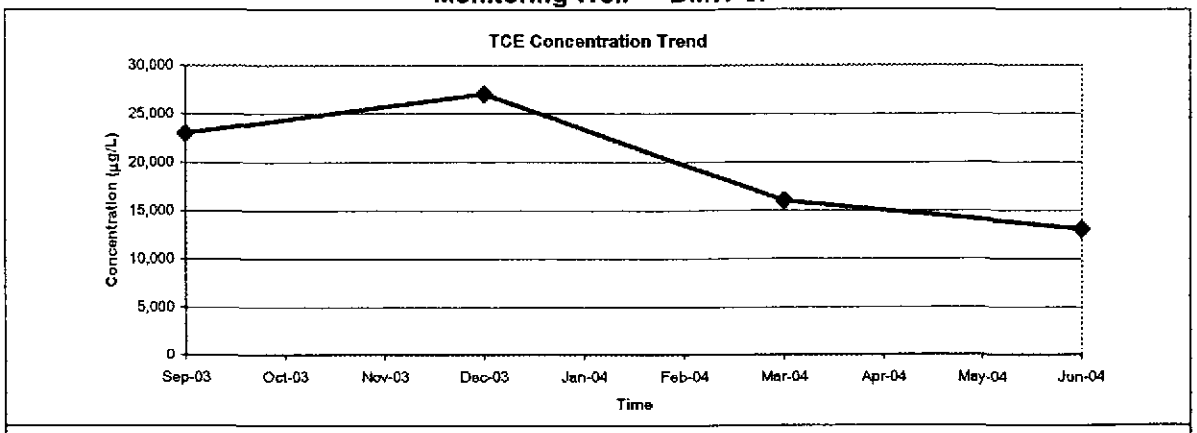


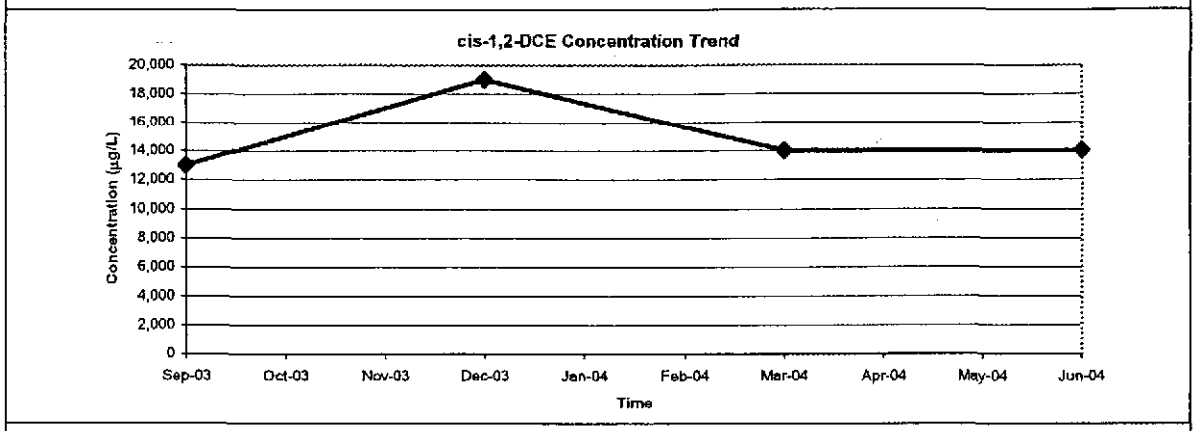


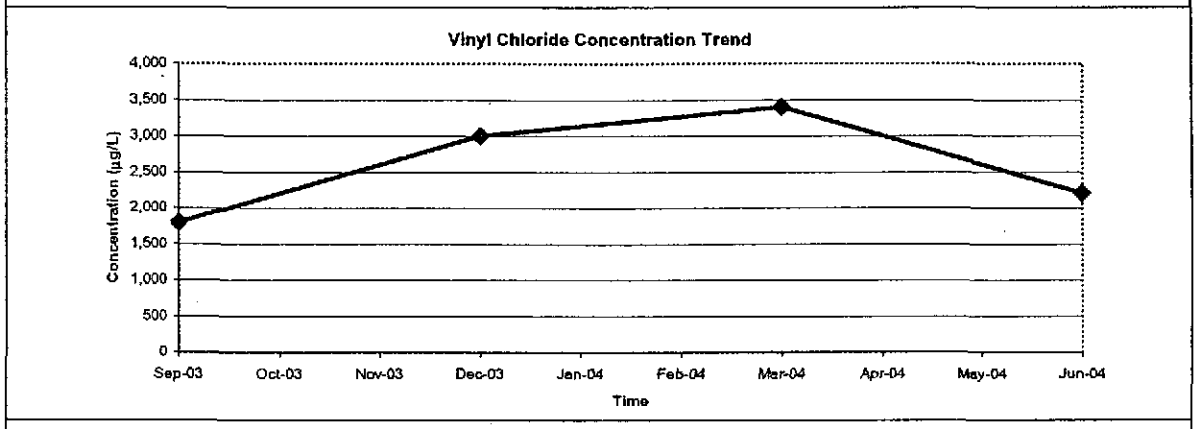


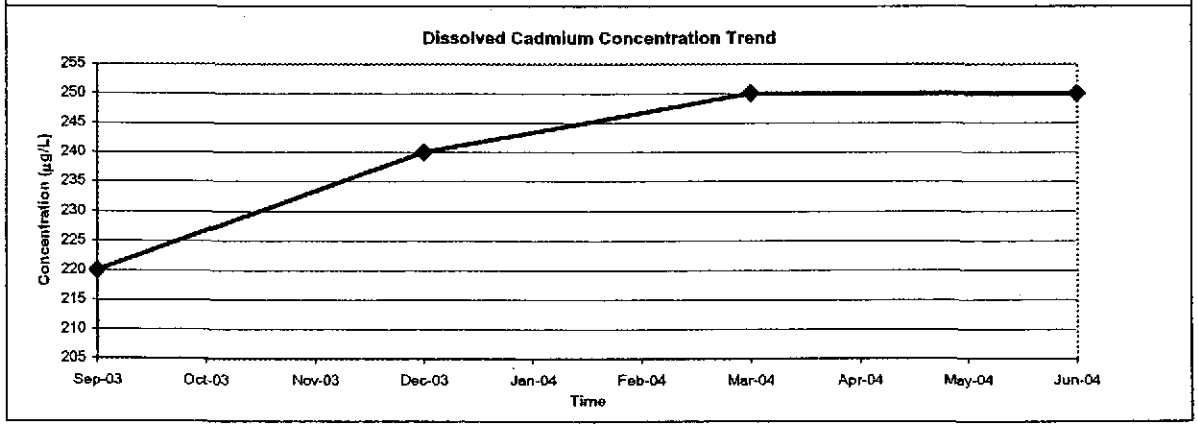


Monitoring Well --- DMW-3I

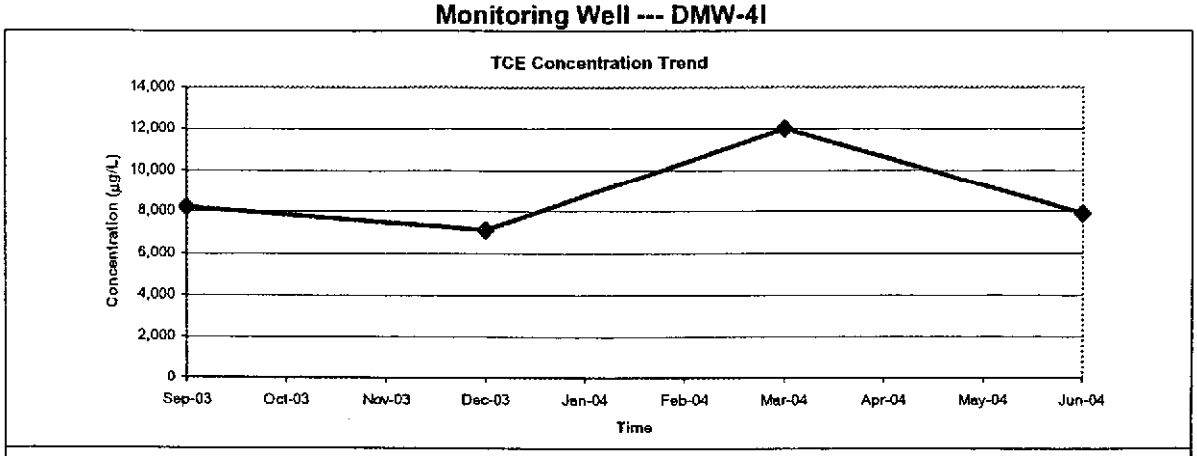


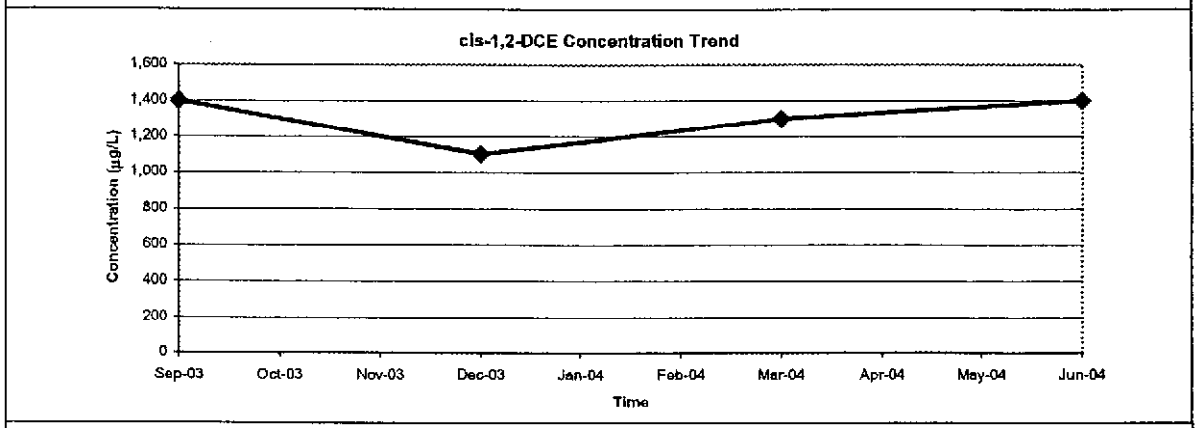


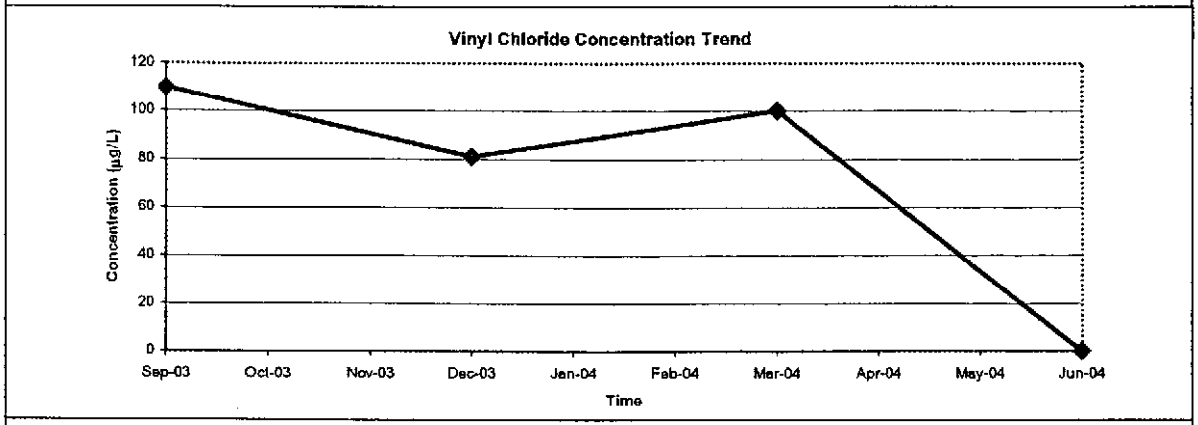


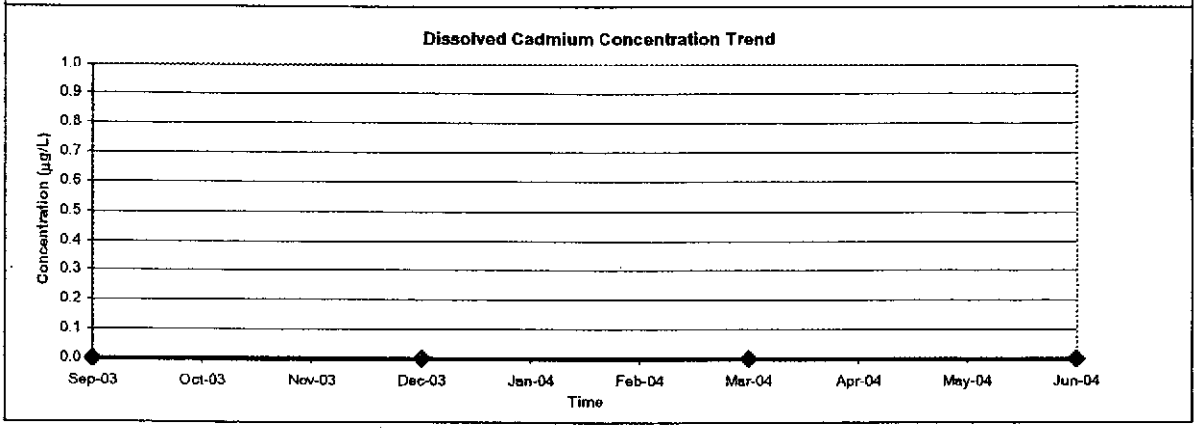


Monitoring Well --- DMW-4I

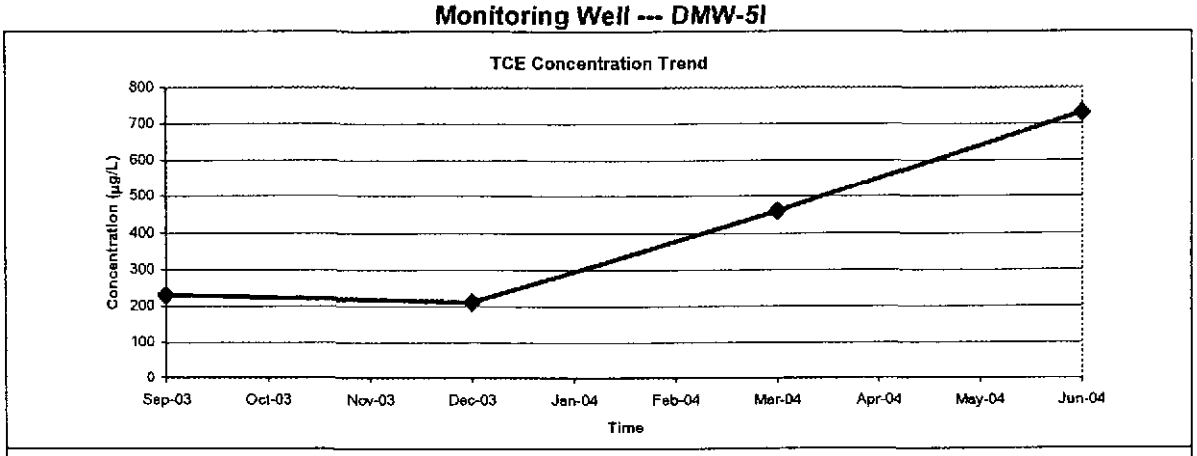


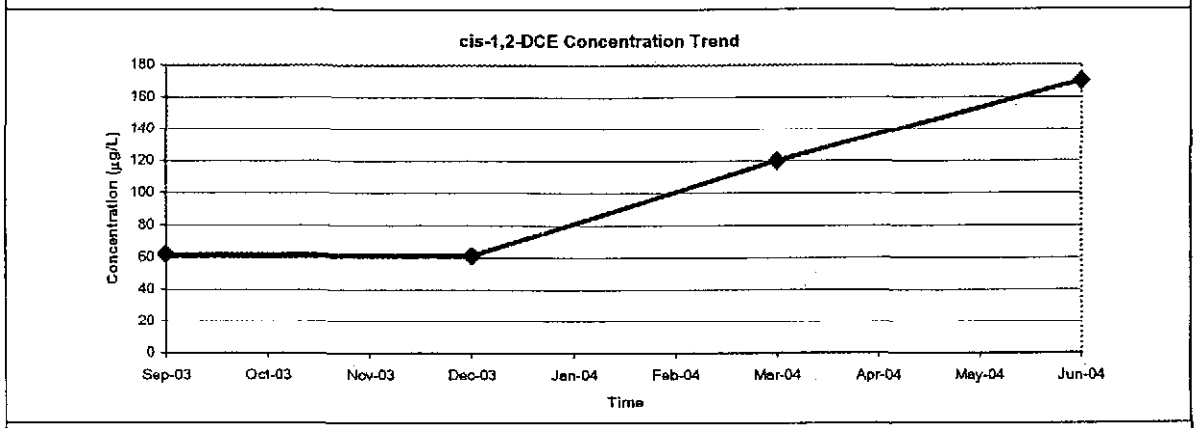


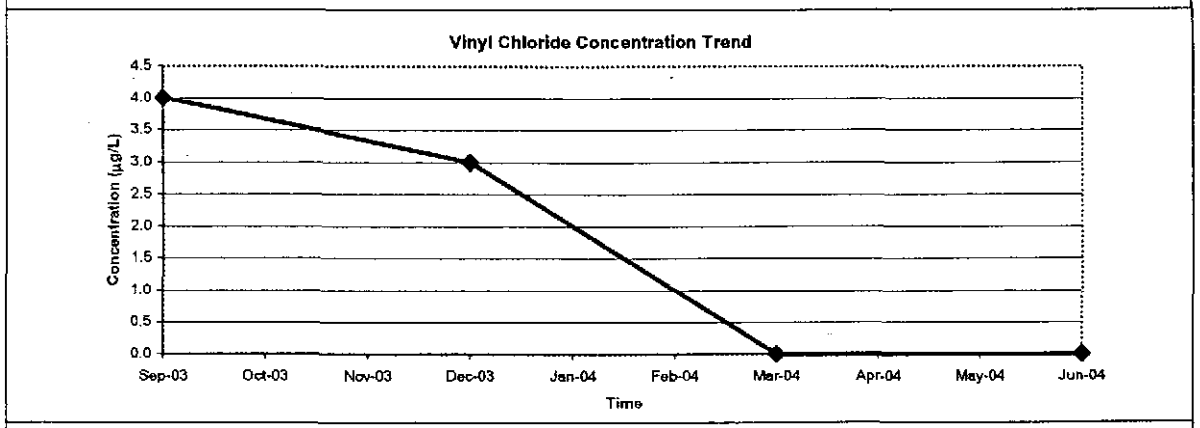


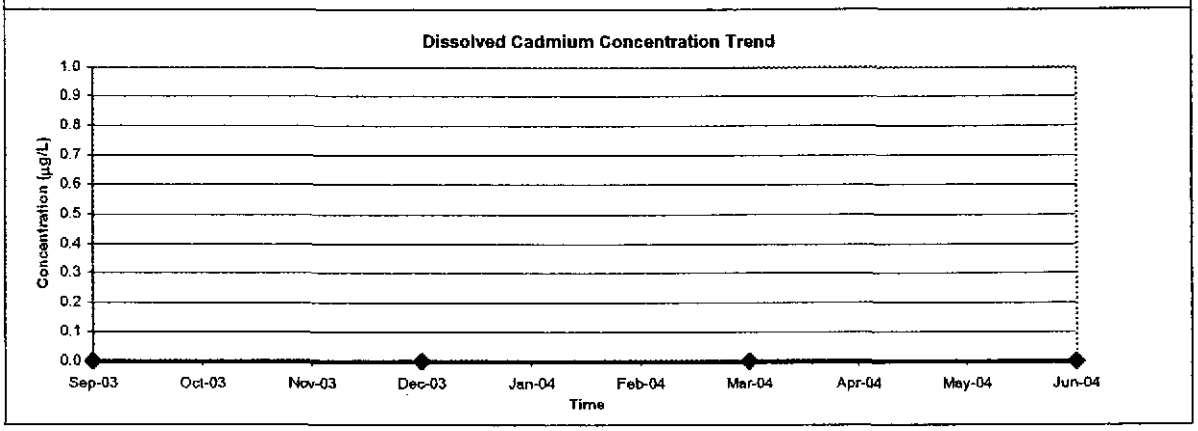


Monitoring Well --- DMW-5I

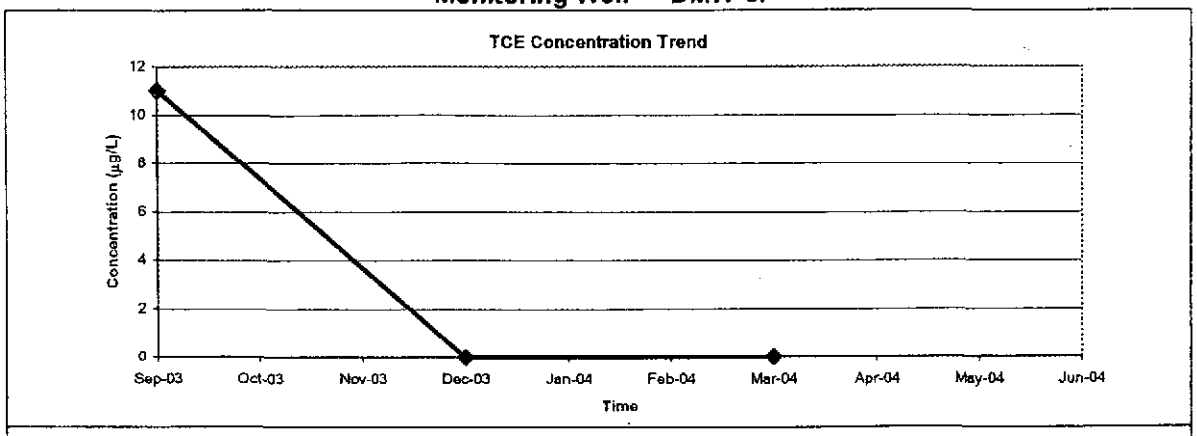


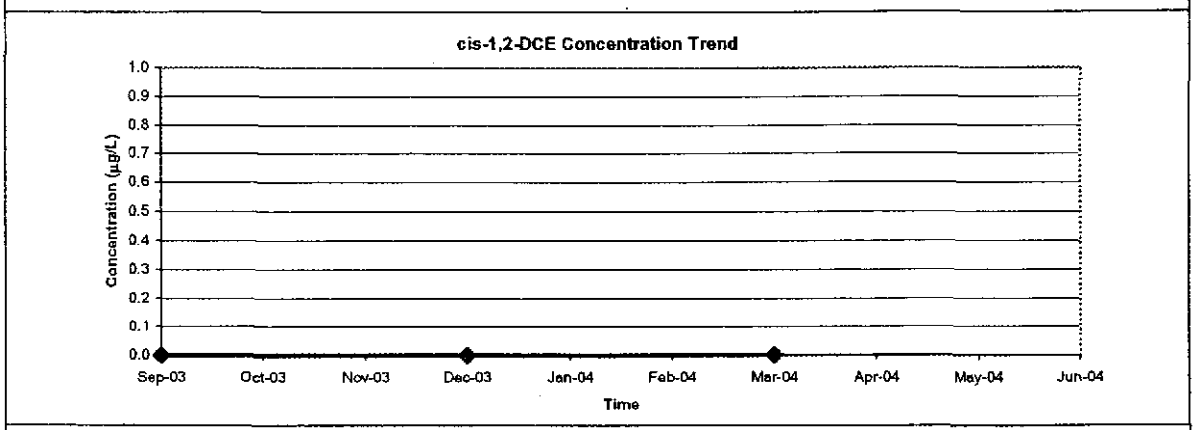


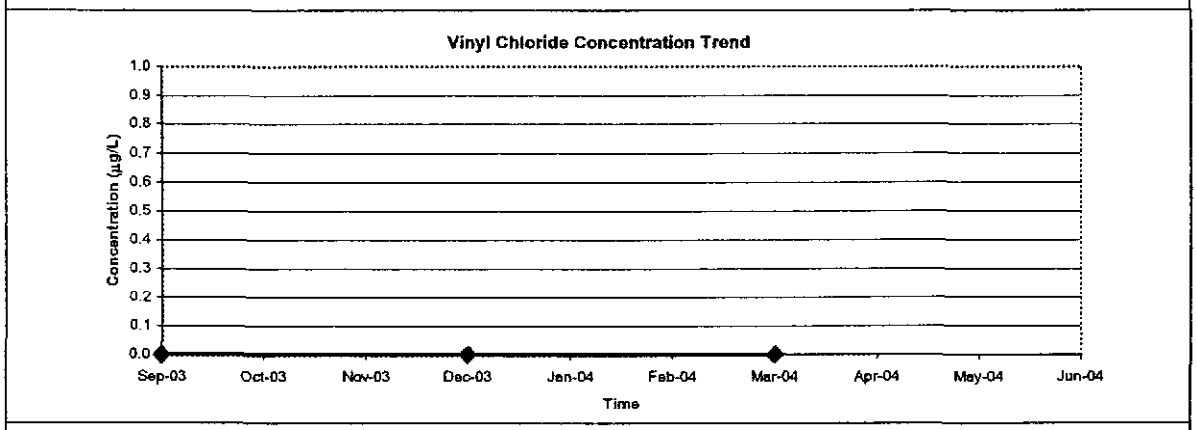


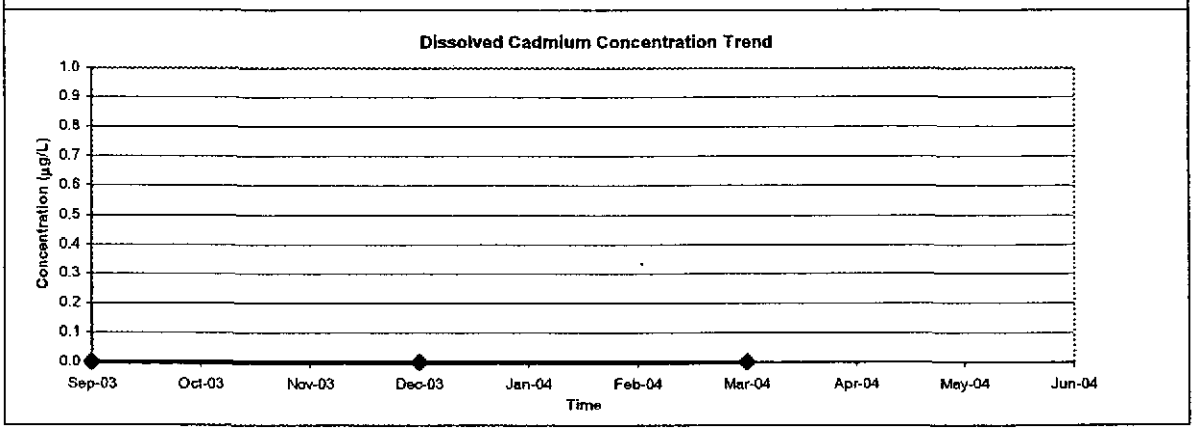


Monitoring Well --- DMW-6I

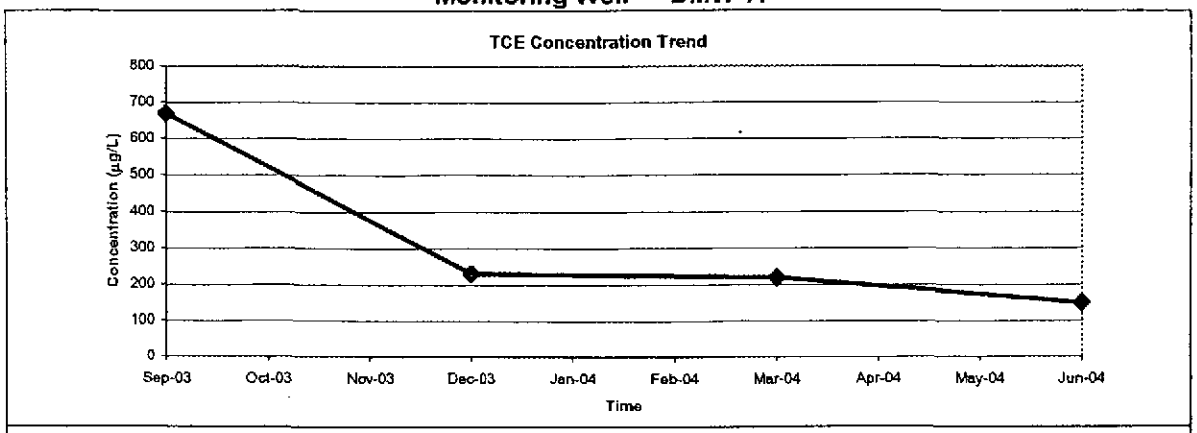


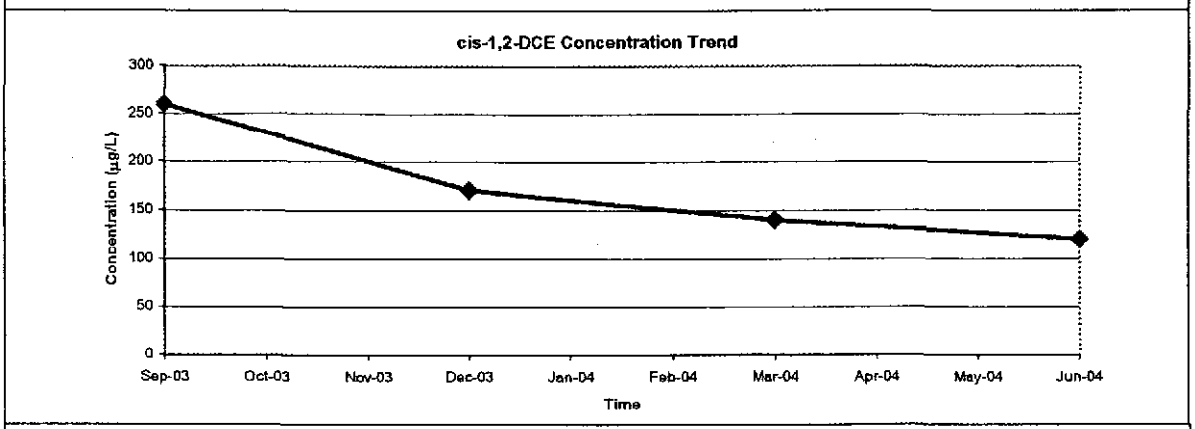


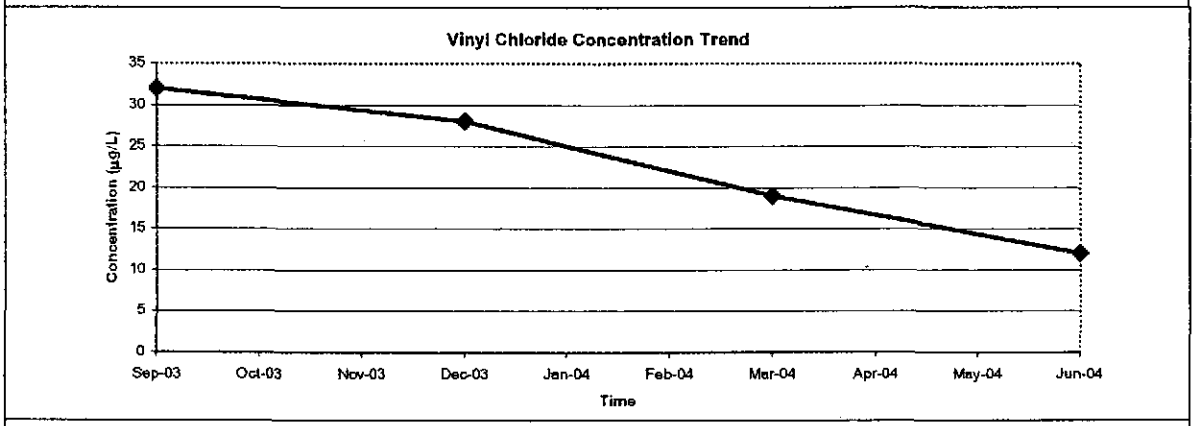


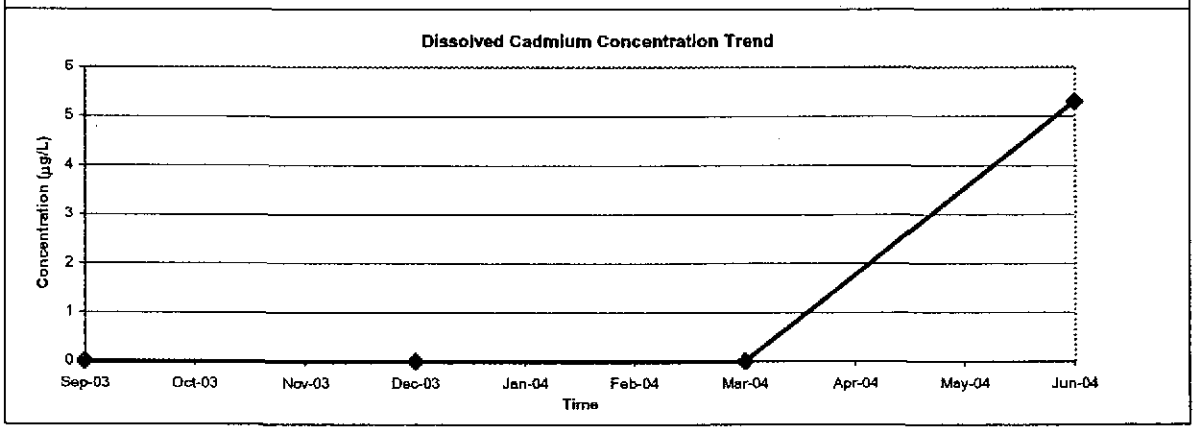


Monitoring Well --- DMW-7I

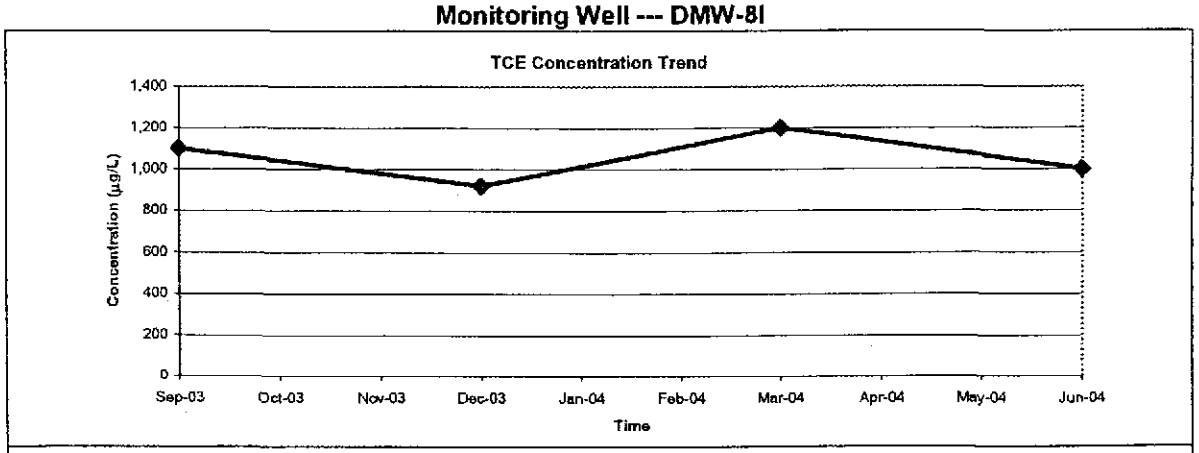


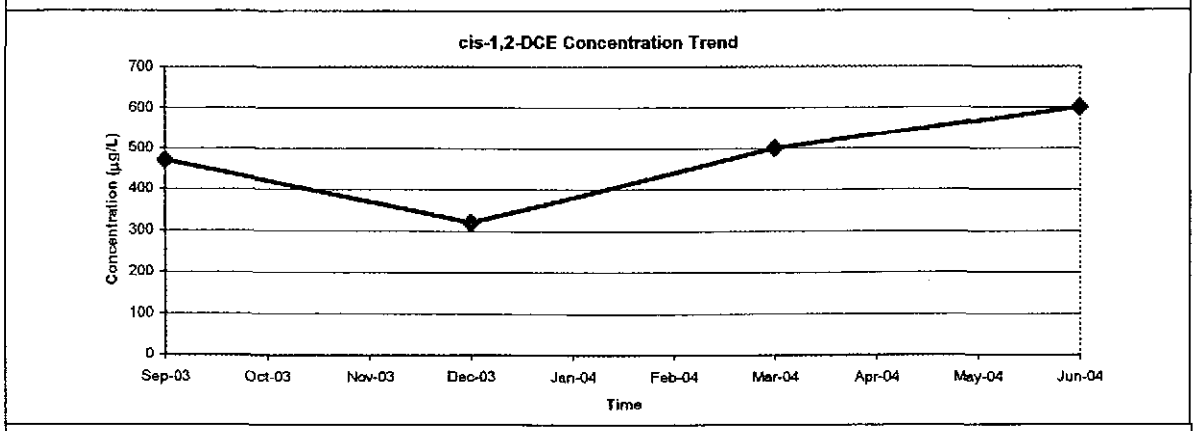


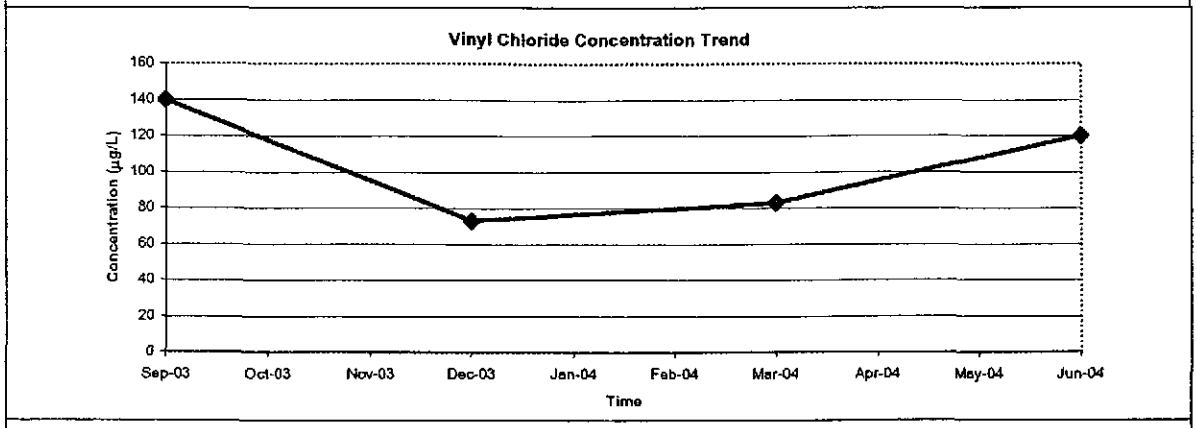


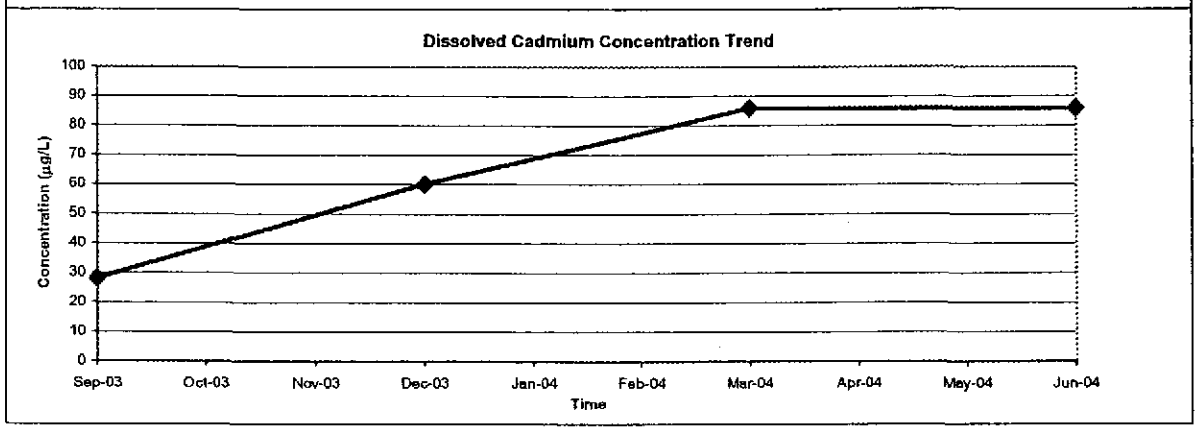


Monitoring Well --- DMW-8I

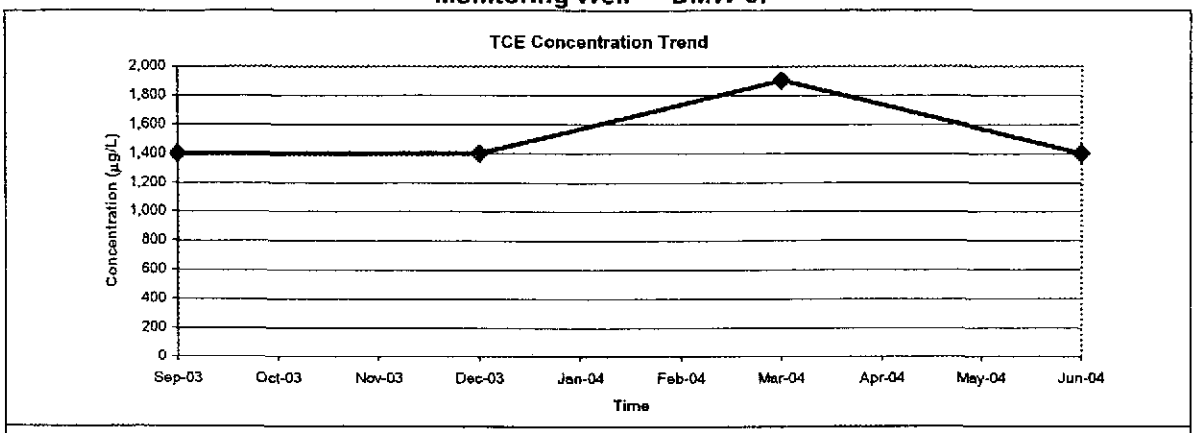


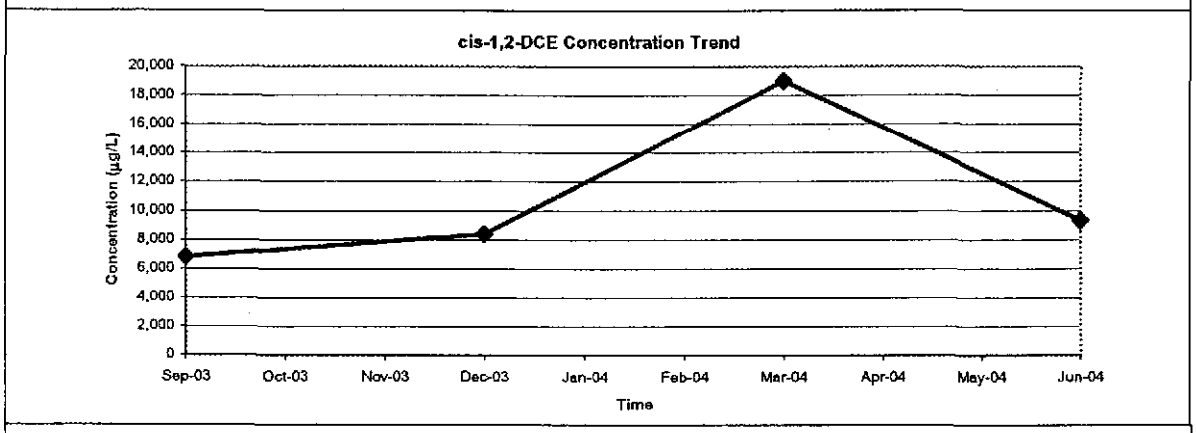


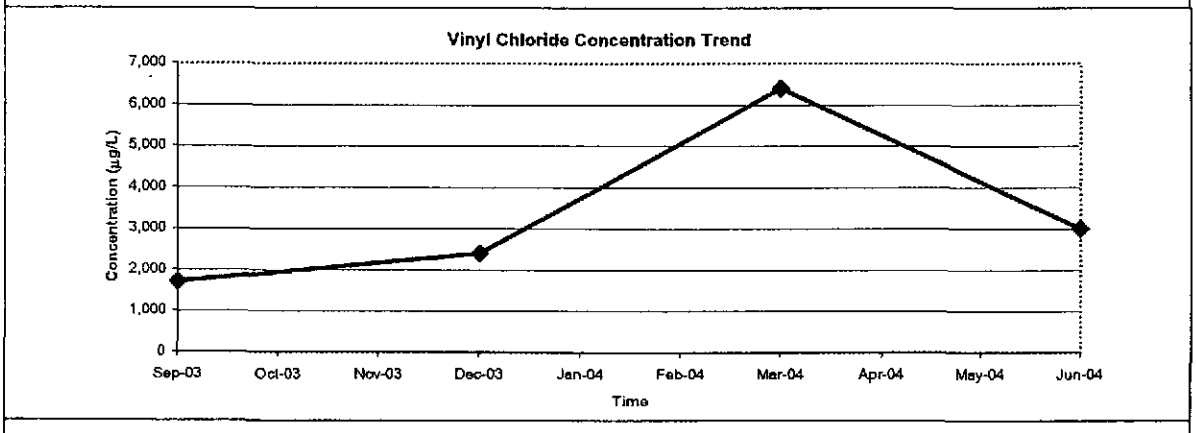


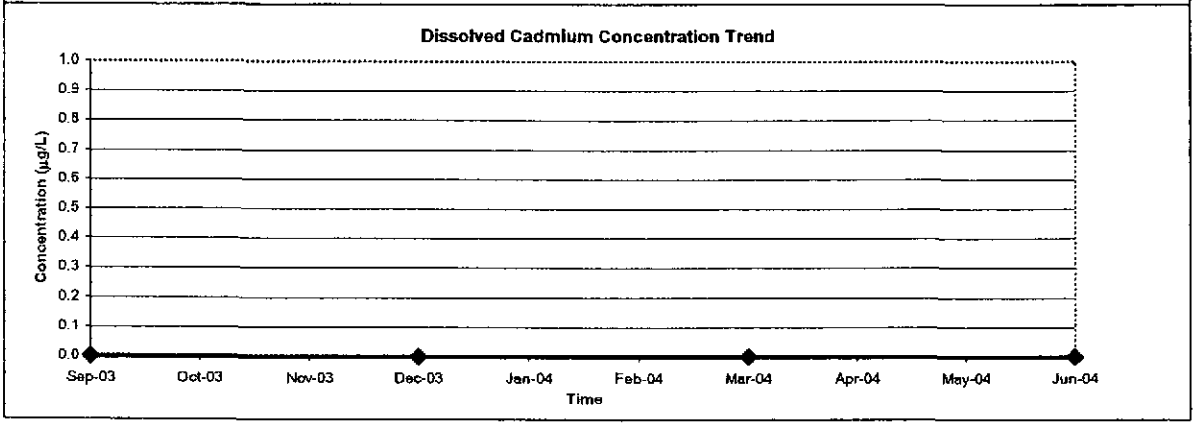


Monitoring Well --- DMW-9I

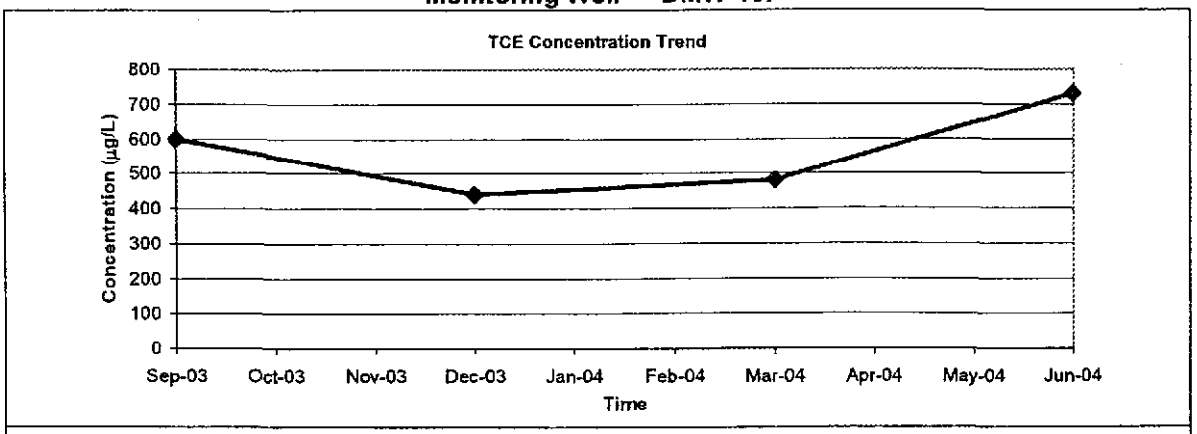


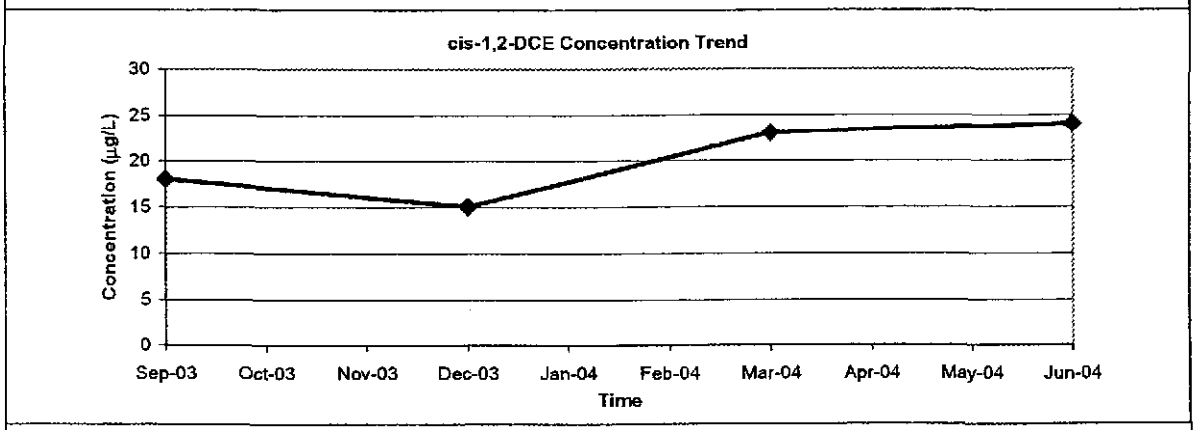


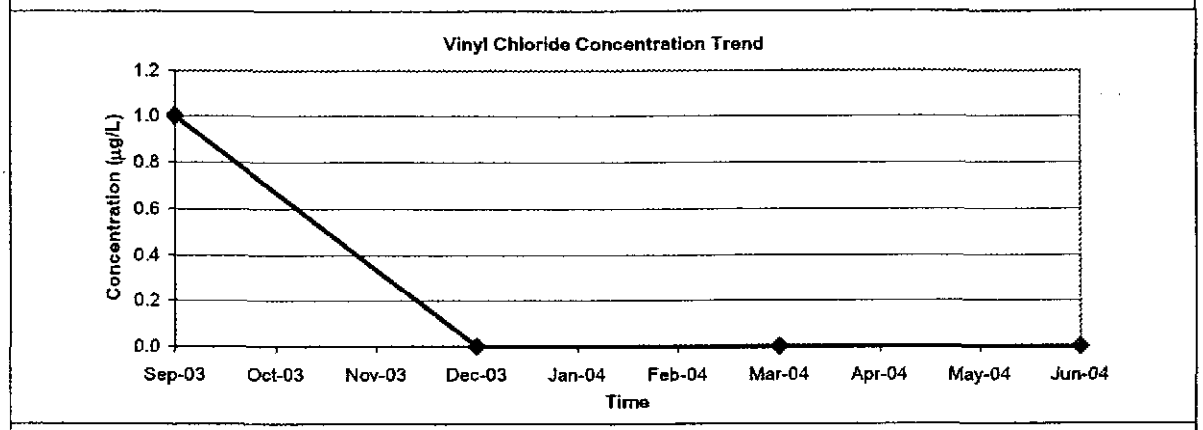


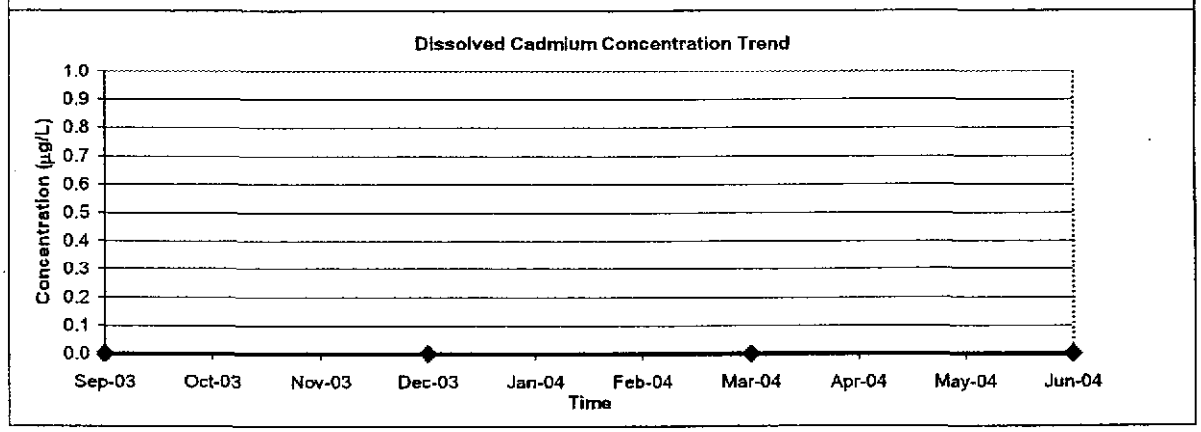


Monitoring Well --- DMW-10I

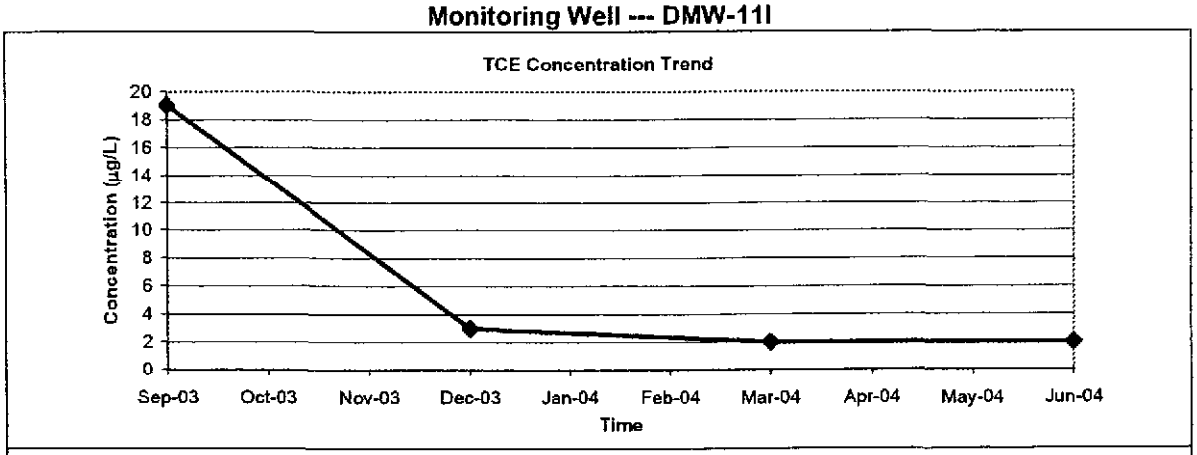


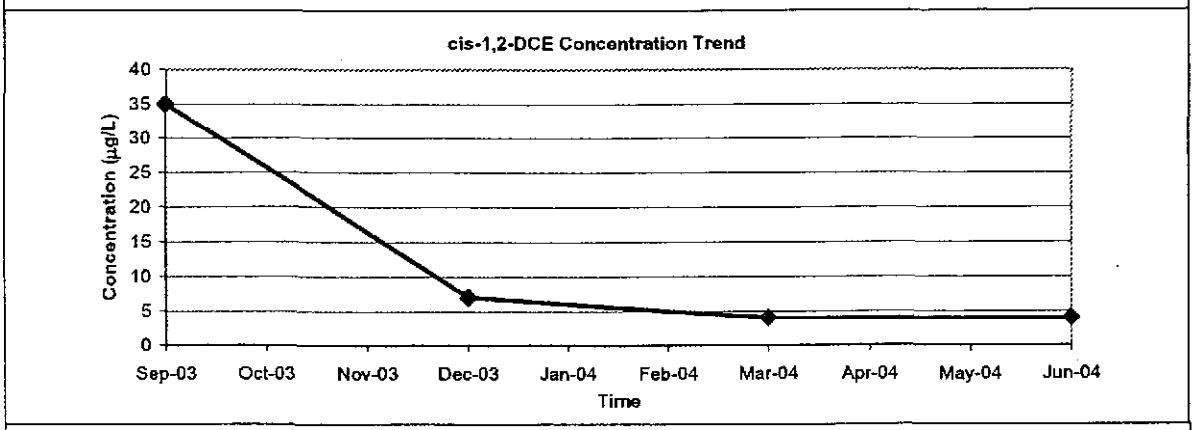


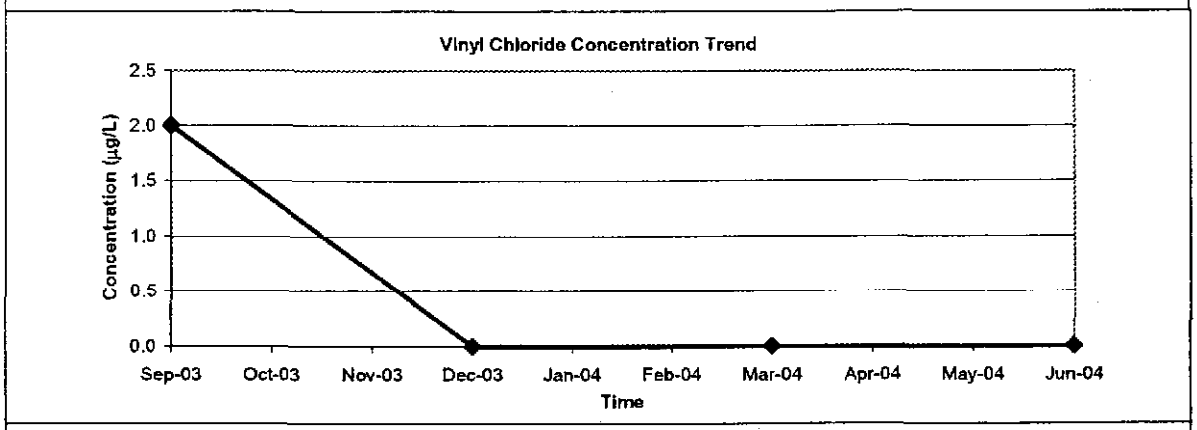


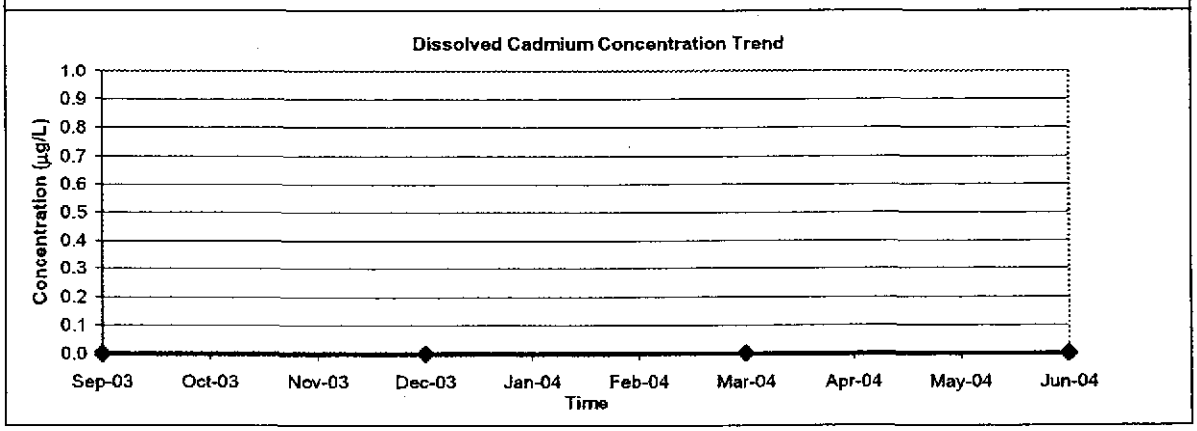


Monitoring Well --- DMW-11I

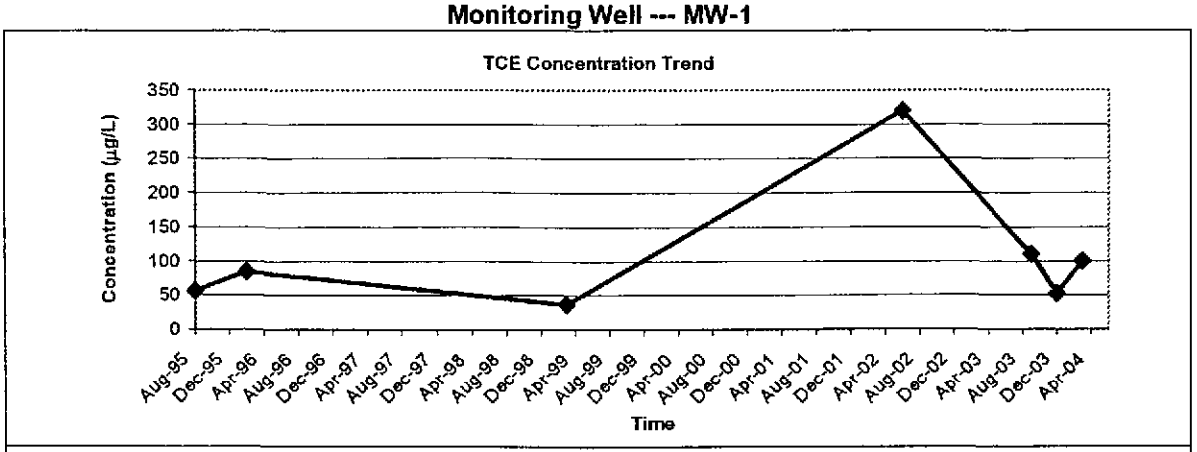


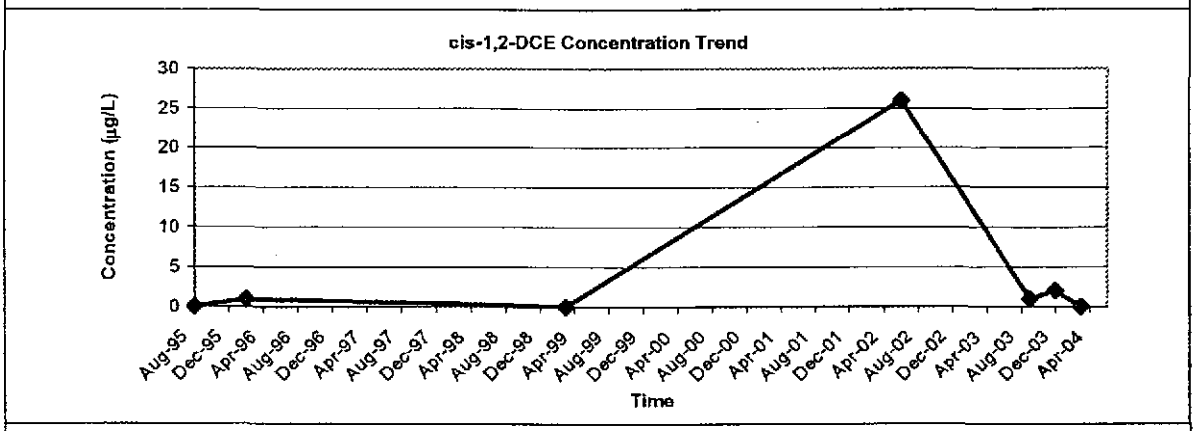


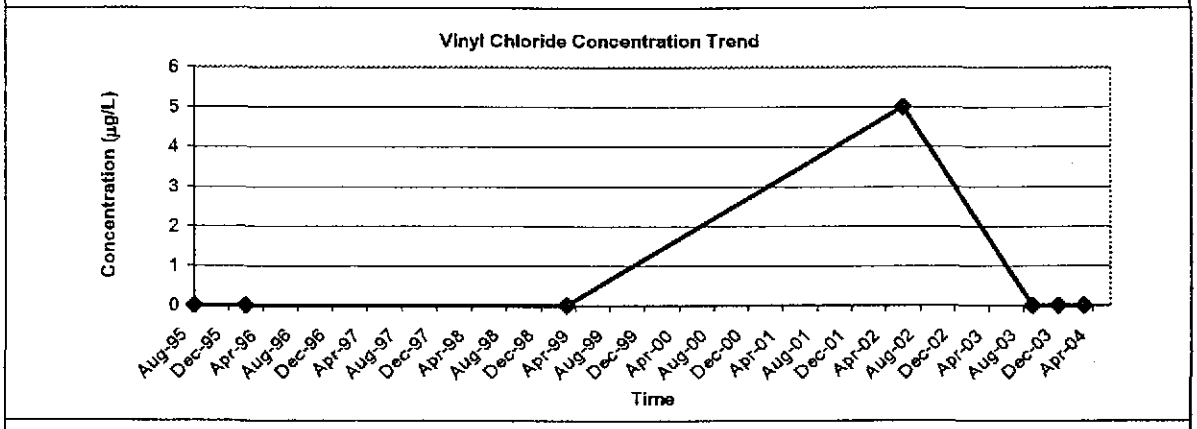


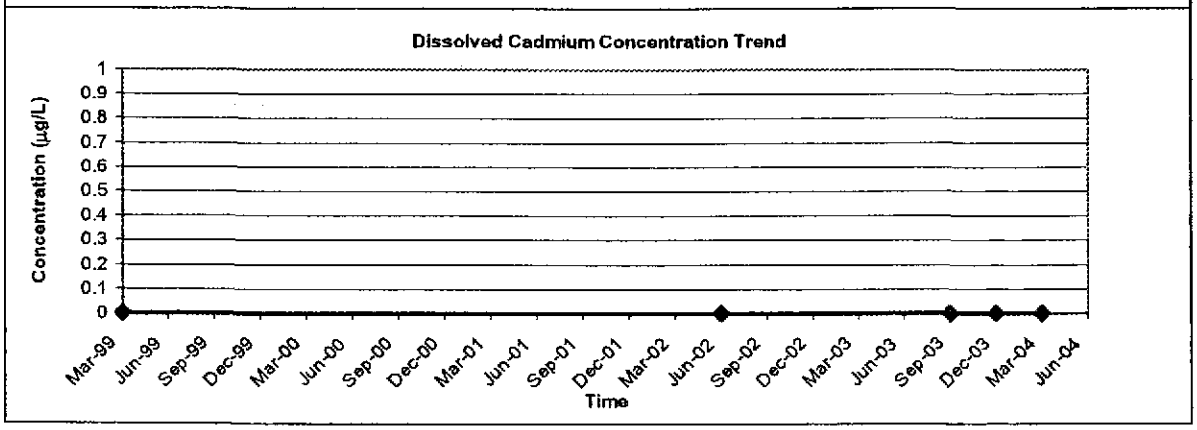


Monitoring Well --- MW-1

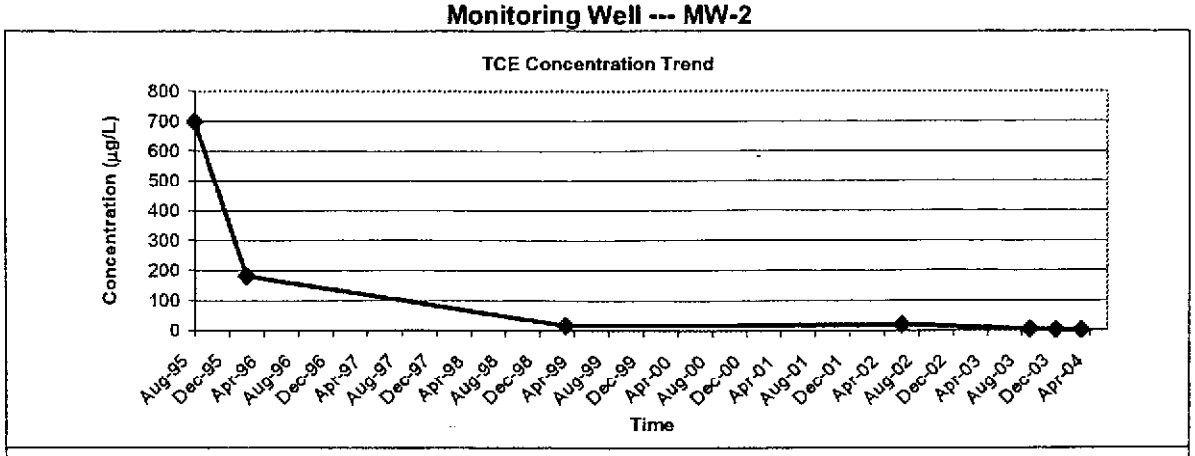


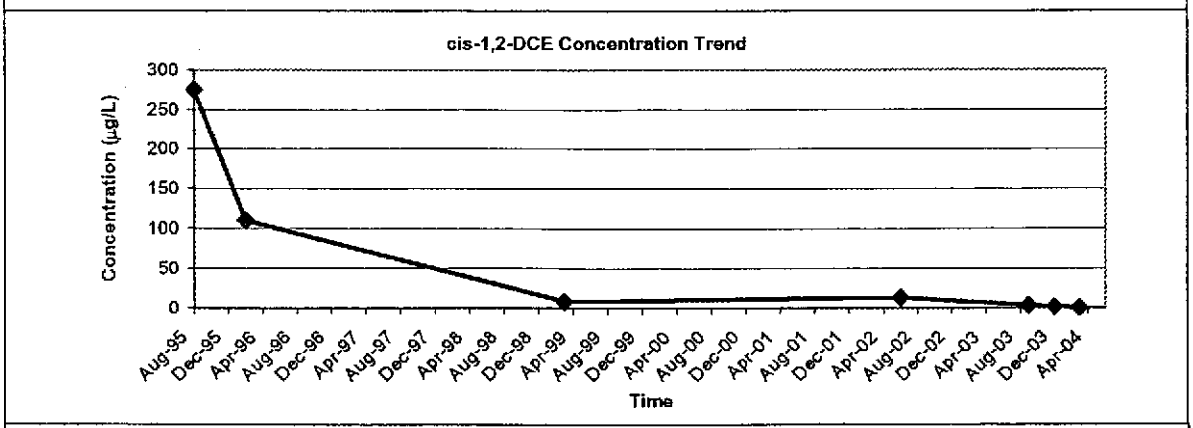


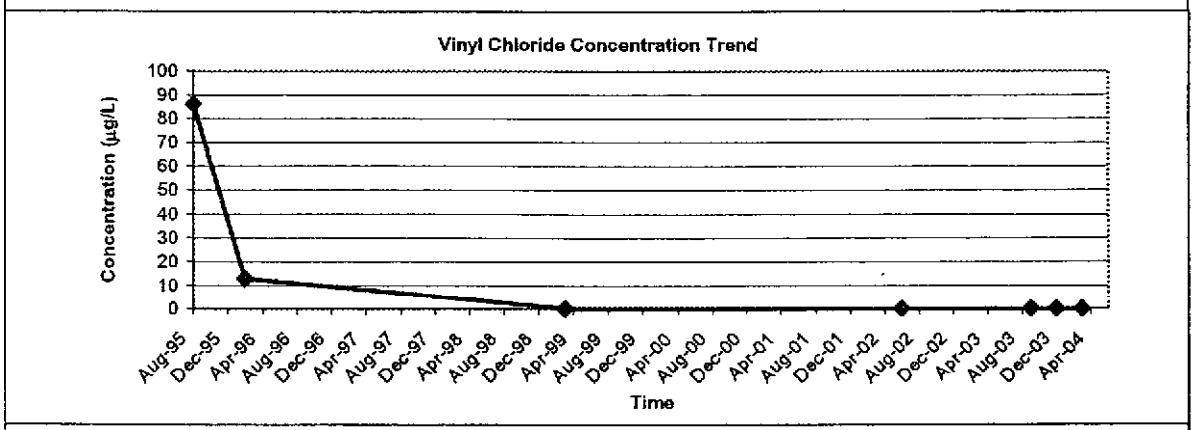


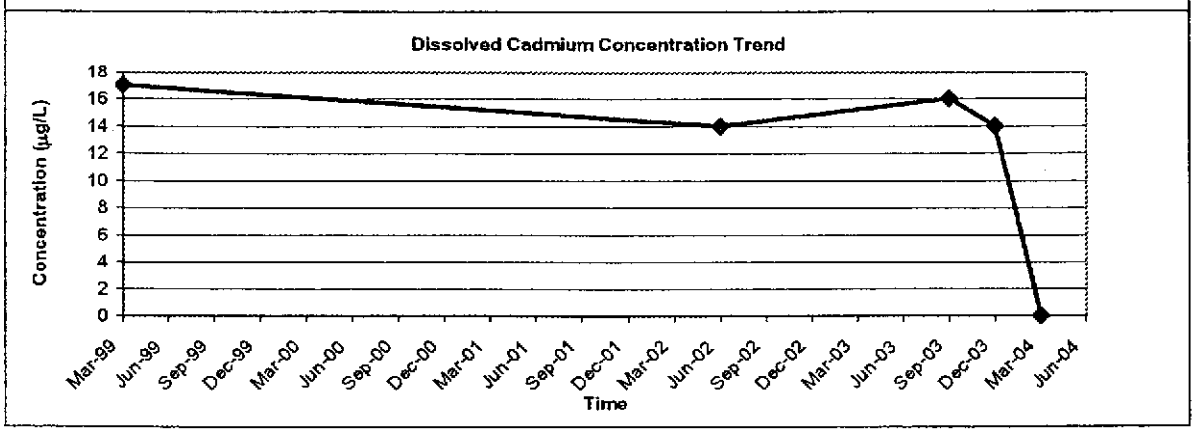


Monitoring Well --- MW-2

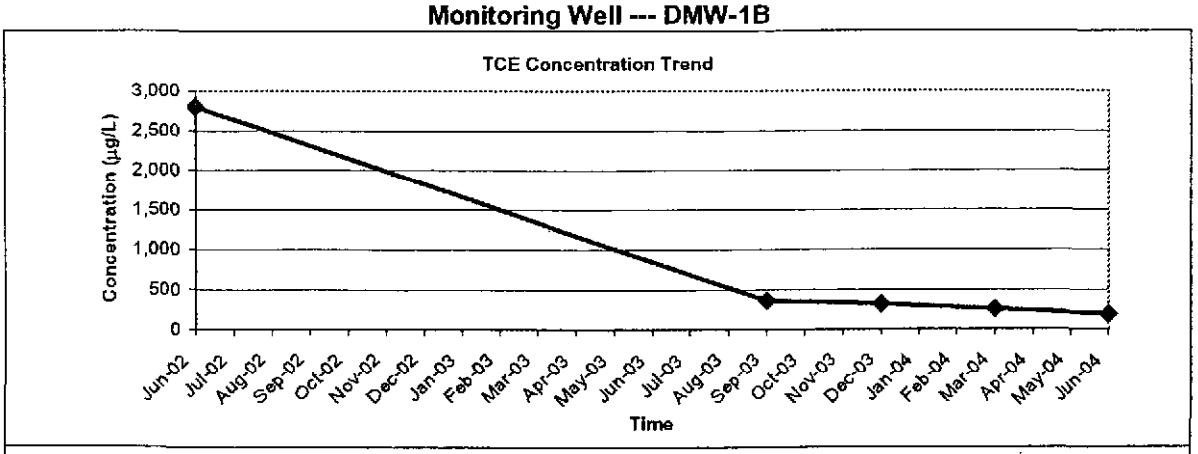


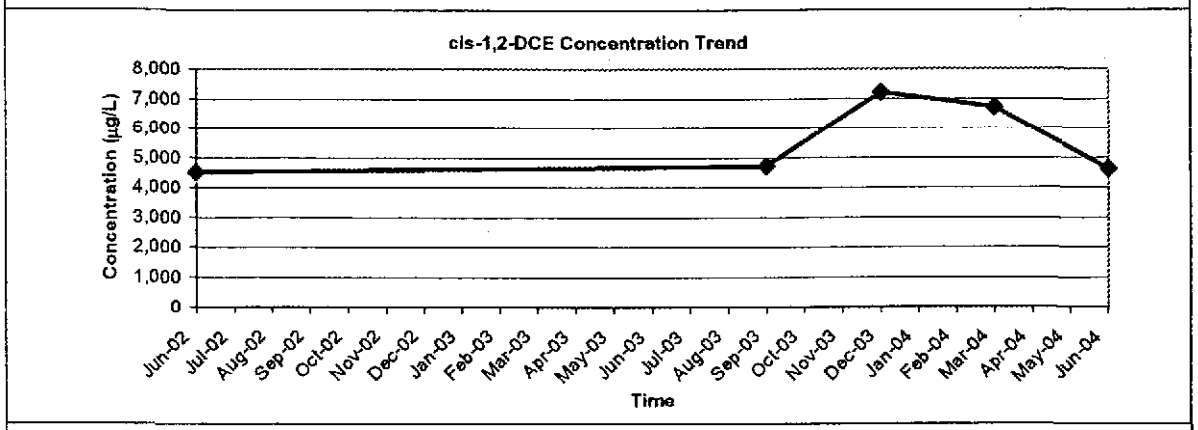


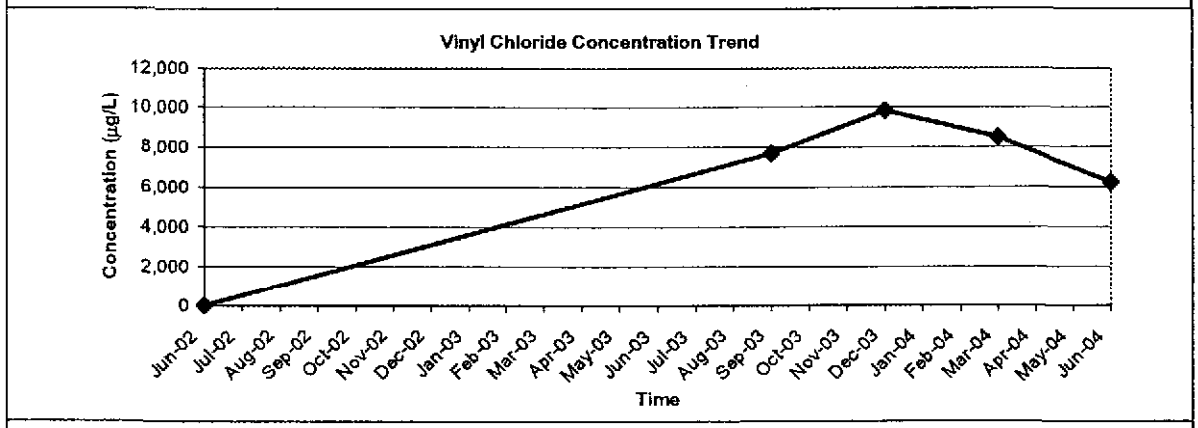


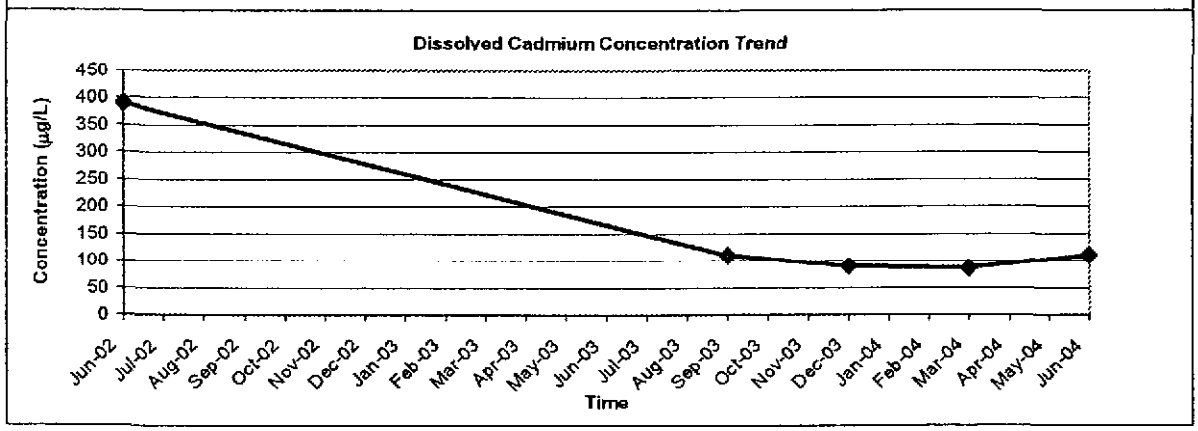


Monitoring Well --- DMW-1B

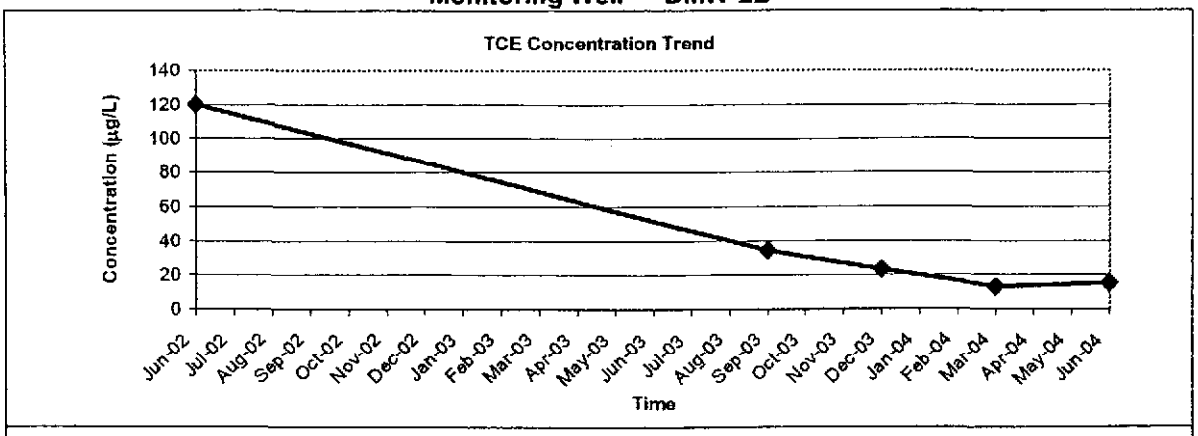


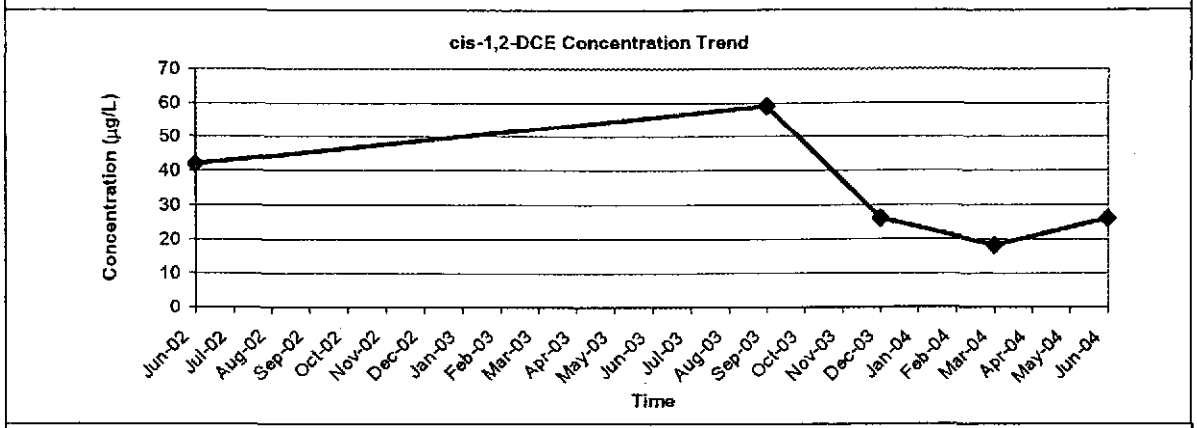


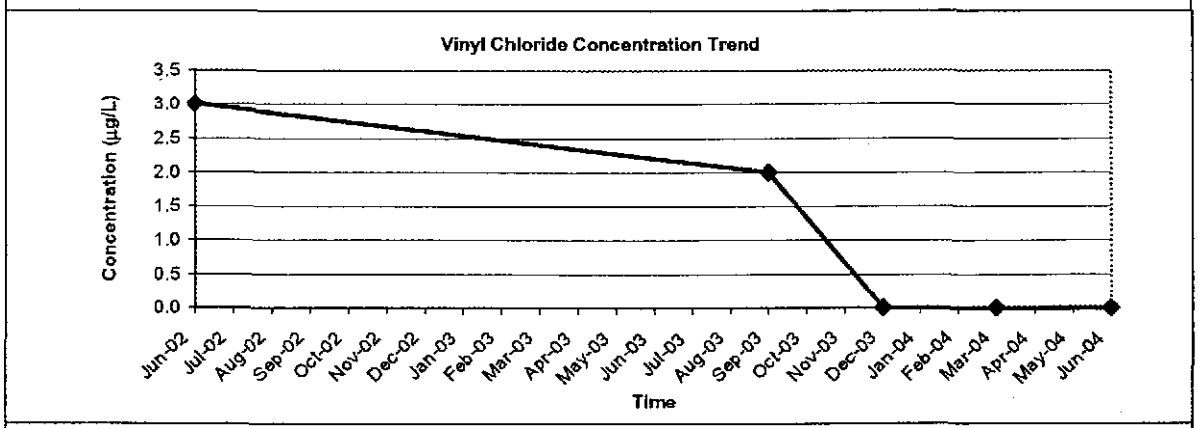


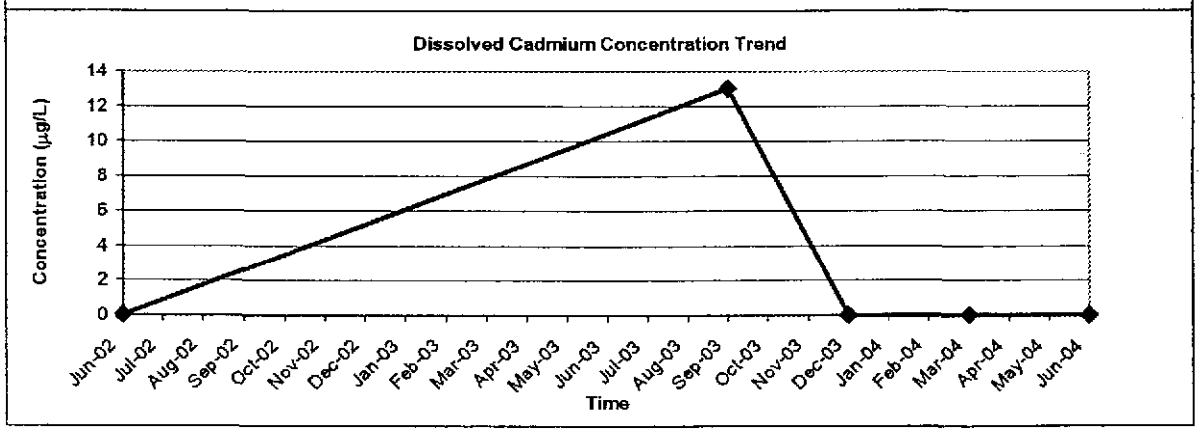


Monitoring Well --- DMW-2B

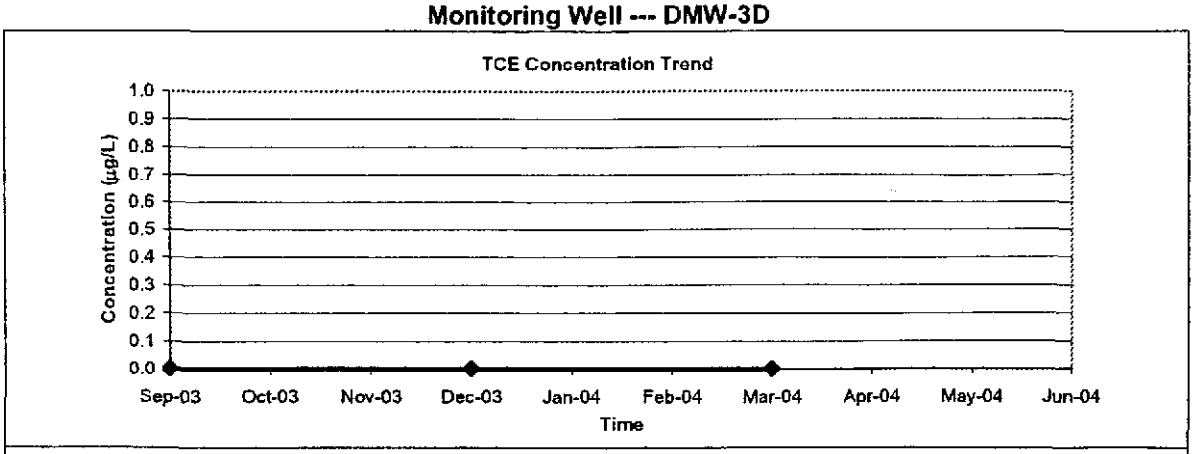


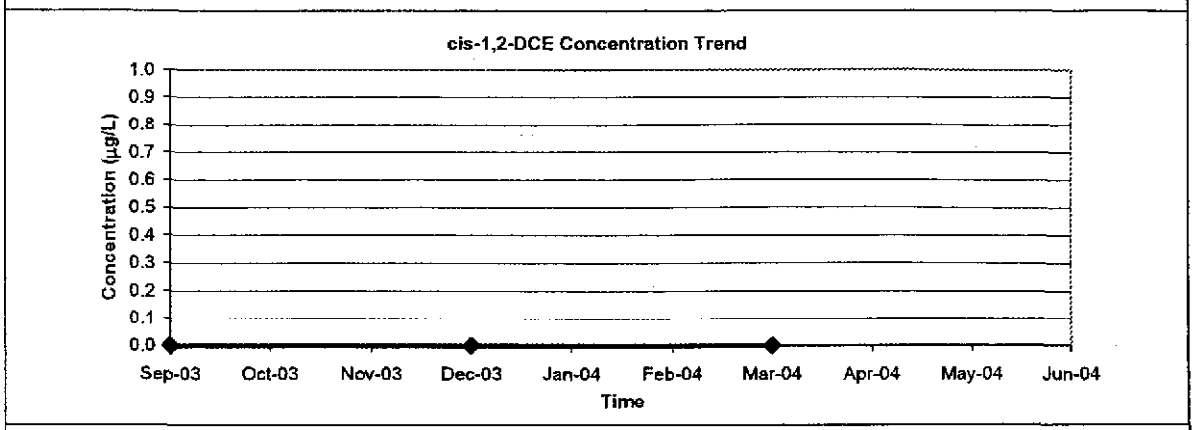


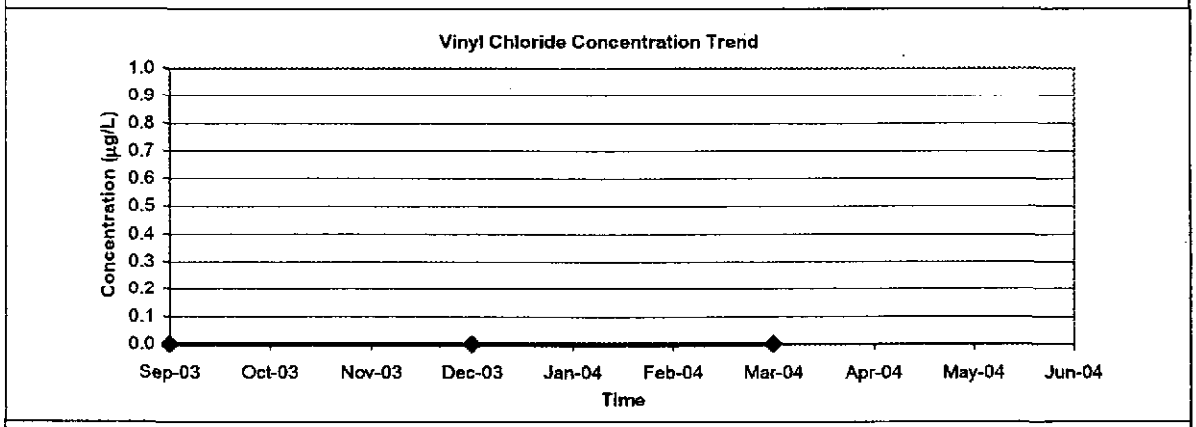


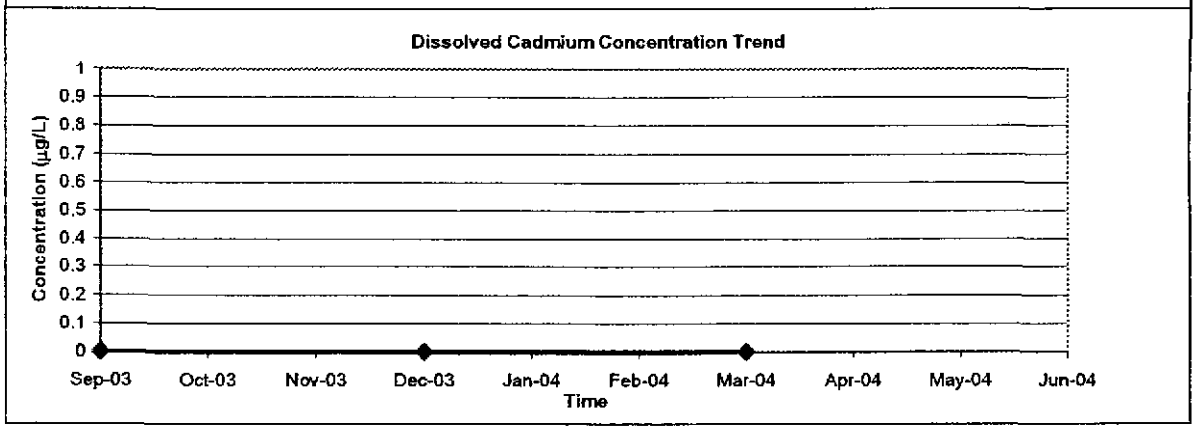


Monitoring Well --- DMW-3D

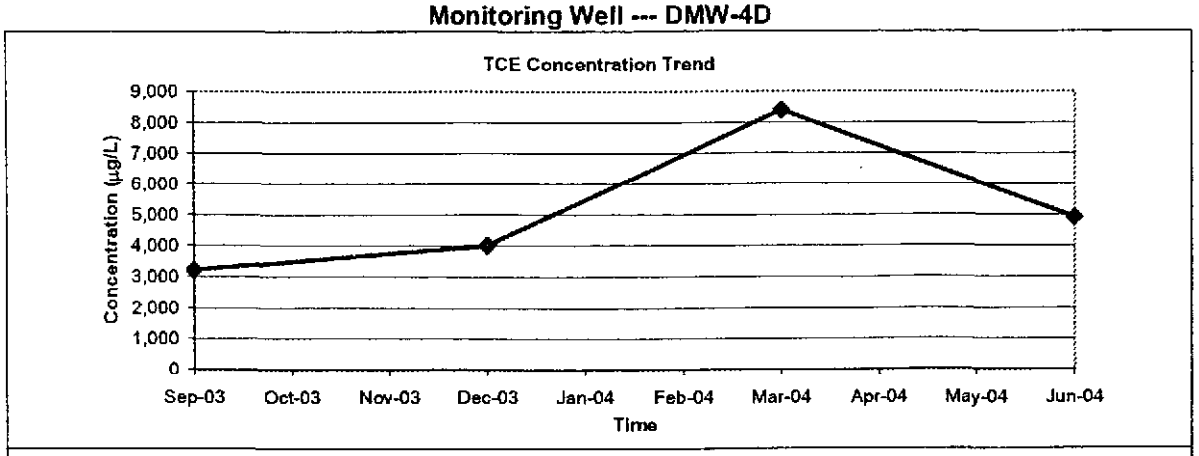


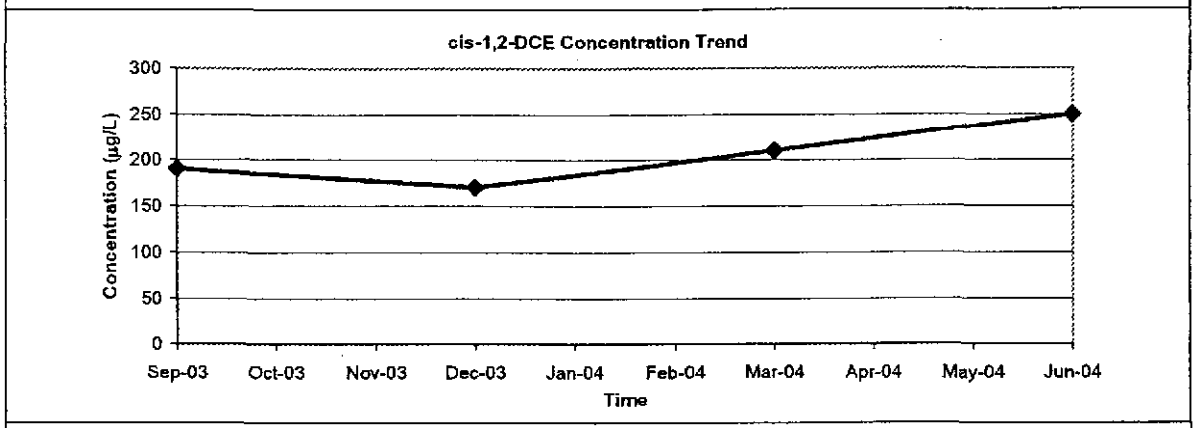


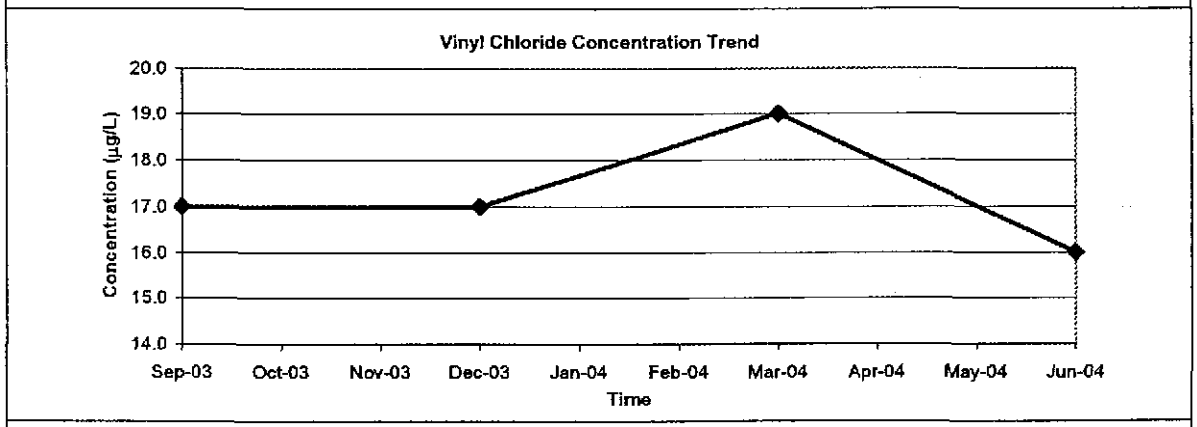


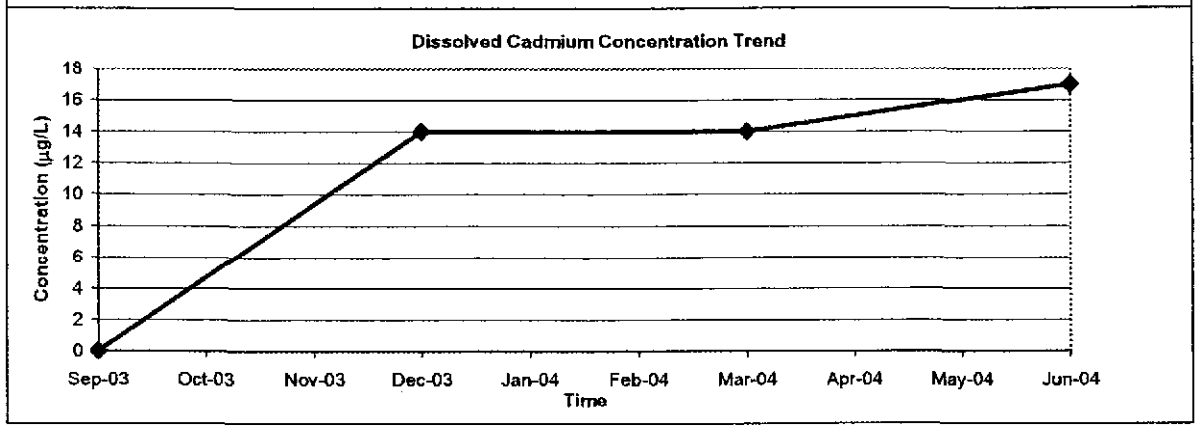


Monitoring Well --- DMW-4D

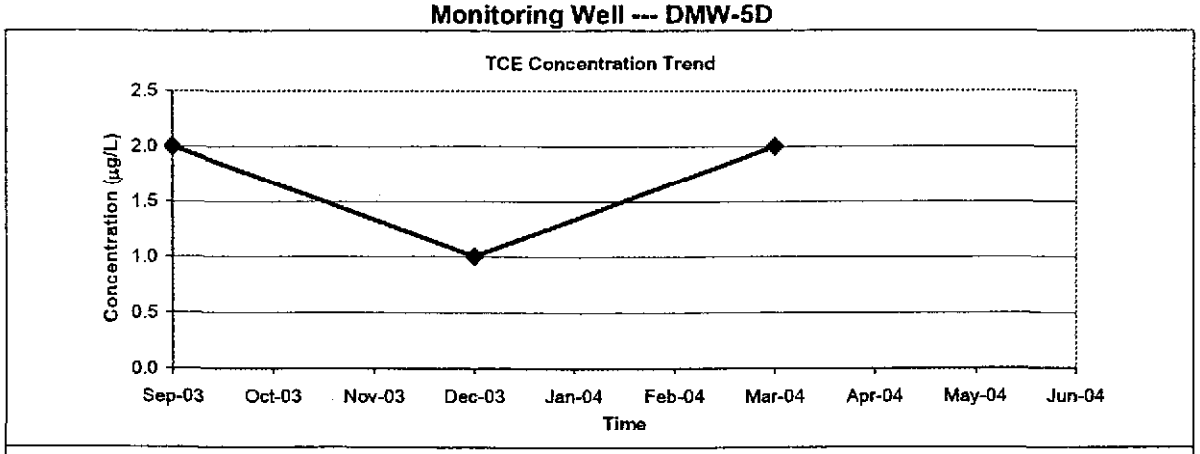


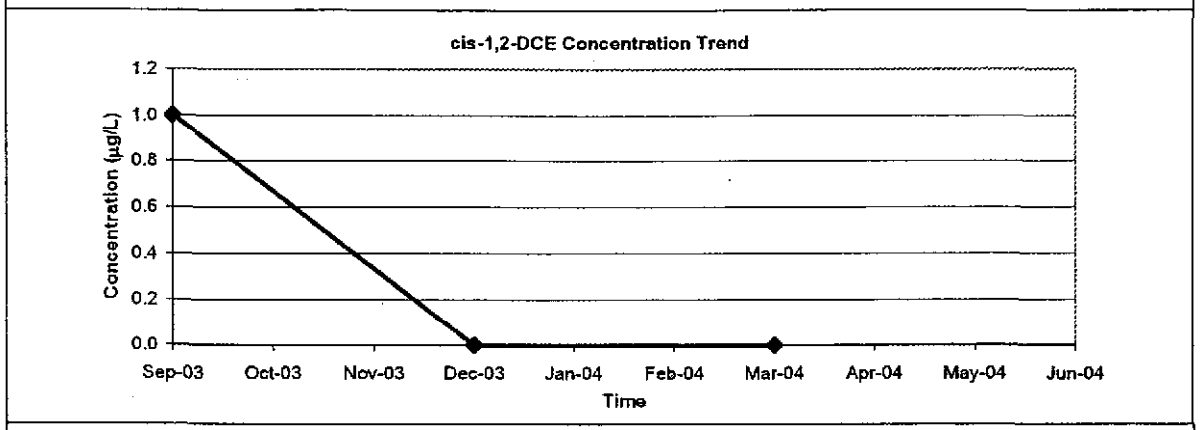


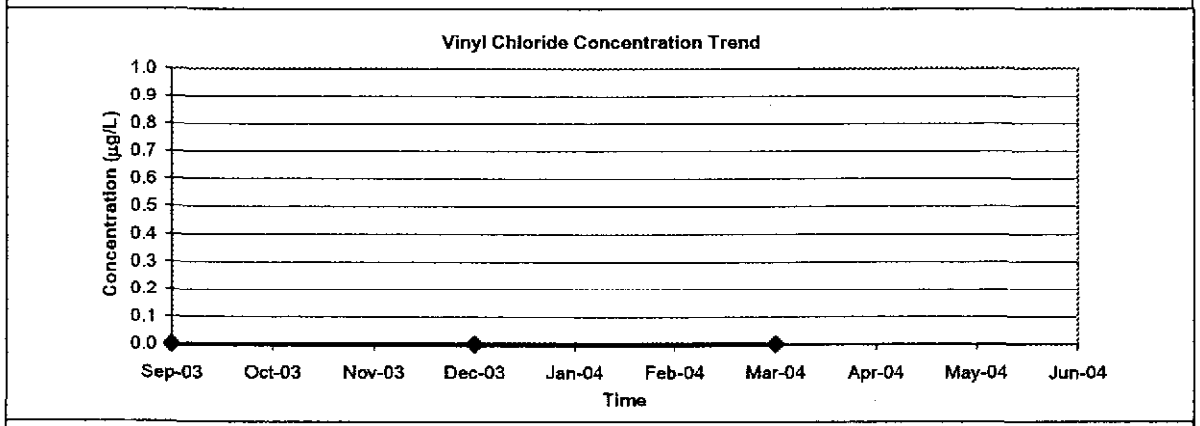


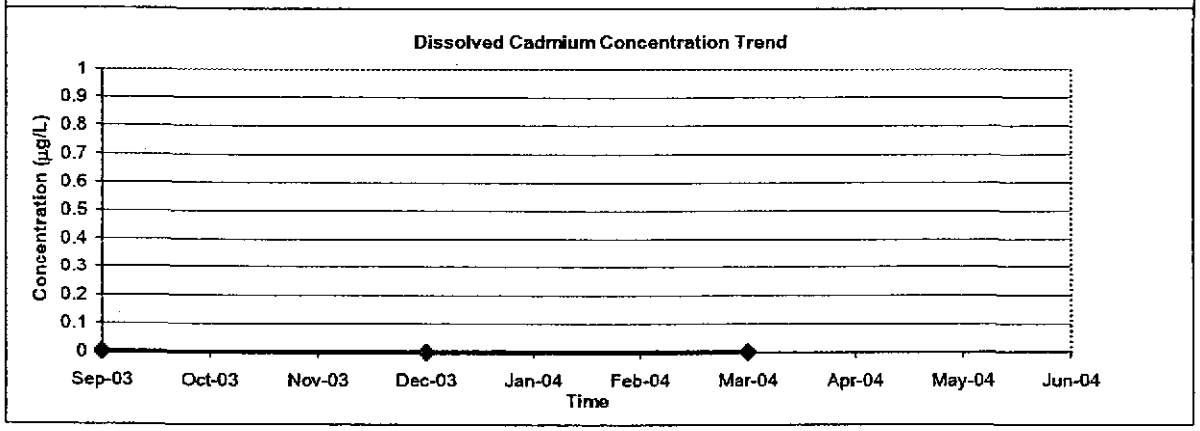


Monitoring Well --- DMW-5D

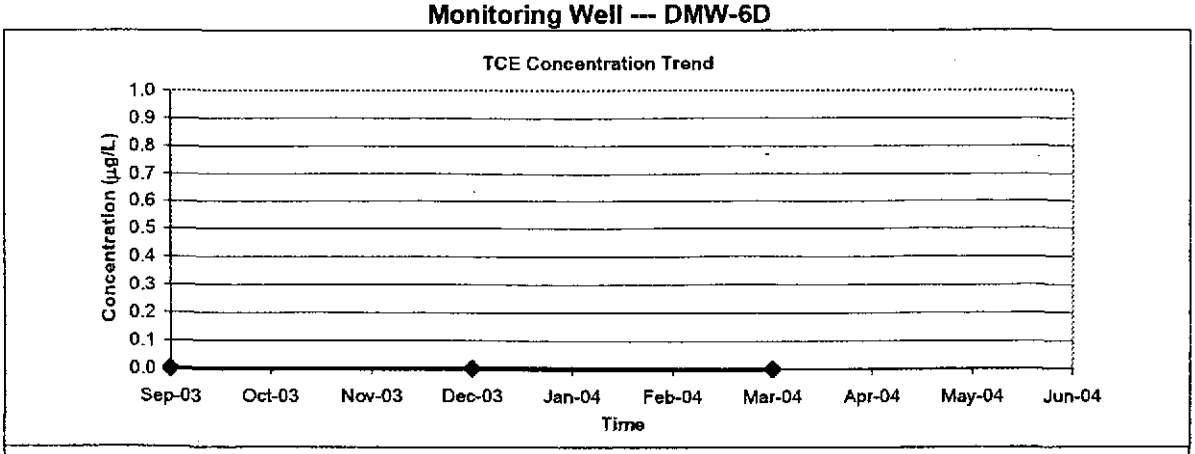


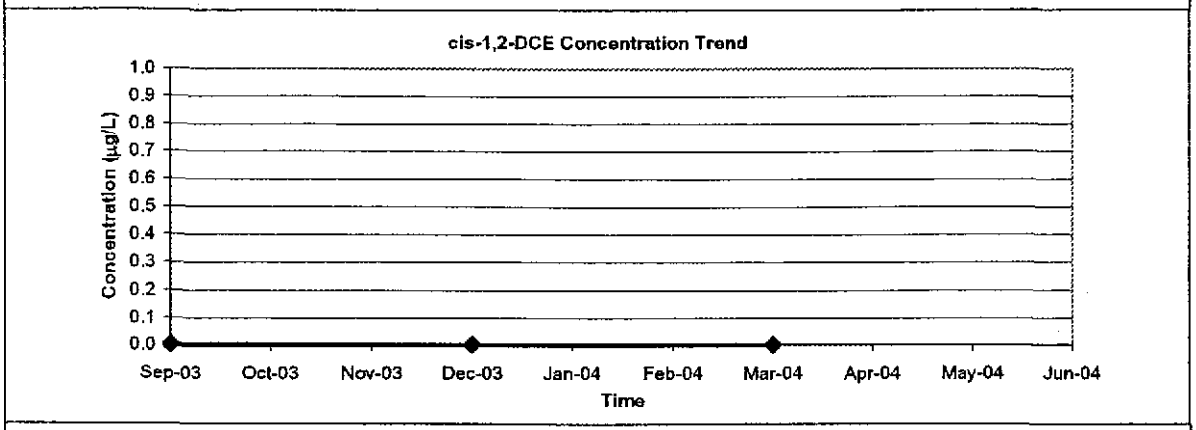


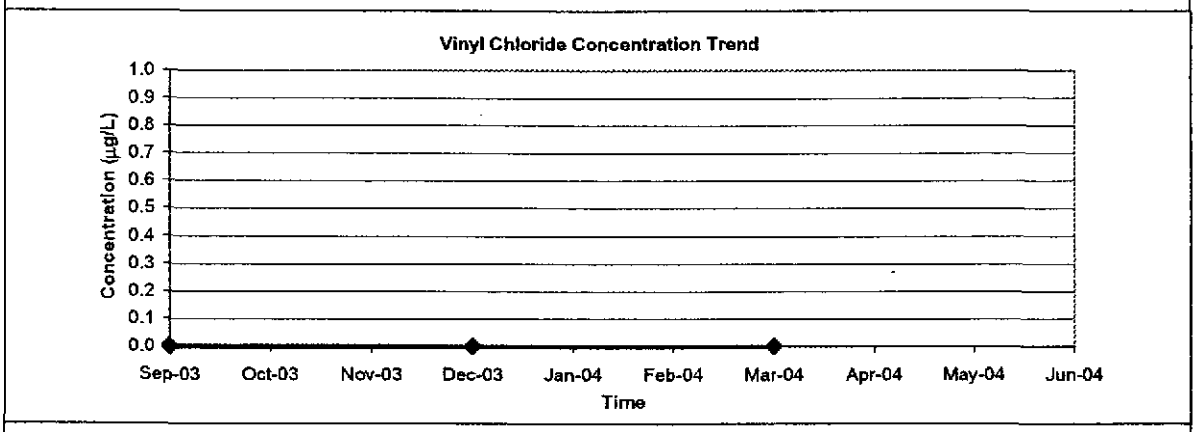


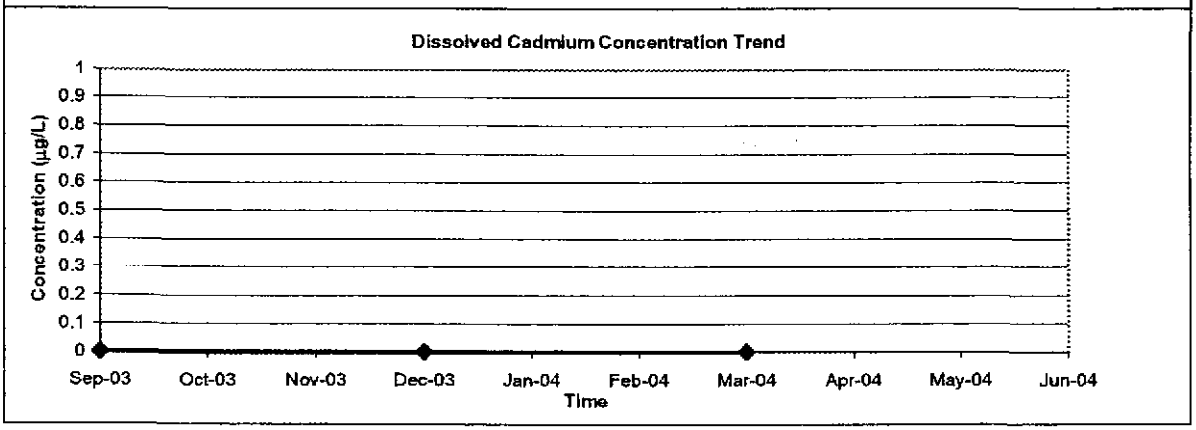


Monitoring Well --- DMW-6D

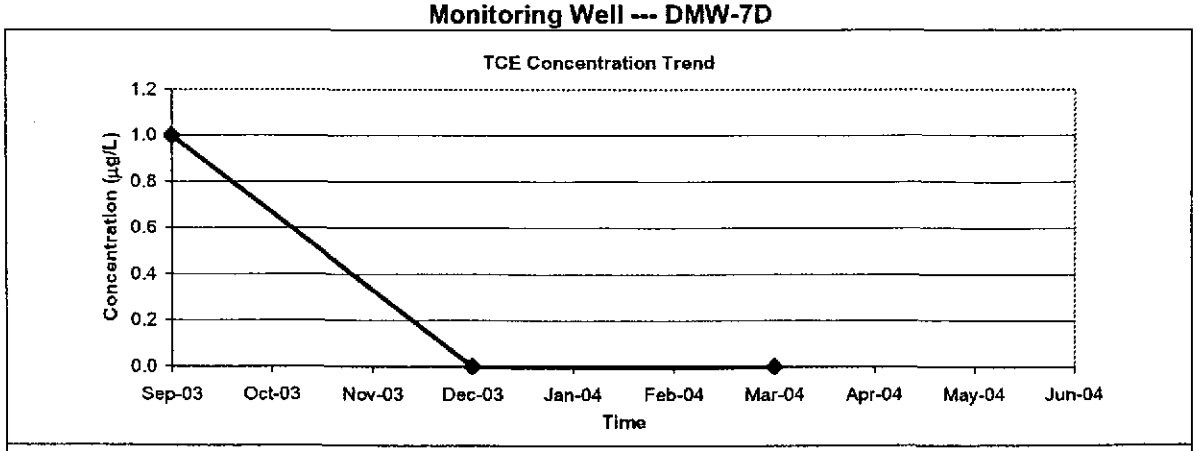


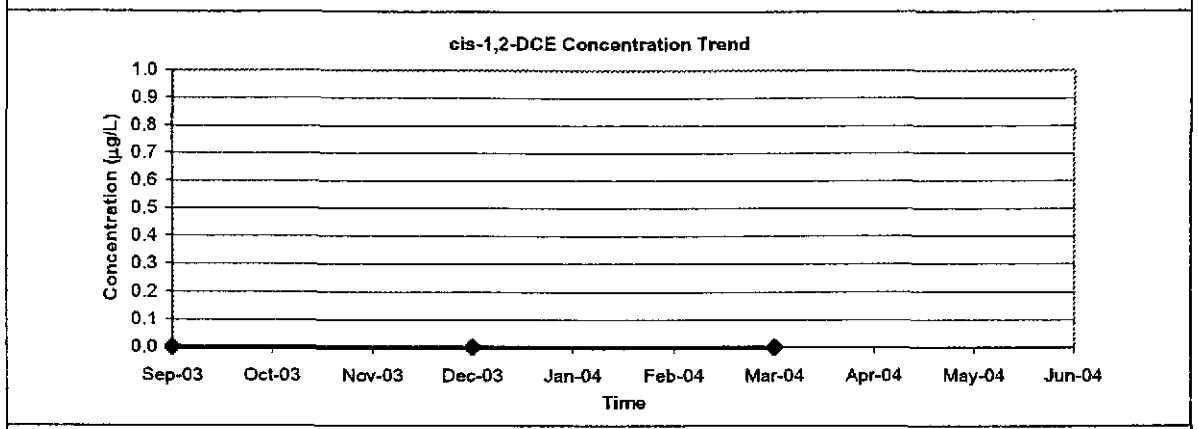


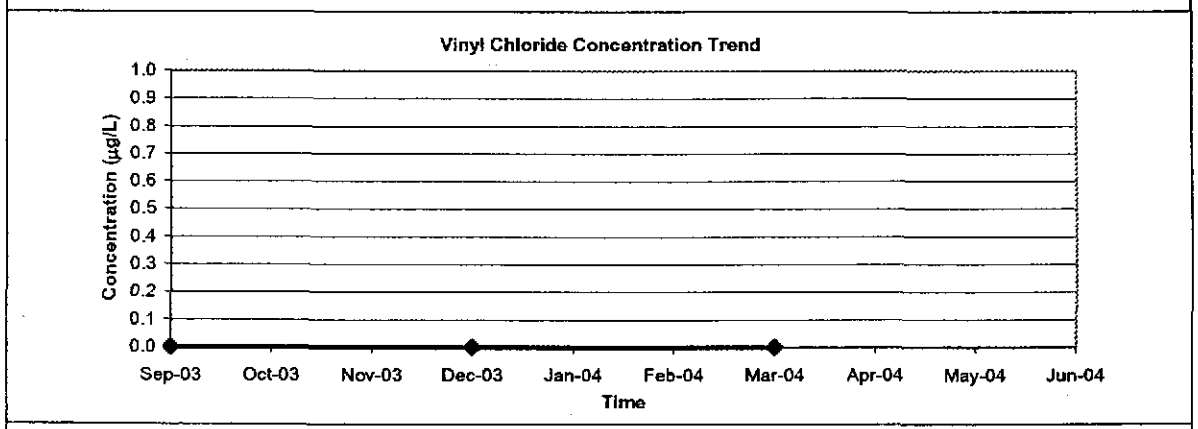


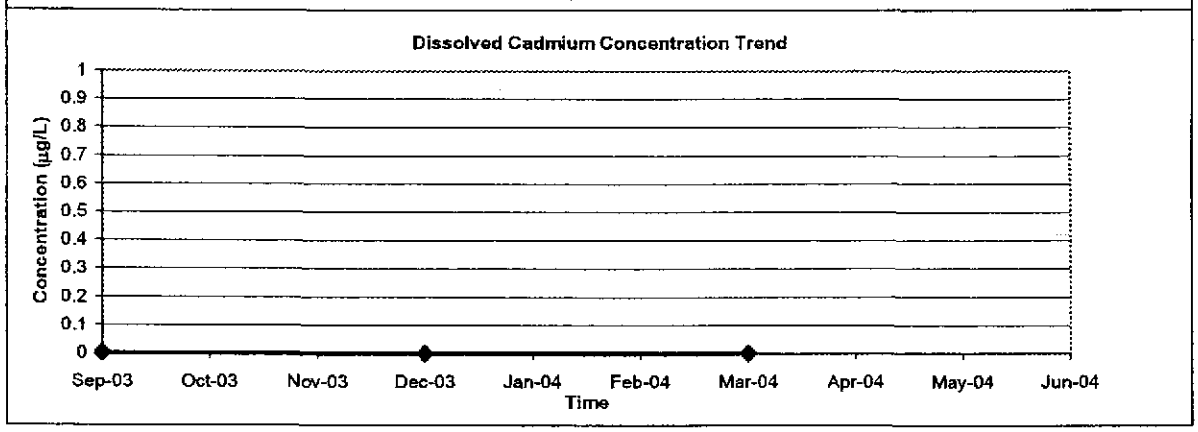


Monitoring Well --- DMW-7D

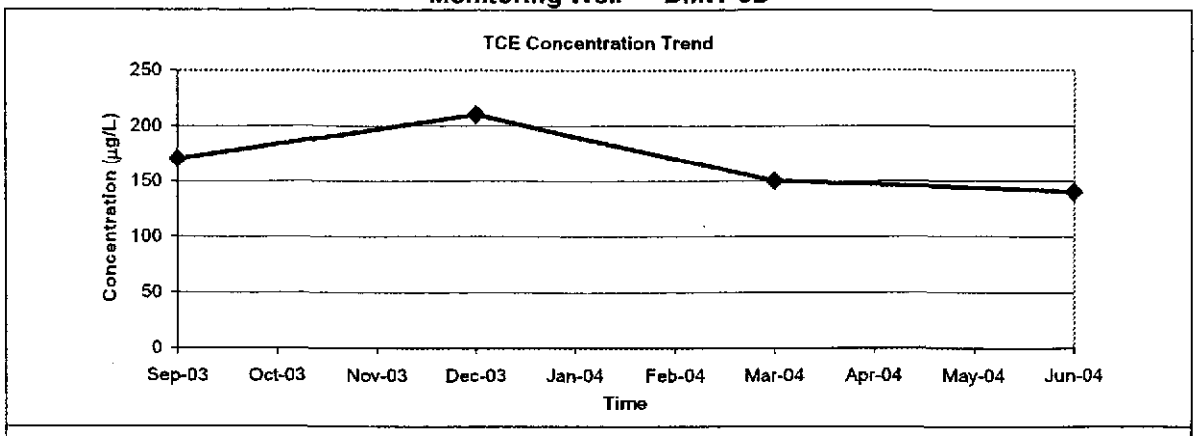


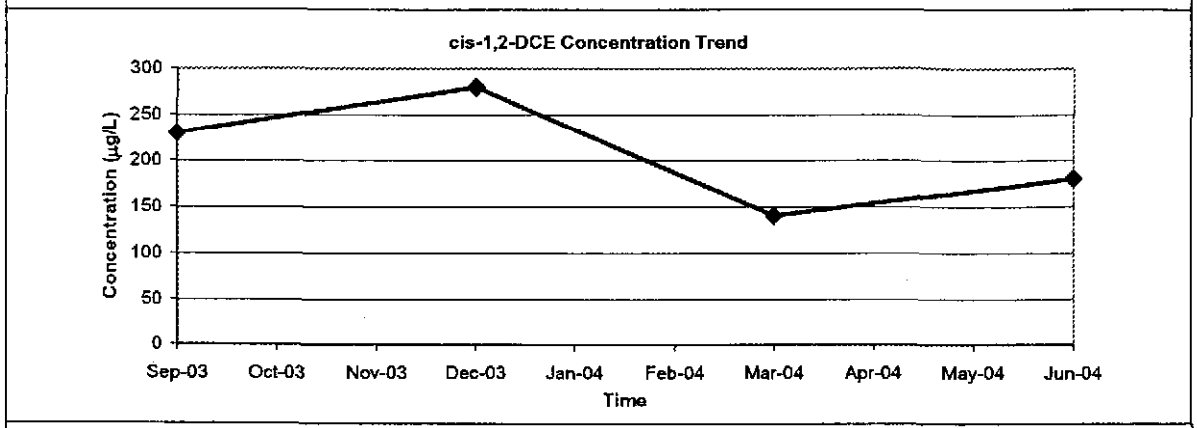


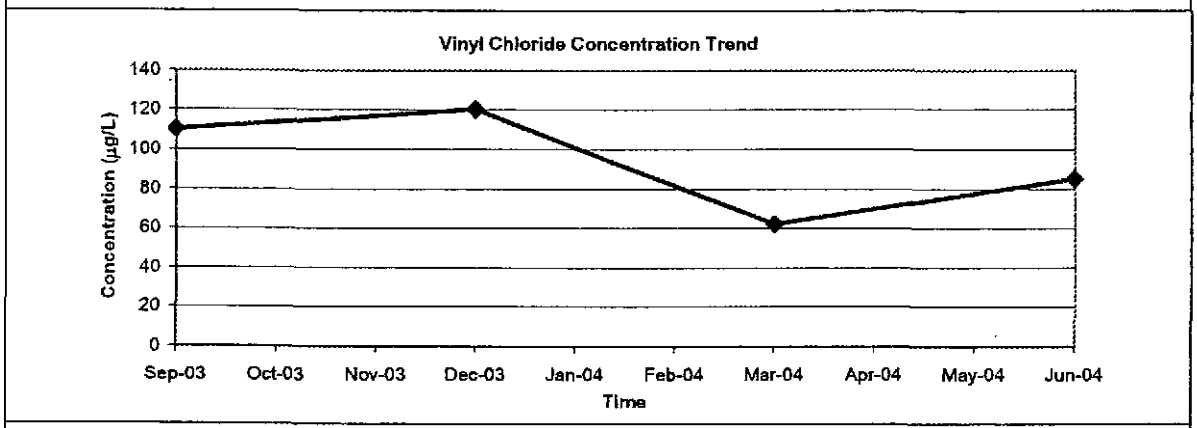


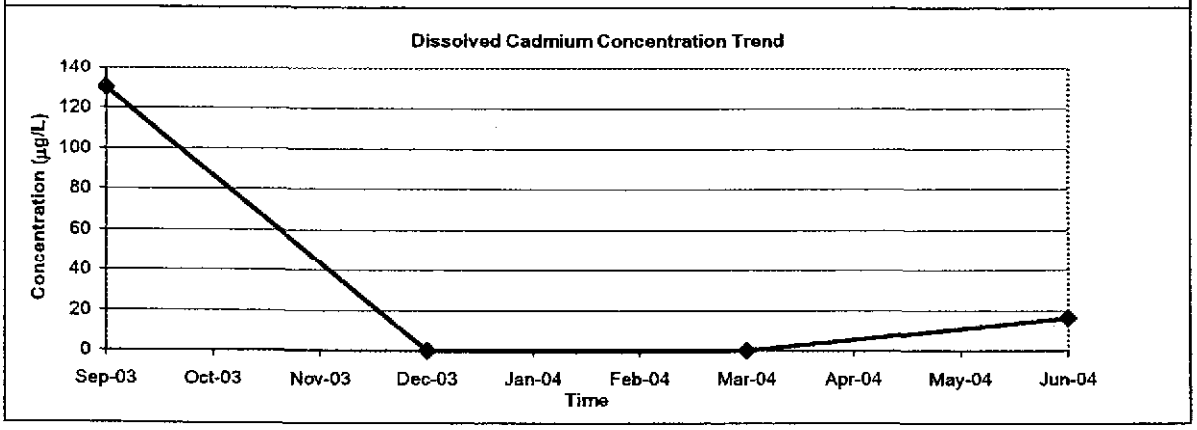


Monitoring Well --- DMW-8D

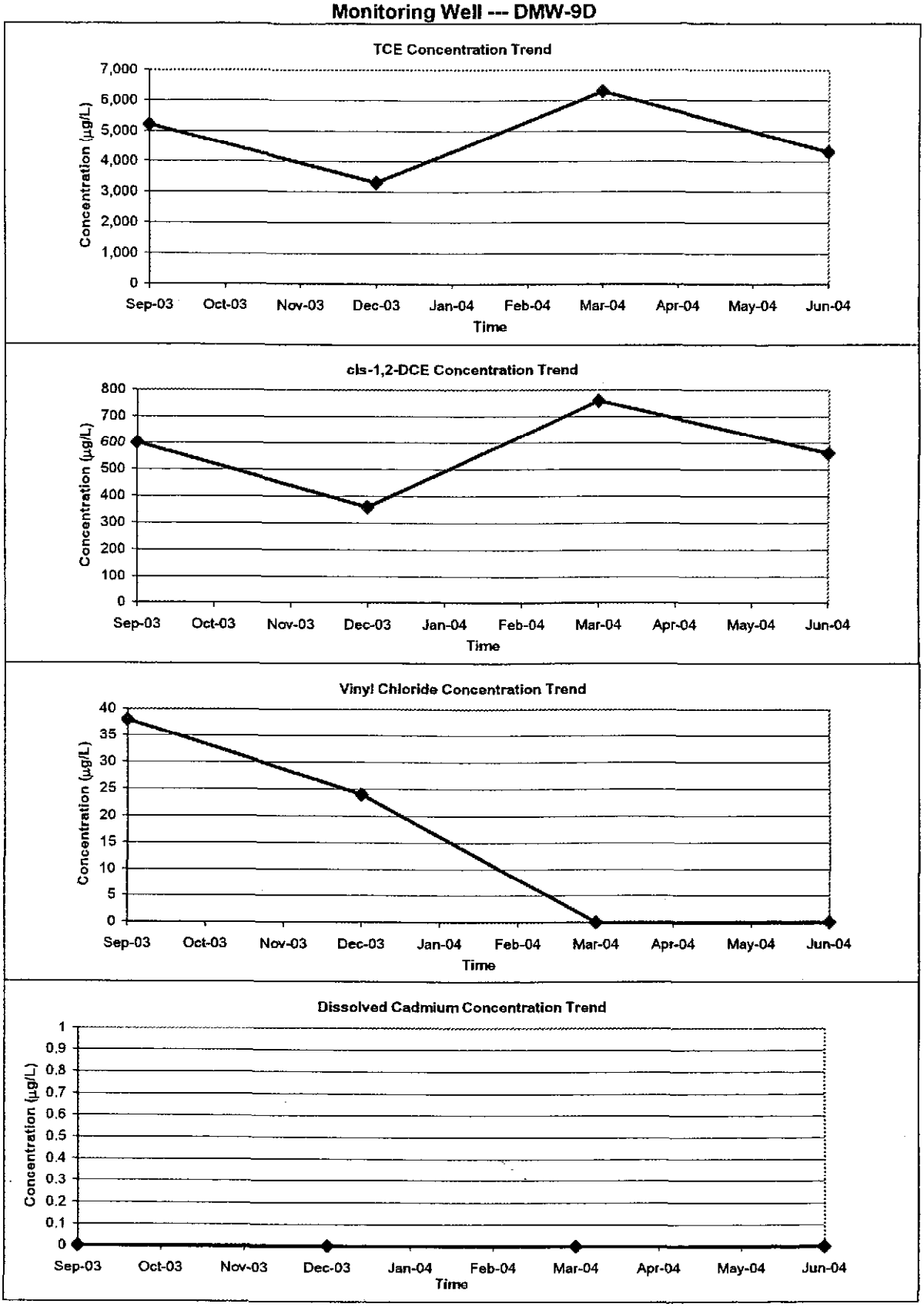








Monitoring Well --- DMW-9D



VOLUME II OF II

FINAL
JUNE 2004
QUARTERLY GROUNDWATER MONITORING REPORT
Martin State Airport: Middle River, Maryland

LOCKHEED MARTIN

Tetra Tech
Environmental Engineers & Scientists
TC#10825-10/August 2004

APPENDIX E
LABORATORY ANALYTICAL DATA REPORTS

PHASE SEPARATION SCIENCE, INC.

Analytical Chemistry Environmental Science

LABORATORY RESULTS

DATE RECEIVED: June 17, 2004

PROJECT: Martin State Airport-Quarterly Sampling

Project #: N7339-0677D

CERTIFICATE OF ANALYSIS #: *04061717*

PREPARED FOR:

Tetra Tech, Inc.
10670 White Rock Rd., Ste. 100
Rancho Cordova, CA 95670

June 29, 2004

6630 Baltimore National Pike Baltimore, Maryland 21228 (410) 747-8770 (800) 932-9047 fax (410) 788-8723

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www.phaseonline.com

PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04061717 Page 1 of 27
Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: TB061604 / 04061717-01						
Volatile Organic Compounds						
Benzene	ND	ug/L	EPA 8260B	1		6/21/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
Bromoform	ND	ug/L	EPA 8260B	1		6/21/2004
Bromomethane	ND	ug/L	EPA 8260B	1		6/21/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	1		6/21/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Chloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Chloroform	ND	ug/L	EPA 8260B	1		6/21/2004
Chloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/21/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/21/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		6/21/2004
Dibromomethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloroethene	ND	ug/L	EPA 8260B	1		6/21/2004
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260B	1		6/21/2004
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004

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CERTIFICATE OF ANALYSIS
No. 04061717 Page 2 of 27
Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: TB061604 / 04061717-01						
Volatile Organic Compounds						
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004
Ethylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		6/21/2004
Methylene chloride	ND	ug/L	EPA 8260B	1		6/21/2004
Naphthalene	ND	ug/L	EPA 8260B	1		6/21/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Styrene	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	1		6/21/2004
Toluene	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Trichloroethene	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Vinyl chloride	ND	ug/L	EPA 8260B	1		6/21/2004
m&p-Xylene	ND	ug/L	EPA 8260B	3		6/21/2004
o-Xylene	ND	ug/L	EPA 8260B	3		6/21/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		6/21/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		6/21/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		6/21/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		6/21/2004
Acetone	ND	ug/L	EPA 8260B	10		6/21/2004

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04061717 Page 3 of 27
Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: TB061604 / 04061717-01						
Volatile Organic Compounds						
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		6/21/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		6/21/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		6/21/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		6/21/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004

Reviewed By: Matt Cohen
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

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CERTIFICATE OF ANALYSIS
No. 04061717 Page 4 of 27
Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-8D-061604 / 04061717-02						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Arsenic	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Beryllium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Cadmium	**190**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Chromium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Copper	**5.1**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Lead	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Mercury	ND	ug/L	EPA 6020	1	6/18/2004	6/18/2004
Nickel	**44**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Selenium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Silver	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Thallium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Zinc	**240**	ug/L	EPA 6020	50	6/18/2004	6/18/2004
Volatile Organic Compounds						
Benzene	**1**	ug/L	EPA 8260B	1		6/21/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
Bromoform	ND	ug/L	EPA 8260B	1		6/21/2004
Bromomethane	ND	ug/L	EPA 8260B	1		6/21/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	1		6/21/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Chloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Chloroform	ND	ug/L	EPA 8260B	1		6/21/2004
Chloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/21/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/21/2004

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CERTIFICATE OF ANALYSIS
No. 04061717 Page 5 of 27
Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-8D-061604 / 04061717-02						
Volatile Organic Compounds						
Dibromochloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		6/21/2004
Dibromomethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloroethene	**4**	ug/L	EPA 8260B	1		6/21/2004
cis-1,2-Dichloroethene	**180**	ug/L	EPA 8260B	1		6/21/2004
trans-1,2-Dichloroethene	**1**	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004
Ethylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		6/21/2004
Methylene chloride	**b 3**	ug/L	EPA 8260B	1		6/21/2004
Naphthalene	ND	ug/L	EPA 8260B	1		6/21/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Styrene	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	1		6/21/2004
Toluene	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004

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Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-8D-061604 / 04061717-02						
Volatile Organic Compounds						
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Trichloroethene	**140**	ug/L	EPA 8260B	1		6/21/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Vinyl chloride	**85**	ug/L	EPA 8260B	1		6/21/2004
m&p-Xylene	ND	ug/L	EPA 8260B	3		6/21/2004
o-Xylene	ND	ug/L	EPA 8260B	3		6/21/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		6/21/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		6/21/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		6/21/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		6/21/2004
Acetone	ND	ug/L	EPA 8260B	10		6/21/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		6/21/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		6/21/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		6/21/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		6/21/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004

Reviewed By: Matt Cohen
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.

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Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-8D-061604 (Dissolved) / 04061717-03						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Arsenic	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Beryllium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Cadmium	**16**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Chromium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Copper	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Lead	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Mercury	ND	ug/L	EPA 6020	1	6/18/2004	6/18/2004
Nickel	**41**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Selenium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Silver	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Thallium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Zinc	**150**	ug/L	EPA 6020	50	6/18/2004	6/18/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Quality Assurance Chemist

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Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-8I-061604 / 04061717-04						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Arsenic	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Beryllium	**9.1**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Cadmium	**110**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Chromium	**360**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Copper	**47**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Lead	**11**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Mercury	ND	ug/L	EPA 6020	1	6/18/2004	6/18/2004
Nickel	**140**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Selenium	**26**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Silver	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Thallium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Zinc	**390**	ug/L	EPA 6020	50	6/18/2004	6/18/2004
Volatile Organic Compounds						
Benzene	**3**	ug/L	EPA 8260B	1		6/21/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
Bromoform	ND	ug/L	EPA 8260B	1		6/21/2004
Bromomethane	ND	ug/L	EPA 8260B	1		6/21/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	1		6/21/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Chloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Chloroform	**4**	ug/L	EPA 8260B	1		6/21/2004
Chloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/21/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/21/2004

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Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water
Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-8I-061604 / 04061717-04						
Volatile Organic Compounds						
Dibromochloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		6/21/2004
Dibromomethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloroethene	3	ug/L	EPA 8260B	1		6/21/2004
cis-1,2-Dichloroethene	600	ug/L	EPA 8260B	10		6/24/2004
trans-1,2-Dichloroethene	3	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004
Ethylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		6/21/2004
Methylene chloride	b 35	ug/L	EPA 8260B	1		6/21/2004
Naphthalene	ND	ug/L	EPA 8260B	1		6/21/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Styrene	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	1		6/21/2004
Toluene	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004

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June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-8I-061604 / 04061717-04						
Volatile Organic Compounds						
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Trichloroethene	**1,000**	ug/L	EPA 8260B	10		6/24/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Vinyl chloride	**120**	ug/L	EPA 8260B	1		6/21/2004
m&p-Xylene	ND	ug/L	EPA 8260B	3		6/21/2004
o-Xylene	ND	ug/L	EPA 8260B	3		6/21/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		6/21/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		6/21/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		6/21/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		6/21/2004
Acetone	ND	ug/L	EPA 8260B	10		6/21/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		6/21/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		6/21/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		6/21/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		6/21/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004

Reviewed By: Scott Ochu
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.

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Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water
Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-8I-061604 (Dissolved) / 04061717-05						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Arsenic	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Beryllium	**8.8**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Cadmium	**86**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Chromium	**7.7**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Copper	**29**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Lead	**7.5**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Mercury	ND	ug/L	EPA 6020	1	6/18/2004	6/18/2004
Nickel	**130**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Selenium	**24**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Silver	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Thallium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Zinc	**390**	ug/L	EPA 6020	50	6/18/2004	6/18/2004

Reviewed By: Matt Oslue
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

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June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-2B-061604 / 04061717-06						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Arsenic	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Beryllium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Cadmium	**13**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Chromium	**240**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Copper	**84**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Lead	**49**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Mercury	ND	ug/L	EPA 6020	1	6/18/2004	6/18/2004
Nickel	**210**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Selenium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Silver	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Thallium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Zinc	**190**	ug/L	EPA 6020	50	6/18/2004	6/18/2004
Volatile Organic Compounds						
Benzene	ND	ug/L	EPA 8260B	1		6/21/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
Bromoform	ND	ug/L	EPA 8260B	1		6/21/2004
Bromomethane	ND	ug/L	EPA 8260B	1		6/21/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	1		6/21/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Chloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Chloroform	ND	ug/L	EPA 8260B	1		6/21/2004
Chloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/21/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/21/2004

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Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water
Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-2B-061604 / 04061717-06						
Volatile Organic Compounds						
Dibromochloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		6/21/2004
Dibromomethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloroethene	ND	ug/L	EPA 8260B	1		6/21/2004
cis-1,2-Dichloroethene	**26**	ug/L	EPA 8260B	1		6/21/2004
trans-1,2-Dichloroethene	**1**	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004
Ethylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		6/21/2004
Methylene chloride	ND	ug/L	EPA 8260B	1		6/21/2004
Naphthalene	ND	ug/L	EPA 8260B	1		6/21/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Styrene	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	1		6/21/2004
Toluene	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004

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Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-2B-061604 / 04061717-06						
Volatile Organic Compounds						
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Trichloroethene	**15**	ug/L	EPA 8260B	1		6/21/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Vinyl chloride	ND	ug/L	EPA 8260B	1		6/21/2004
m&p-Xylene	ND	ug/L	EPA 8260B	3		6/21/2004
o-Xylene	ND	ug/L	EPA 8260B	3		6/21/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		6/21/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		6/21/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		6/21/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		6/21/2004
Acetone	ND	ug/L	EPA 8260B	10		6/21/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		6/21/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		6/21/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		6/21/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		6/21/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004

Reviewed By: _____
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

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June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-2B-061604 (Dissolved) / 04061717-07						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Arsenic	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Beryllium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Cadmium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Chromium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Copper	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Lead	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Mercury	ND	ug/L	EPA 6020	1	6/18/2004	6/18/2004
Nickel	**27**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Selenium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Silver	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Thallium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Zinc	ND	ug/L	EPA 6020	50	6/18/2004	6/18/2004

Reviewed By: Matt Colee
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

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No. 04061717
Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-2A-061604 / 04061717-08						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Arsenic	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Beryllium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Cadmium	**910**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Chromium	**8.4**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Copper	**100**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Lead	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Mercury	ND	ug/L	EPA 6020	1	6/18/2004	6/18/2004
Nickel	**150**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Selenium	**11**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Silver	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Thallium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Zinc	**630**	ug/L	EPA 6020	50	6/18/2004	6/18/2004
Volatile Organic Compounds						
Benzene	**37**	ug/L	EPA 8260B	1		6/21/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
Bromoform	ND	ug/L	EPA 8260B	1		6/21/2004
Bromomethane	ND	ug/L	EPA 8260B	1		6/21/2004
n-Butylbenzene	**3**	ug/L	EPA 8260B	1		6/21/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Carbon tetrachloride	**2**	ug/L	EPA 8260B	1		6/21/2004
Chlorobenzene	**8**	ug/L	EPA 8260B	1		6/21/2004
Chloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Chloroform	**99**	ug/L	EPA 8260B	1		6/21/2004
Chloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/21/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/21/2004

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Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-2A-061604 / 04061717-08						
Volatile Organic Compounds						
Dibromochloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		6/21/2004
Dibromomethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichlorobenzene	**7**	ug/L	EPA 8260B	1		6/21/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,4-Dichlorobenzene	**7**	ug/L	EPA 8260B	1		6/21/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloroethene	**49**	ug/L	EPA 8260B	1		6/21/2004
cis-1,2-Dichloroethene	**4,600**	ug/L	EPA 8260B	200		6/24/2004
trans-1,2-Dichloroethene	**33**	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004
Ethylbenzene	**20**	ug/L	EPA 8260B	1		6/21/2004
Isopropylbenzene	**4**	ug/L	EPA 8260B	1		6/21/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		6/21/2004
Methylene chloride	**b 100**	ug/L	EPA 8260B	1		6/21/2004
Naphthalene	**10**	ug/L	EPA 8260B	1		6/21/2004
n-Propylbenzene	**6**	ug/L	EPA 8260B	1		6/21/2004
Styrene	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Tetrachloroethene	**60**	ug/L	EPA 8260B	1		6/21/2004
Toluene	**410**	ug/L	EPA 8260B	200		6/24/2004
1,2,3-Trichlorobenzene	**180**	ug/L	EPA 8260B	1		6/21/2004
1,2,4-Trichlorobenzene	**890**	ug/L	EPA 8260B	200		6/24/2004

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Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-2A-061604 / 04061717-08						
Volatile Organic Compounds						
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,2-Trichloroethane	**10**	ug/L	EPA 8260B	1		6/21/2004
Trichloroethene	**23,000**	ug/L	EPA 8260B	200		6/24/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,4-Trimethylbenzene	**17**	ug/L	EPA 8260B	1		6/21/2004
1,3,5-Trimethylbenzene	**17**	ug/L	EPA 8260B	1		6/21/2004
Vinyl chloride	**640**	ug/L	EPA 8260B	200		6/24/2004
m&p-Xylene	**92**	ug/L	EPA 8260B	3		6/21/2004
o-Xylene	**35**	ug/L	EPA 8260B	3		6/21/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		6/21/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		6/21/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		6/21/2004
4-Methyl-2-Pentanone (MIBK)	**j 2**	ug/L	EPA 8260B	10		6/21/2004
Acetone	ND	ug/L	EPA 8260B	10		6/21/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		6/21/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		6/21/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		6/21/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		6/21/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004

Reviewed By: Matt Colee
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.
j - estimated value, less than quantitation limit.

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Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/16/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-2A-061604 (Dissolved) / 04061717-09						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Arsenic	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Beryllium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Cadmium	**860**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Chromium	**9.2**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Copper	**55**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Lead	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Mercury	ND	ug/L	EPA 6020	1	6/18/2004	6/18/2004
Nickel	**140**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Selenium	**10**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Silver	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Thallium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Zinc	**660**	ug/L	EPA 6020	50	6/18/2004	6/18/2004

Reviewed By: Matt Collier
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

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Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/17/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-5S-061704 / 04061717-10						
Nitrate Nitrogen						
Nitrate	ND	mg/L	EPA 300.0	0.2		6/17/2004
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Arsenic	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Beryllium	**5.1**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Cadmium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Chromium	**79**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Copper	**21**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Lead	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Mercury	ND	ug/L	EPA 6020	1	6/18/2004	6/18/2004
Nickel	**55**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Selenium	**19**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Silver	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Thallium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Zinc	**170**	ug/L	EPA 6020	50	6/18/2004	6/18/2004
Total Sulfate						
Sulfate	**520**	mg/L	EPA 300.0	1		6/18/2004
Volatile Organic Compounds						
Benzene	**2**	ug/L	EPA 8260B	1		6/21/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
Bromoform	ND	ug/L	EPA 8260B	1		6/21/2004
Bromomethane	ND	ug/L	EPA 8260B	1		6/21/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	1		6/21/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Chloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Chloroform	**2**	ug/L	EPA 8260B	1		6/21/2004

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04061717 Page 21 of 27
Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/17/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-5S-061704 / 04061717-10						
Volatile Organic Compounds						
Chloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/21/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/21/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		6/21/2004
Dibromomethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichloroethane	**9**	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloroethene	**5**	ug/L	EPA 8260B	1		6/21/2004
cis-1,2-Dichloroethene	**2,600**	ug/L	EPA 8260B	100		6/24/2004
trans-1,2-Dichloroethene	**18**	ug/L	EPA 8260B	1		6/21/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004
Ethylbenzene	**j 0.9**	ug/L	EPA 8260B	1		6/21/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		6/21/2004
Methylene chloride	**b 6**	ug/L	EPA 8260B	1		6/21/2004
Naphthalene	**3**	ug/L	EPA 8260B	1		6/21/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		6/21/2004
Styrene	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
Tetrachloroethene	**14**	ug/L	EPA 8260B	1		6/21/2004

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CERTIFICATE OF ANALYSIS
No. 04061717 Page 22 of 27
Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/17/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-5S-061704 / 04061717-10						
Volatile Organic Compounds						
Toluene	1	ug/L	EPA 8260B	1		6/21/2004
1,2,3-Trichlorobenzene	4	ug/L	EPA 8260B	1		6/21/2004
1,2,4-Trichlorobenzene	18	ug/L	EPA 8260B	1		6/21/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		6/21/2004
1,1,2-Trichloroethane	8	ug/L	EPA 8260B	1		6/21/2004
Trichloroethene	14,000	ug/L	EPA 8260B	100		6/24/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		6/21/2004
1,2,4-Trimethylbenzene	6	ug/L	EPA 8260B	1		6/21/2004
1,3,5-Trimethylbenzene	6	ug/L	EPA 8260B	1		6/21/2004
Vinyl chloride	35	ug/L	EPA 8260B	1		6/21/2004
m&p-Xylene	j 1	ug/L	EPA 8260B	3		6/21/2004
o-Xylene	5	ug/L	EPA 8260B	3		6/21/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		6/21/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		6/21/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		6/21/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		6/21/2004
Acetone	ND	ug/L	EPA 8260B	10		6/21/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		6/21/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		6/21/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		6/21/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		6/21/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/21/2004

Reviewed By: Matt Celice
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL
b - found in blank / suspected lab artifact.
j - estimated value, less than quantitation limit.

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CERTIFICATE OF ANALYSIS
No. 04061717 Page 23 of 27
Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/17/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-5S-061704 (Dissolved) / 04061717-11						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Arsenic	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Beryllium	**5.2**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Cadmium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Chromium	**11**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Copper	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Lead	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Mercury	ND	ug/L	EPA 6020	1	6/18/2004	6/18/2004
Nickel	**55**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Selenium	**18**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Silver	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Thallium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Zinc	**180**	ug/L	EPA 6020	50	6/18/2004	6/18/2004

Reviewed By: Matt Cole
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL

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CERTIFICATE OF ANALYSIS
No. 04061717 Page 24 of 27
Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/17/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-4I-061704 / 04061717-12						
Nitrate Nitrogen						
Nitrate	ND	mg/L	EPA 300.0	0.2		6/17/2004
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Arsenic	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Beryllium	**8.3**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Cadmium	**55**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Chromium	**33**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Copper	**15**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Lead	**16**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Mercury	ND	ug/L	EPA 6020	1	6/18/2004	6/18/2004
Nickel	**88**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Selenium	**26**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Silver	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Thallium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Zinc	**490**	ug/L	EPA 6020	50	6/18/2004	6/18/2004
Total Sulfate						
Sulfate	**900**	mg/L	*EPA 300.0*	1		6/18/2004
Volatile Organic Compounds						
Benzene	ND	ug/L	EPA 8260B	100		6/22/2004
Bromobenzene	ND	ug/L	EPA 8260B	100		6/22/2004
Bromochloromethane	ND	ug/L	EPA 8260B	100		6/22/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	100		6/22/2004
Bromoform	ND	ug/L	EPA 8260B	100		6/22/2004
Bromomethane	ND	ug/L	EPA 8260B	100		6/22/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	100		6/22/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	100		6/22/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	100		6/22/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	100		6/22/2004
Chlorobenzene	ND	ug/L	EPA 8260B	100		6/22/2004
Chloroethane	ND	ug/L	EPA 8260B	100		6/22/2004
Chloroform	ND	ug/L	EPA 8260B	100		6/22/2004

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CERTIFICATE OF ANALYSIS
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Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/17/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-4I-061704 / 04061717-12						
Volatile Organic Compounds						
Chloromethane	ND	ug/L	EPA 8260B	100		6/22/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	100		6/22/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	100		6/22/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	100		6/22/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	100		6/22/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	100		6/22/2004
Dibromomethane	ND	ug/L	EPA 8260B	100		6/22/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	100		6/22/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	100		6/22/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	100		6/22/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	100		6/22/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	100		6/22/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	100		6/22/2004
1,1-Dichloroethene	ND	ug/L	EPA 8260B	100		6/22/2004
cis-1,2-Dichloroethene	**1,400**	ug/L	EPA 8260B	100		6/22/2004
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260B	100		6/22/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	100		6/22/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	100		6/22/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	100		6/22/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	100		6/22/2004
Ethylbenzene	ND	ug/L	EPA 8260B	100		6/22/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	100		6/22/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	100		6/22/2004
Methylene chloride	**b 950**	ug/L	EPA 8260B	100		6/22/2004
Naphthalene	ND	ug/L	EPA 8260B	100		6/22/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	100		6/22/2004
Styrene	ND	ug/L	EPA 8260B	100		6/22/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	100		6/22/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	100		6/22/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	100		6/22/2004

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CERTIFICATE OF ANALYSIS
No. 04061717 Page 26 of 27
Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/17/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-4I-061704 / 04061717-12						
Volatile Organic Compounds						
Toluene	ND	ug/L	EPA 8260B	100		6/22/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	100		6/22/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	100		6/22/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	100		6/22/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	100		6/22/2004
Trichloroethene	**7,900**	ug/L	EPA 8260B	100		6/22/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	100		6/22/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	100		6/22/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	100		6/22/2004
Vinyl chloride	ND	ug/L	EPA 8260B	100		6/22/2004
m&p-Xylene	ND	ug/L	EPA 8260B	300		6/22/2004
o-Xylene	ND	ug/L	EPA 8260B	300		6/22/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	100		6/22/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	1000		6/22/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	1000		6/22/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	1000		6/22/2004
Acetone	ND	ug/L	EPA 8260B	1000		6/22/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	500		6/22/2004
Carbon disulfide	ND	ug/L	EPA 8260B	100		6/22/2004
Vinyl acetate	ND	ug/L	EPA 8260B	100		6/22/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	100		6/22/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	100		6/22/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	100		6/22/2004

Reviewed By: Matt Cole
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.

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CERTIFICATE OF ANALYSIS
No. 04061717 Page 27 of 27
Tetra Tech, Inc.
June 29, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/17/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-4I-061704 (Dissolved) / 04061717-13						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Arsenic	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Beryllium	**6.9**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Cadmium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Chromium	**16**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Copper	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Lead	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Mercury	ND	ug/L	EPA 6020	1	6/18/2004	6/18/2004
Nickel	**76**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Selenium	**23**	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Silver	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Thallium	ND	ug/L	EPA 6020	5	6/18/2004	6/18/2004
Zinc	**240**	ug/L	EPA 6020	50	6/18/2004	6/18/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: _____
Quality Assurance Chemist

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CERTIFICATE OF ANALYSIS
No. 04061717 Page 1 of 1
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D

Date Sampled: 6/17/2004
Date Received: 6/17/2004

	Result	Unit	Method	PQL	Analyzed
Sample ID: DMW-5S-061704 / 04061717-10 / Ground Water					
Dissolved Gases in Water					
Ethane	ND	mg/L	SM6211B/EPA8015	0.012	6/22/2004
Ethene	ND	mg/L	SM6211B/EPA8015	0.012	6/22/2004
Ferric Iron					
Iron (Fe3+)	ND	mg/L	Mod_7199	1	6/18/2004
Sample ID: DMW-4I-061704 / 04061717-12 / Ground Water					
Dissolved Gases in Water					
Ethane	ND	mg/L	SM6211B/EPA8015	0.013	6/22/2004
Ethene	**0.013**	mg/L	SM6211B/EPA8015	0.012	6/22/2004
Ferric Iron					
Iron (Fe3+)	ND	mg/L	Mod_7199	1	6/18/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Quality Assurance Chemist

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

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(1)

CLIENT: Tetra Tech PHONE NO.: (916) 276-7846

PROJECT MGR: Nisha Bansal FAX NO.: ( )

EMAIL: Nisha.bansal@TetraTech.com

PROJECT NAME: Martin State Airport - Quarterly Sampling

SITE LOCATION: Martin State Airport

PROJECT NO.: N7339-0677D P.O. NO.:

PSS Project #: 04061717 ~~04061715~~ 6/17/04

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(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	Volatile Organic Compounds (8260B)	Total Priority Pollutant Metals (6020)	Dissolved Priority Pollutant Metals (6020)	Ethane/Ethene	Nitrate & Sulfate	Ferric Iron				REMARKS
							Preservatives Used: HCL	HNO3	HNO3	ICE	ICE	ICE				
	TB0616 04	6/16/04	0900	GW	2	G	X									
	DMW-8D-0616 04		1227	GW	5	G	X	X	X							
	DMW-8I-0616 04		1334	GW	5	G	X	X	X							
	DMW-2B-0616 04		1451	GW	5	G	X	X	X							
	DMW-2A-0616 04		1605	GW	5	G	X	X	X							
	DMW-5S-0617 04	6/17/04	0958	GW	10	G	X	X	X	X	X	X				
	DMW-4I-0617 04		1126	GW	10	G	X	X	X	X	X	X				

(3) Analysis Required

(4)

Requested Turnaround Time
- [x] 5-Day (Std.)
- [ ] 3-Day
- [ ] 2-Day
- [ ] Next Day
- [ ] Emergency
- [ ] Other

Data Deliverables Required:

Sample Condition Upon Receipt:

Custody Seal:

Shipping Carrier:

Shipping Ticket No.:

Special Instructions:

(5)

Collected / Relinquished By: (1)	Date	Time	Received By
Clark C. Smith III	6/17	1:58	[illegible]
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Collected / Relinquished By: (4)	Date	Time	Received By:

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The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if colleciton becomes necessary.

Lab Proj #: P0406361
Report Date: 06/28/04
Client Proj Name: Martin State Airport
Client Proj #: 04061717

Client Name: Phase Separation Science
Contact: Bryan Ridgell
Address: 6630 Baltimore National P
Baltimore, MD 21228

Lab Sample #: P0406361-01

Sample Description	Matrix	Sampled Date/Time	Received
04061717-10	Water	17 Jun. 04 9:58	18 Jun. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
WetChem						
Ferric Iron	<1.0	1.0	mg/L	Mod.7199	md	6/18/04 19:53

N - NELAC certified analysis

Lab Proj #: P0406361
Report Date: 06/28/04
Client Proj Name: Martin State Airport
Client Proj #: 04061717

Client Name: Phase Separation Science
Contact: Bryan Ridgell
Address: 6630 Baltimore National P
Baltimore, MD 21228

Lab Sample #: P0406361-02

Sample Description	Matrix	Sampled Date/Time	Received
04061717-12	Water	17 Jun. 04 11:26	18 Jun. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
WetChem						
Ferric Iron	<1.0	1.0	mg/L	Mod.7199	md	6/18/04 20:09

N - NELAC certified analysis

ENVIRO-CHEM
LABORATORIES, INC.

100 Lakefront Drive, Hunt Valley, Maryland 21030 (410) 785-9739

FINAL REPORT OF ANALYSES

Phase Separation Science, Inc.
6630 Baltimore Nat. Pike
Baltimore, MD 21228-
Attn: Mr. John Richardson

PROJECT NAME: 04061717 ~~04061715~~ BE 4/19/04
REPORT DATE: 06/23/2004

SAMPLE NUMBER- 32175 SAMPLE ID- DMW-5S-061704
DATE SAMPLED- 06/17/04
DATE RECEIVED- 06/17/04 SAMPLER- NOT SPECIFIED
TIME RECEIVED- 1600 DELIVERED BY- Courier

SAMPLE MATRIX- WA
TIME SAMPLED- 0958
RECEIVED BY- SES

ANALYSIS	METHOD	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
NITRATE	EPA 300.0	06/17/04	SES	<0.2	mg/L as N	0.2
SULFATE	EPA 300.0	06/18/04	SES	523	mg/L	1.0

LABORATORY DIRECTOR

ENVIRO-CHEM
LABORATORIES, INC.

100 Lakefront Drive, Hunt Valley, Maryland 21030 (410) 785-9739

FINAL REPORT OF ANALYSES

Phase Separation Science, Inc.
6630 Baltimore Nat. Pike
Baltimore, MD 21228-
Attn: Mr. John Richardson

PROJECT NAME: 04061715
REPORT DATE: 06/23/2004

SAMPLE NUMBER- 32176 SAMPLE ID- DMW-4I-061704
DATE SAMPLED- 06/17/04
DATE RECEIVED- 06/17/04 SAMPLER- NOT SPECIFIED
TIME RECEIVED- 1600 DELIVERED BY- Courier

SAMPLE MATRIX- WA
TIME SAMPLED- 1126
RECEIVED BY- SES

ANALYSIS	METHOD	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
NITRATE	EPA 300.0	06/17/04	SES	<0.2	mg/L as N	0.2
SULFATE	EPA 300.0	06/18/04	SES	898	mg/L	1.0

LABORATORY DIRECTOR

MARYLAND SPECTRAL SERVICES, INC.

1500 CATON CENTER DRIVE, BALTIMORE, MD 21227

(410) 247-7600

LABORATORY RESULTS

RESULTS OF ANALYSIS OF

MARTIN STATE AIRPORT-QUARTERLY SAMPLING WATER SAMPLES

COLLECTED 17 JUNE 2004

Prepared For

PHASE SEPARATION SCIENCE, INC.

BALTIMORE, MD

14 July 2004

SAMPLE DATA SUMMARY PACKAGE

Table of Contents

1. Narrative

2. Chain-of-Custody Records

3. Results of Analyses

4. Chromatograms of Samples and Method Blanks

1. Narrative

NARRATIVE

Laboratory Name: Maryland Spectral Services, Inc. (MSS)

Date Samples Delivered to MSS Laboratory: 18 June 2004

Client: Phase Separation Science, Inc.

Project: Martin State Airport-Quarterly Sampling; 04061717

Results for the following samples are included in this data package:

Client ID	MSS ID	Matrix	Analysis
04061717-10 DMW-5S-061704	040618-48	Water	Ethane, Ethene
04061717-12 DMW-4I-061704	040618-49	Water	Ethane, Ethene

The samples were analyzed for ethane (C_2H_6) and ethene (C_2H_4) using Method 6211B of *Standard Methods* (1989) for the sample preparation and calculation steps and replacing the combustible-gas indicator with capillary gas chromatography and a flame ionization detector (FID) as in U.S. EPA Method 8015.

The samples were received in nominal 40-mL septum-sealed vials with no headspace. Prior to analysis, the vials were allowed to reach room temperature. Approximately half of the liquid was removed from each vial. The vials were shaken for 15 min and then allowed to stand for one hour.

An aliquot of the headspace vapor was removed from each vial with a gas-tight syringe. Fifty microliters of the headspace vapor, or of a dilution thereof, was injected directly into a Hewlett Packard 5890 gas chromatograph equipped with an FID. A RTx-200 capillary column (60 m x 0.53 mm i.d., 5.0-um film thickness) was used for the separation. The GC oven temperature was maintained at 45 C.

The GC detector response was calibrated by analysis of three levels of methane, ethane, and ethene prepared from a certified mixture in nitrogen obtained from Scott Specialty Gases.

Samples with high concentrations were diluted to keep the analyte response within the calibration range.

See the appendix to this narrative for a discussion of the values for the Henry's law constants used in the conversion of the headspace concentrations to aqueous concentrations.

The results of the analyses are presented in Section 3 and are reported as milligrams per liter (parts per million).

Prior to the analysis of the samples, a method blank consisting of laboratory helium was analyzed. The method blank results are present on the sample data tables in Section 3.

Chromatograms of sample and method blank analyses are provided in Section 4 and are labeled for the target compounds.

NARRATIVE (continued)

RELEASE OF THE DATA CONTAINED IN THIS HARDCOPY DATA PACKAGE HAS BEEN AUTHORIZED BY THE LABORATORY MANAGER OR HIS DESIGNEE, AS VERIFIED BY THE FOLLOWING SIGNATURE:

Michael M. Robison DATE: 14 July 2004

Michael M. Robison 14 July 2004

APPENDIX - Henry's Law Constants

The calculation of the original aqueous phase concentration from the headspace concentration require Henry's law constant, but Method 6211B only provides the constant for methane. The Henry's law constants for ethane and ethene were derived from values given by Lide & Frederikse (1995) and Wilhelm et al. (1997) as collected in Sander (1999). The values for 25 C were converted to 20 C using the temperature dependence constants given with the values. (A value for methane at 20 C calculated by the same process differed from the value in Method 6211B by less than 4%.) The following values were used in the calculations:

Analyte	Henry's Law Constant (kPa)	Reference
Ethane	2.59×10^6	Lide & Frederikse (1995)
Ethene	1.08×10^6	Wilhelm et al. (1997)

For T = 20 C and P = 100 kPa, the concentration in the original aqueous sample is given by:

$$C_o = C_v \cdot MW \cdot [0.4103 \times 10^{-4} (V_v/V_a) + 5.541/H] \cdot D$$

where

C_o = analyte concentration in original aqueous sample (mg/L)
C_v = analyte concentration in headspace vapor phase (uL/L)
MW = molecular weight of analyte
V_v = volume of headspace vapor phase (mL)
V_a = volume of headspace aqueous phase (mL)
H = Henry's law constant (kPa)
D = dilution factor

References

American Public Health Association, American Water Works Association, Water Pollution Control Federation. 1989. Method 6211B: Methane/Combustible-gas indicator method. In *Standard Methods for the Examination of Water and Wastewater*, 17th ed. APHA, Washington, D.C.

Lide, D.R. and H.P.R. Frederikse, Eds. 1995. *CRC Handbook of Chemistry and Physics*, 76th ed. CRC Press, Inc., Boca Raton, Florida.

NARRATIVE (continued)

Sander, R. 1999. Compilation of Henry's Law Constants for Inorganic and Organic Species of Potential Importance in Environmental Chemistry, ver. 3. http://www.mpch-mainz.mpg.de/~sander/res/henry.html (accessed June 2000).

Wilhelm, E., R. Battino, and R.J. Wilcock. 1977. Low-pressure solubility of gases in liquid water. *Chem. Rev.* 77:219-262.

2. Chain-of-Custody Records

OFFICES:
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BALTIMORE, MD 21228
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800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE •

Chain of Custody

COC- ID	3337	**Phone Number**	410-247-7600
Date Shipped	06/17/04	**Fax Number**	410-247-7602
Organization	MSS	**Shipped Via**	Dial Courier
Address	1500 Caton Center Drive Baltimore, MD 21227	**Airbill Number**	
		Due Date	06/24/04 5:00:00 PM

Lab Number: 04061717
Project: Martin State Airport-Quarterly Sampling

Sample Number	Description	Analysis		Method	No. of Cont.	Date Sampled
04061717-10	DMW-5S-061704	Ethane	04-0618-48	211B/EPA8015M	1	06/17/04 9:58:00 AM
		Ethene		211B/EPA8015M	1	06/17/04 9:58:00 AM
04061717-12	DMW-4I-061704	Ethane	04-0618-49	211B/EPA8015M	1	06/17/04 11:26:00 AM
		Ethene		211B/EPA8015M	1	06/17/04 11:26:00 AM

Relinquished By / Date / Time

RSmith 6/18

Matt Smith 6/18 1:45

Accepted By / Date / Time

Matt Smith 6/18/04 1:15

K L Lill Jr 6/18/04 1345

3. Results of Analyses

MARYLAND SPECTRAL SERVICES, INC.
1500 Caton Center Drive, Baltimore MD 21227

HYDROCARBONS BY METHODS SM6211B/EPA 8015 (HEADSPACE/GC/FID)

CLIENT SAMPLE ID:	DMW-5S MARTIN STATE	DMW-4I MARTIN STATE	WBLK0622
LAB SAMPLE ID:	04061848	04061849	METHOD BLANK
SAMPLE DATE:	06/17/04	06/17/04	
RECEIVED DATE:	06/18/04	06/18/04	
ANALYSIS DATE:	06/22/04	06/22/04	06/22/04
INSTRUMENT ID:	GC-G	GC-G	GC-G
MATRIX:	WATER	WATER	WATER
UNITS:	mg/L	mg/L	mg/L
DILUTION FACTOR:	1.0	1.0	1.0
ANALYTE			
Ethene	0.012 U	0.013	0.012 U
Ethane	0.012 U	0.013 U	0.012 U

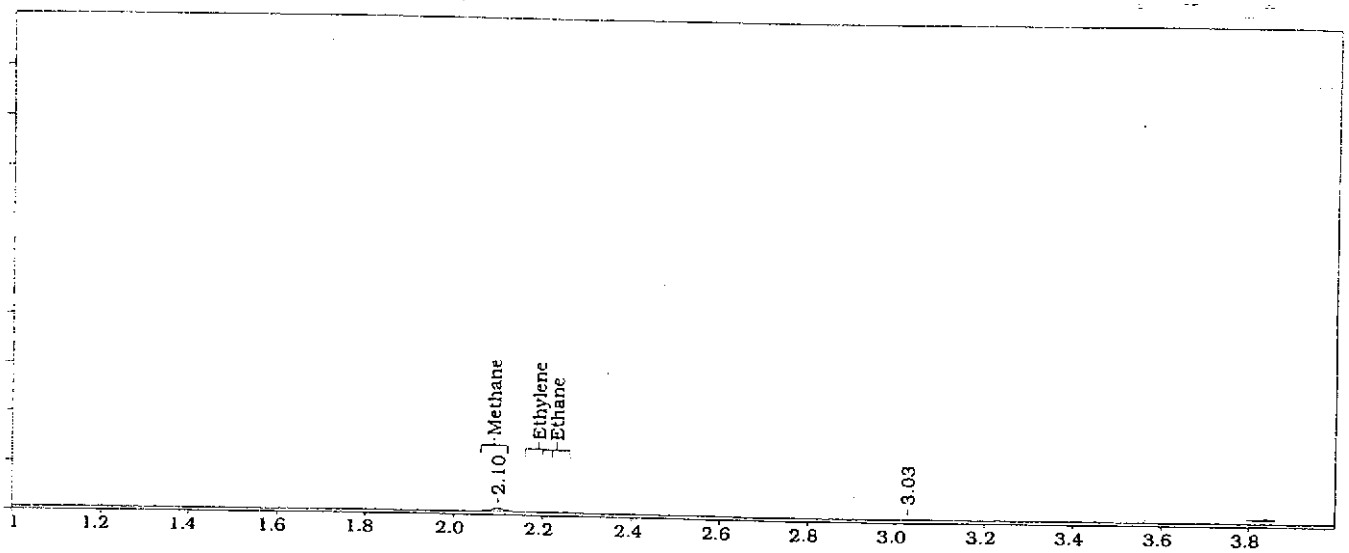
E - Analyte response exceeds the calibration range
mg/L - Milligrams per Liter (parts per million)
U - Less than reported quantitaion limit

4. Chromatograms of Samples and Method Blanks

File=C:\DIRECT\DATAG1\0622G.05R Date printed=06-22-2004 Time= 14:50:00

Sample Name=METHOD BLANK

1.0 to 4.0 min. Low Y=2.691 High Y=62.691 mv Span=60.0



********** MARYLAND SPECTRAL SERVICES, INC. **********

SAMPLE NAME:---- METHOD BLANK-----
ANALYSIS DATE: Jun 22, 2004 10:06:03
OPERATOR: CMK
INSTRUMENT ID: GC-G--FID

METHOD FILE: C:\DIRECT\DATAG1\C1C2.MET
CALIBRATION FILE: C:\DIRECT\DATAG1\C1-C2.CAL 22
RAW DATA FILE NAME:C:\DIRECT\DATAG1\0622G.05R
RUN TIME 5

DILUTION FACTOR 1
AMOUNT INJECTED 1

RTX-1 60 X .53MMID X 5.0UM FILM
HYDROCARBONS BY METHOD EPA 8015M

********* PEAKS DETECTED IN THIS CHROMATOGRAM **********

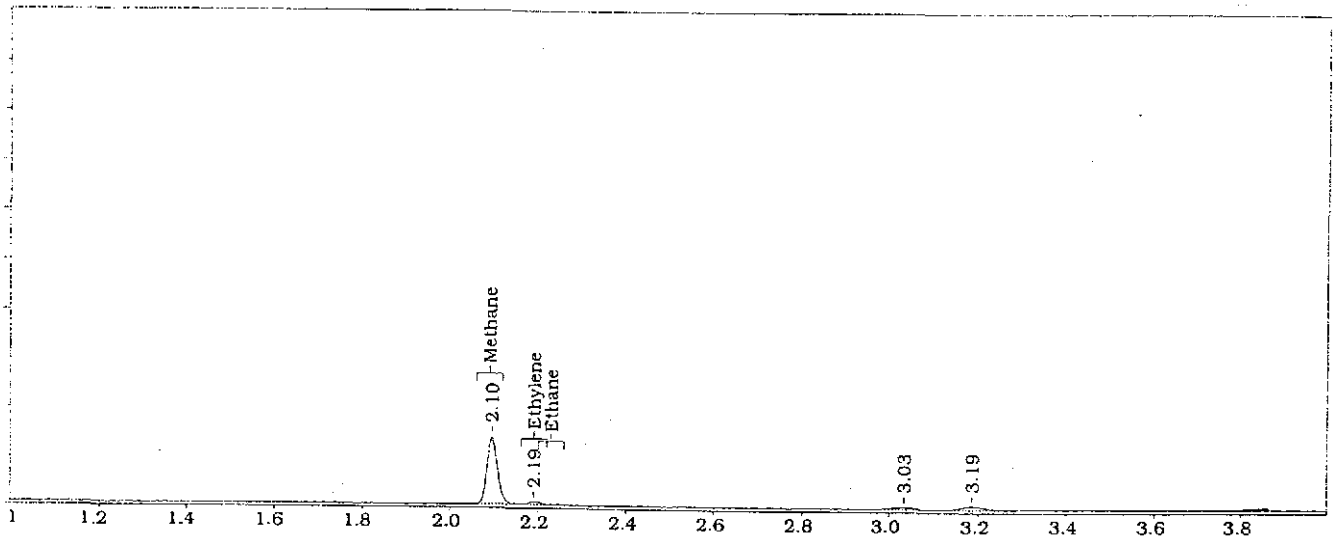
Peak #	Ret Time (min)	Peak Name	Amount PPM V/V	Peak Area	Peak Height
1	2.101	Methane	4.3288	741	353
2	3.027		0.0000	941	138
3	4.830		0.0000	763	105

File name: C:\DIRECT\DATAG1\0622G.05R
Total area for this analysis = 2445.187

File=C:\DIRECT\DATAG1\0622G.06R Date printed=06-22-2004 Time= 10:19:56

Sample Name=040618-48

1.0 to 4.0 min. Low Y=2.691 High Y=62.691 mv Span=60.0



********** MARYLAND SPECTRAL SERVICES, INC. **********

SAMPLE NAME:---- 040618-48-----
ANALYSIS DATE: Jun 22, 2004 10:19:20
OPERATOR: CMK
INSTRUMENT ID: GC-G--FID

METHOD FILE: C:\DIRECT\DATAG1\C1C2.MET
CALIBRATION FILE: C:\DIRECT\DATAG1\C1-C2.CAL 22
RAW DATA FILE NAME:C:\DIRECT\DATAG1\0622G.06R
RUN TIME 5

DILUTION FACTOR 1 RTX-1 60 X .53MMID X 5.0UM FILM
AMOUNT INJECTED 1 HYDROCARBONS BY METHOD EPA 8015M

********* PEAKS DETECTED IN THIS CHROMATOGRAM **********

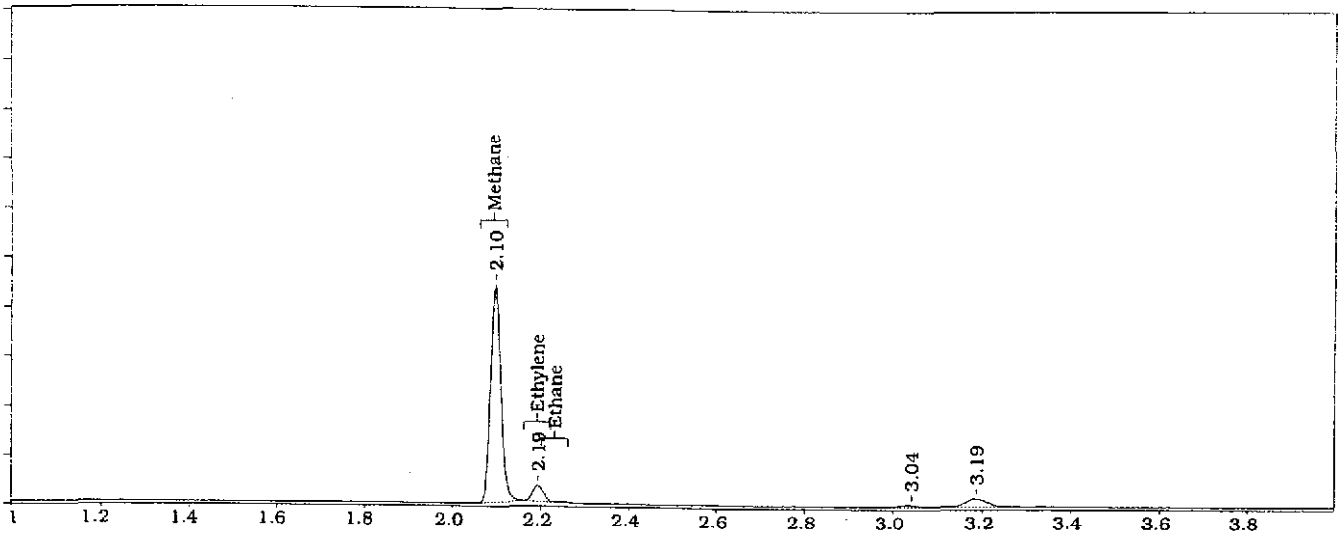
Peak #	Ret Time (min)	Peak Name	Amount PPM V/V	Peak Area	Peak Height
1	2.096	Methane	79.3502	13590	8200
2	2.192	Ethylene	2.3540	766	370
3	3.032		0.0000	1143	260
4	3.187		0.0000	1587	417
5	4.797		0.0000	983	104

File name: C:\DIRECT\DATAG1\0622G.06R
Total area for this analysis = 18068.96

File=C:\DIRECT\DATAG1\0622G.07R Date printed=06-22-2004 Time= 10:28:35

Sample Name=040618-49

1.0 to 4.0 min. Low Y=2.713 High Y=62.713 mv Span=60.0



********** MARYLAND SPECTRAL SERVICES, INC. **********

SAMPLE NAME:---- 040618-49-----
ANALYSIS DATE: Jun 22, 2004 10:28:33
OPERATOR: CMK
INSTRUMENT ID: GC-G--FID

METHOD FILE: C:\DIRECT\DATAG1\C1C2.MET
CALIBRATION FILE: C:\DIRECT\DATAG1\C1-C2.CAL 22
RAW DATA FILE NAME:C:\DIRECT\DATAG1\0622G.07R
RUN TIME 5

DILUTION FACTOR 1 RTX-1 60 X .53MMID X 5.0UM FILM
AMOUNT INJECTED 1 HYDROCARBONS BY METHOD EPA 8015M

********* PEAKS DETECTED IN THIS CHROMATOGRAM **********

Peak #	Ret Time (min)	Peak Name	Amount PPM V/V	Peak Area	Peak Height
1	2.096	Methane	249.1345	42667	26275
2	2.193	Ethylene	10.7719	3506	1941
3	3.039		0.0000	896	223
4	3.186		0.0000	3968	957

File name: C:\DIRECT\DATAG1\0622G.07R
Total area for this analysis = 51036.88

PHASE SEPARATION SCIENCE, INC.

Analytical Chemistry Environmental Science

QA/QC SUMMARY DATA

Volatile Organic Compounds

- *Surrogate Summary*
- *Method Blank Summary*
- *Continuing Calibration Verification Summary*
- *LCS Summary*
- *MS/MSD Summary*
- *BFB Tune Summary*

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PHASE SEPARATION SCIENCE, INC.

VOLATILE ORGANIC COMPOUNDS
SYSTEM MONITORING COMPOUND RECOVERY
(SURROGATES)

ANALYSIS: GC/MS Volatiles **LAB CODE:** SURR

METHOD: EPA 8260 **MATRIX:** Water

Date/Time Analyzed	Sample ID / Lab ID	SMC-1 (DBF) #	SMC-2 (TOL) #	SMC-3 (BFB) #	Total Out
	Upper Limit	113	110	113	
	Lower Limit	84	83	67	
06/21/04 10:40:00 AM	Calibration Verification	99	102	95	
06/21/04 12:45:00 PM	Method Blank	98	104	100	
06/22/04 02:41:00 AM	LCS / LCS 25ppb	101	102	97	
06/21/04 03:01:00 PM	TB061604 / 04061717-01	97	99	101	
06/21/04 03:27:00 PM	DMW-8D-061604 / 04061717-02	99	100	100	
06/21/04 03:53:00 PM	DMW-8I-061604 / 04061717-04	99	100	98	
06/21/04 04:19:00 PM	DMW-2B-061604 / 04061717-06	98	102	102	
06/21/04 04:45:00 PM	DMW-2A-061604 / 04061717-08	100	102	97	
06/21/04 05:11:00 PM	DMW-5S-061704 / 04061717-10	99	101	95	
06/22/04 12:32:00 AM	DMW-4I-061704 / 04061717-12	99	103	103	

	Water Control Limits	Soil Control Limits
SMC-1 (DBF): Dibromofluoromethane	84-113	74-131
SMC-2 (TOL): Toluene d-8	83-110	82-115
SMC-3 (BFB): Bromofluorobenzene	67-113	59-157

Column used to flag recovery values
* = Values outside QC limits
D: Surrogate diluted out

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410-788-8723 Fax
www.phaseonline.com

PHASE SEPARATION SCIENCE, INC.

VOLATILE ORGANICS COMPOUNDS
SAMPLE SPIKE AND SAMPLE SPIKE DUPLICATE SUMMARY

DATE ANALYZED:	**06/22/04**	**BATCH NUMBER:**	**VOC040621**
METHOD:	**EPA 8260**	**LAB FILE IDs:**	**04062135.D** **04062136.D**
MATRIX:	**Water**		

Client Sample ID: 04061717-02 MS

SAMPLE SPIKE COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPIKE CONC (ug/L)	SPIKE REC (%)	QC LIMITS (%)
1,1-Dichloroethene	25	2.5	27	97	61-145
Benzene	25	1.5	28	105	76-127
Trichloroethene	25	137	177	159 *	71-120
Toluene	25	ND	25	100	76-125
Chlorobenzene	25	ND	24	98	75-130

Client Sample ID: 04061717-02 MSD

SAMPLE SPIKE DUP COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPK DUP CONC (ug/L)	SPIKE DUP REC (%)	RPD (%)	QC RPD (%)	QC LIMITS (%)
1,1-Dichloroethene	25	2.5	26	93	3.6	14	61-145
Benzene	25	1.5	26	100	4.9	11	76-127
Trichloroethene	25	137	170	133 *	3.8	14	71-120
Toluene	25	ND	25	100	0.4	13	76-125
Chlorobenzene	25	ND	23	93	4.8	13	75-130

* - Values outside of QC Limits

Calculation: spike or spike dup %Recovery
*=[(spike conc - original sample conc)/(spike added)]*100*
Calculation: spike/spike dup Relative Percent Difference
*=absolute value [(spike dup conc - spike conc)/((spike dup conc + spike conc)/2))]*100*
Note: QC limits are based on CLP OLM04.2

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062135.D
Acq On : 22 Jun 2004 1:49 am
Sample : 04061717-02 MS 25ppb
Misc : IS/Surr 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 22 14:55 2004

Vial: 35
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.38	168	164363	50.00	ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.12	114	243837	50.00	ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.54	117	193598	50.00	ug/L	0.01
48) 1,4-Dichlorobenzene d-4 IS	11.73	152	91834	50.00	ug/L	0.01
System Monitoring Compounds						
20) Dibromofluoromethane SS#1	4.36	113	126076	50.45	ug/L	0.01
Spiked Amount 50.000			Recovery	=	100.90%	
33) Toluene d-8 SS#2	6.76	98	263019	49.67	ug/L	0.00
Spiked Amount 50.000			Recovery	=	99.34%	
50) 4-Bromofluorobenzene SS#3	10.12	95	134332	48.65	ug/L	0.01
Spiked Amount 50.000			Recovery	=	97.30%	
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.55	85	65653	23.23	ug/L	100
3) Chloromethane	1.69	50	22136	26.63	ug/L	99
4) VINYL CHLORIDE	1.78	62	110230	112.26	ug/L	100
5) Bromomethane	2.00	94	45932	23.34	ug/L	97
6) Chloroethane	2.01	64	15314	30.28	ug/L	100
7) Trichlorofluoromethane	2.12	101	53071m	21.42	ug/L	
8) Acetone	2.52	43	14726	30.27	ug/L	100
9) 1,1-DICHLOROETHENE	2.58	96	50565	26.83	ug/L	98
10) 1,1,2-Trichlorotrifluoroet	2.57	101	51155	23.08	ug/L	96
11) Carbon Disulfide	2.79	76	99495	26.26	ug/L	99
12) Methyl Acetate	2.75	74	2900	24.17	ug/L	99
13) Methylene chloride	2.86	84	41955	25.54	ug/L #	43
14) trans-1,2-Dichloroethene	3.08	96	44389	25.44	ug/L	98
15) Methyl-t-Butyl Ether	3.08	73	70408	25.30	ug/L	100
16) 1,1-Dichloroethane	3.42	63	50188	24.98	ug/L	100
17) cis-1,2-Dichloroethene	3.92	96	348740	216.66	ug/L	98
18) 2-Butanone (MEK)	3.91	43	12324	32.02	ug/L #	25
19) CHLOROFORM	4.21	83	99040	24.58	ug/L	99
21) 1,1,1-Trichloroethane	4.41	97	105617	23.43	ug/L #	4
22) Cyclohexane	4.47	56	30256	27.16	ug/L	89
24) Carbon tetrachloride	4.57	117	83697	24.09	ug/L	100
25) Benzene	4.75	78	99003	27.77	ug/L	100
26) 1,2-Dichloroethane	4.76	62	90515	25.99	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062135.D
Acq On : 22 Jun 2004 1:49 am
Sample : 04061717-02 MS 25ppb
Misc : IS/Surr 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 22 14:55 2004

Vial: 35
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) Trichloroethene	5.41	95	404779	176.70 ug/L	99
28) 1,2-DICHLOROPROPANE	5.63	63	19095	25.77 ug/L	99
29) Methylcyclohexane	5.63	83	40751	30.09 ug/L	98
30) Bromodichloromethane	5.93	83	77868	23.91 ug/L	99
31) cis-1,3-Dichloropropene	6.44	75	42979	23.90 ug/L	99
32) 4-Methyl-2-Pentanone (MIBK	6.62	43	25475	29.22 ug/L	98
34) TOLUENE	6.84	92	74194	25.05 ug/L	100
35) trans-1,3-Dichloropropene	7.08	75	47295	23.65 ug/L	100
36) 1,1,2-Trichloroethane	7.31	83	23119	26.15 ug/L	99
37) Tetrachloroethene	7.50	166	39650	23.71 ug/L	99
38) 2-Hexanone (MBK)	7.63	43	16292	29.35 ug/L	98
40) Dibromochloromethane	7.79	129	42392	24.53 ug/L	98
41) 1,2-Dibromoethane	7.93	107	41437	25.51 ug/L	100
42) Chlorobenzene	8.57	112	89774	24.42 ug/L	97
43) ETHYLBENZENE	8.73	91	159029	24.95 ug/L	100
44) m&p-Xylene	8.88	106	108477	49.25 ug/L	96
45) o-Xylene	9.41	106	53316	24.00 ug/L	100
46) Styrene	9.43	104	91164	24.81 ug/L	98
47) Bromoform	9.66	173	40003	25.11 ug/L	100
49) Isopropylbenzene	9.92	105	138621	24.02 ug/L	100
51) 1,1,2,2-Tetrachloroethane	10.31	83	29869	28.63 ug/L	98
52) 1,3-Dichlorobenzene	11.64	146	56680	24.59 ug/L	100
53) 1,4-Dichlorobenzene	11.77	146	55874	23.59 ug/L	97
54) 1,2-Dichlorobenzene	12.29	146	54952	23.94 ug/L	99
55) 1,2-Dibromo-3-chloropropan	13.39	75	7434	26.59 ug/L	97
56) 1,2,4-Trichlorobenzene	14.62	180	33972	25.15 ug/L	98
57) Naphthalene	14.96	128	317	Not Detected	

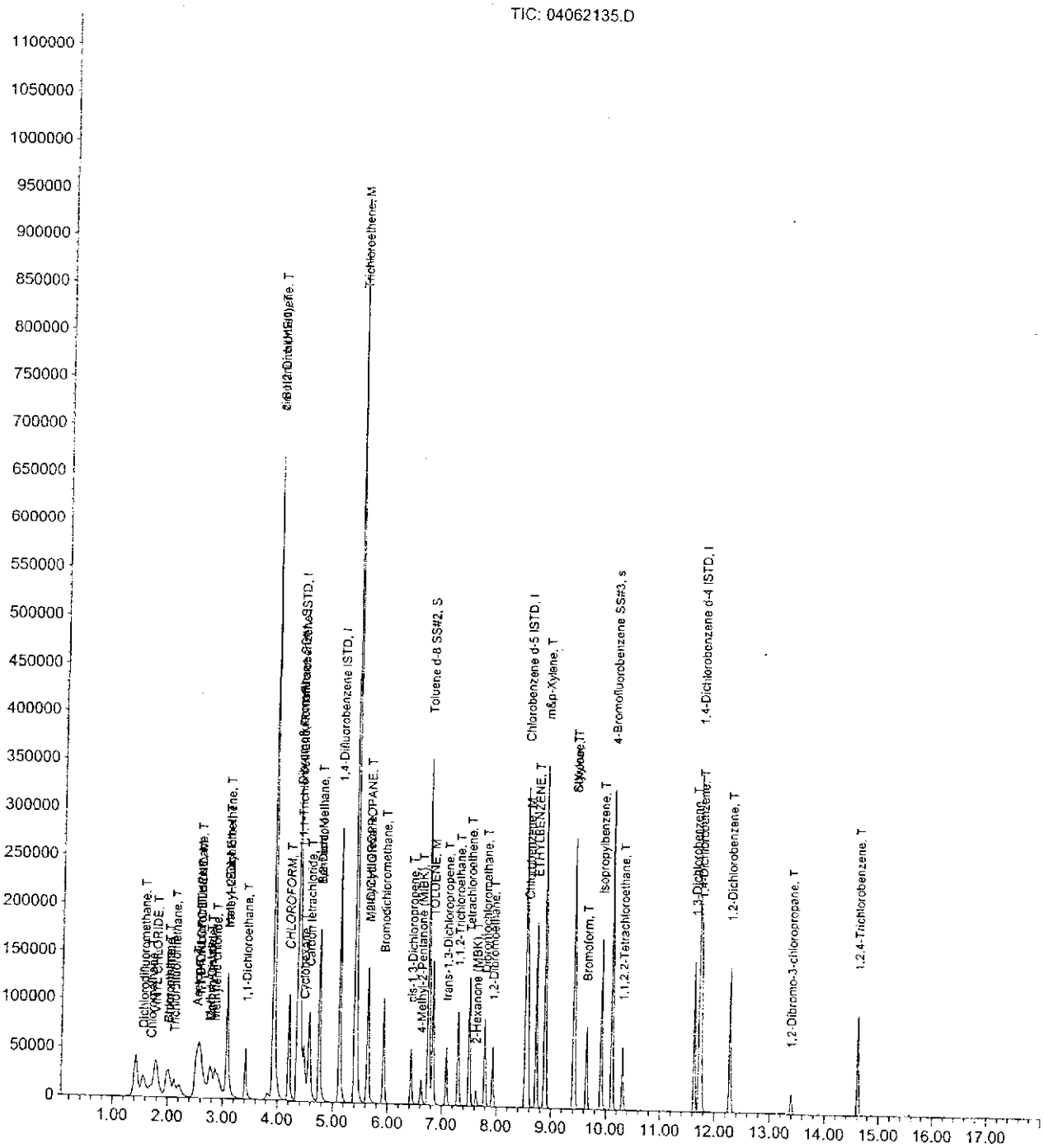
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040621\04062135.D
Acq On : 22 Jun 2004 1:49 am
Sample : 04061717-02 MS 25ppb
Misc : IS/Surr 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 22 14:55 2004

Vial: 35
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062136.D
Acq On : 22 Jun 2004 2:16 am
Sample : 04061717-02 MSD 25ppb
Misc : IS/Surr 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 22 14:55 2004

Vial: 36
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.38	168	163285	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.12	114	239470	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.54	117	199441	50.00 ug/L	0.01
48) 1,4-Dichlorobenzene d-4 IS	11.73	152	92006	50.00 ug/L	0.01
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	4.36	113	123447	49.73 ug/L	0.01
Spiked Amount 50.000			Recovery =	99.46%	
33) Toluene d-8 SS#2	6.76	98	271167	52.15 ug/L	0.01
Spiked Amount 50.000			Recovery =	104.30%	
50) 4-Bromofluorobenzene SS#3	10.11	95	137071	49.55 ug/L	0.01
Spiked Amount 50.000			Recovery =	99.10%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.55	85	56683	20.19 ug/L	100
3) Chloromethane	1.69	50	22087	26.75 ug/L	89
4) VINYL CHLORIDE	1.78	62	103720	106.33 ug/L	100
5) Bromomethane	1.99	94	42945	21.96 ug/L	98
6) Chloroethane	2.02	64	14019	27.91 ug/L	99
7) Trichlorofluoromethane	2.12	101	55810m	22.67 ug/L	
8) Acetone	2.52	43	14862	30.75 ug/L	94
9) 1,1-DICHLOROETHENE	2.56	96	48424	25.87 ug/L	99
10) 1,1,2-Trichlorotrifluoroet	2.56	101	44689	20.29 ug/L	97
11) Carbon Disulfide	2.79	76	92749	24.64 ug/L	98
12) Methyl Acetate	2.75	74	2918	24.48 ug/L	99
13) Methylene chloride	2.87	84	41684m	25.55 ug/L	
14) trans-1,2-Dichloroethene	3.08	96	42152	24.32 ug/L	98
15) Methyl-t-Butyl Ether	3.08	73	69483	25.13 ug/L	100
16) 1,1-Dichloroethane	3.42	63	48500	24.30 ug/L	99
17) cis-1,2-Dichloroethene	3.92	96	332621	208.01 ug/L	98
18) 2-Butanone (MEK)	3.91	43	12562	32.85 ug/L #	28
19) CHLOROFORM	4.21	83	94745	23.67 ug/L	99
21) 1,1,1-Trichloroethane	4.40	97	100991	22.55 ug/L #	1
22) Cyclohexane	4.48	56	28825	26.04 ug/L	91
24) Carbon tetrachloride	4.58	117	80343	23.54 ug/L	99
25) Benzene	4.76	78	92559	26.44 ug/L	99
26) 1,2-Dichloroethane	4.76	62	88270	25.80 ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062136.D
Acq On : 22 Jun 2004 2:16 am
Sample : 04061717-02 MSD 25ppb
Misc : IS/Surr 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 22 14:55 2004

Vial: 36
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) Trichloroethene	5.41	95	382591	170.06 ug/L	98
28) 1,2-DICHLOROPROPANE	5.64	63	19561	26.88 ug/L	97
29) Methylcyclohexane	5.64	83	38954	29.29 ug/L	97
30) Bromodichloromethane	5.93	83	76415	23.89 ug/L	100
31) cis-1,3-Dichloropropene	6.43	75	43248	24.49 ug/L	98
32) 4-Methyl-2-Pentanone (MIBK	6.61	43	25825	30.16 ug/L	97
34) TOLUENE	6.84	92	72543	24.94 ug/L	99
35) trans-1,3-Dichloropropene	7.08	75	48327	24.60 ug/L	98
36) 1,1,2-Trichloroethane	7.30	83	23848	27.46 ug/L	98
37) Tetrachloroethene	7.51	166	39061	23.79 ug/L	99
38) 2-Hexanone (MBK)	7.63	43	16989	31.16 ug/L	98
40) Dibromochloromethane	7.80	129	43630	24.51 ug/L	99
41) 1,2-Dibromoethane	7.94	107	42446	25.37 ug/L	99
42) Chlorobenzene	8.58	112	88136	23.27 ug/L	94
43) ETHYLBENZENE	8.73	91	159047	24.22 ug/L	100
44) m&p-Xylene	8.88	106	108749	47.92 ug/L	95
45) o-Xylene	9.41	106	54738	23.92 ug/L	95
46) Styrene	9.42	104	88956	23.50 ug/L	97
47) Bromoform	9.65	173	40988	24.97 ug/L	97
49) Isopropylbenzene	9.92	105	136661	23.63 ug/L	98
51) 1,1,2,2-Tetrachloroethane	10.32	83	31424	30.06 ug/L	99
52) 1,3-Dichlorobenzene	11.63	146	54637	23.66 ug/L	100
53) 1,4-Dichlorobenzene	11.77	146	56152	23.66 ug/L	97
54) 1,2-Dichlorobenzene	12.28	146	53664	23.34 ug/L	100
55) 1,2-Dibromo-3-chloropropan	13.39	75	7905	28.22 ug/L	99
56) 1,2,4-Trichlorobenzene	14.62	180	33338	24.63 ug/L	99
57) Naphthalene	14.96	128	219	Not Detected	

(#) = qualifier out of range (m) = manual integration

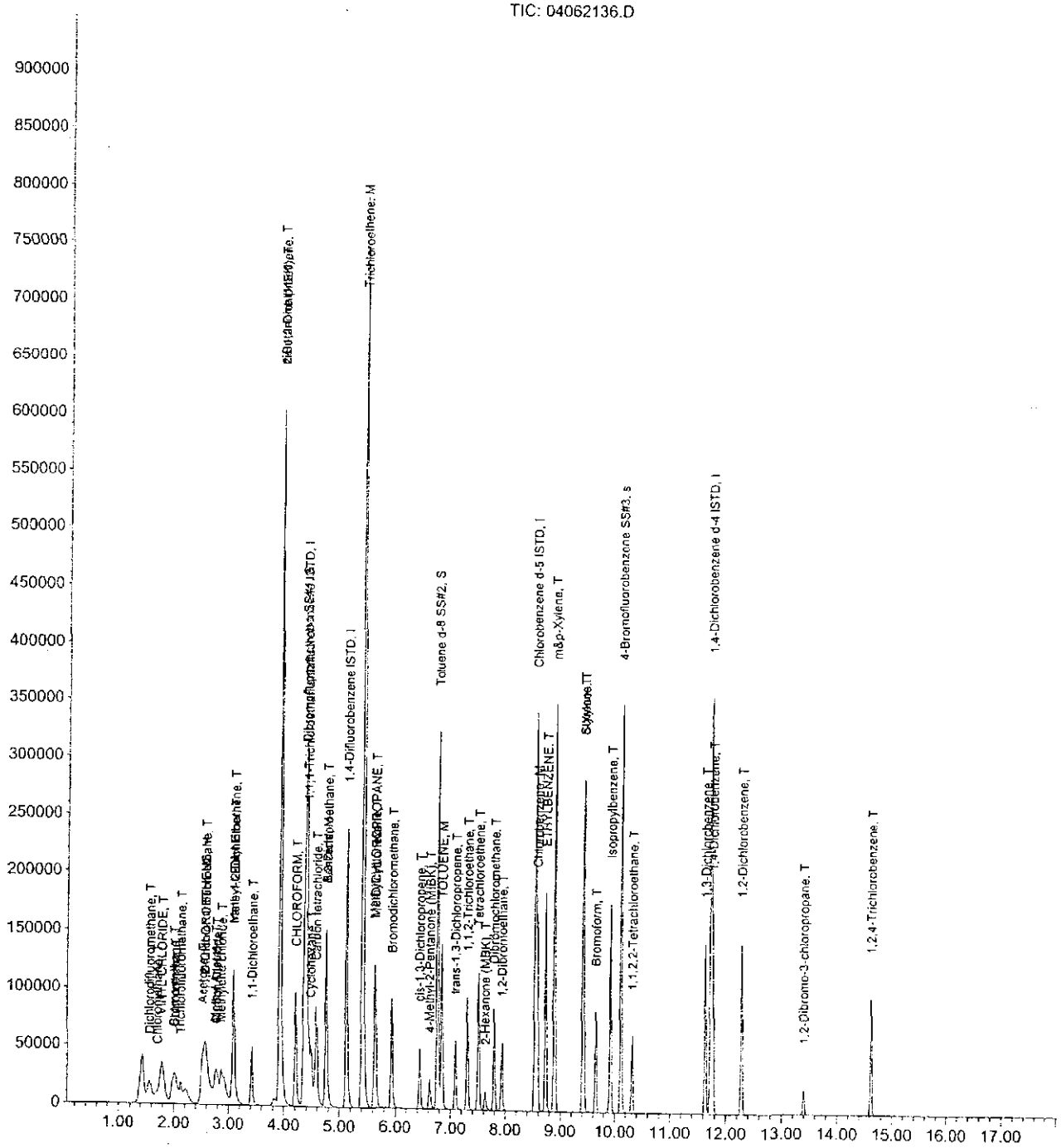
Quantitation Report

Data File : C:\HPCHEM\2\DATA\040621\04062136.D
Acq On : 22 Jun 2004 2:16 am
Sample : 04061717-02 MSD 25ppb
Misc : IS/Surr 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 22 14:55 2004

Vial: 36
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration

TIC: 04062136.D



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PHASE SEPARATION SCIENCE, INC.

VOLATILE ORGANICS COMPOUNDS
LCS AND LCS DUPLICATE SUMMARY

DATE ANALYZED: 06/22/04 **BATCH NUMBER:** VOC040621

METHOD: EPA 8260 **LAB FILE IDs:** 04062137.D 04062138.D

MATRIX: Water

Client Sample ID: LCS 25ppb

SAMPLE SPIKE COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPIKE CONC (ug/L)	SPIKE REC (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	23	91	61-145
Benzene	25	ND	26	104	76-127
Trichloroethene	25	ND	24	97	71-120
Toluene	25	ND	26	104	76-125
Chlorobenzene	25	ND	24	97	75-130

Client Sample ID: LCS-DUP 25ppb

SAMPLE SPIKE DUP COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPK DUP CONC (ug/L)	SPIKE DUP REC (%)	RPD (%)	QC RPD (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	22	89	2.5	14	61-145
Benzene	25	ND	26	104	0.3	11	76-127
Trichloroethene	25	ND	24	95	1.6	14	71-120
Toluene	25	ND	25	102	2.6	13	76-125
Chlorobenzene	25	ND	24	96	1.2	13	75-130

* - Values outside of QC Limits

Calculation: spike or spike dup %Recovery
*=[(spike conc - original sample conc)/(spike added)]*100*
Calculation: spike/spike dup Relative Percent Difference
*=absolute value [(spike dup conc - spike conc)/((spike dup conc + spike conc)/2))]*100*
Note: QC limits are based on CLP OLM04.2

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062137.D
Acq On : 22 Jun 2004 2:41 am
Sample : LCS 25ppb
Misc : IS/Surr 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 22 14:56 2004

Vial: 37
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.38	168	159652	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.12	114	233463	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.53	117	186967	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.73	152	88301	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	4.35	113	122757	50.58 ug/L	0.00
Spiked Amount 50.000			Recovery = 101.16%		
33) Toluene d-8 SS#2	6.76	98	259084	51.10 ug/L	0.00
Spiked Amount 50.000			Recovery = 102.20%		
50) 4-Bromofluorobenzene SS#3	10.11	95	128909	48.56 ug/L	0.00
Spiked Amount 50.000			Recovery = 97.12%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.56	85	62682	22.83 ug/L	100
3) Chloromethane	1.69	50	21404	26.51 ug/L	96
4) VINYL CHLORIDE	1.79	62	22273	23.35 ug/L	65
5) Bromomethane	1.99	94	43576	22.79 ug/L	99
6) Chloroethane	2.03	64	13596	27.68 ug/L	72
7) Trichlorofluoromethane	2.12	101	48813m	20.28 ug/L	
8) Acetone	2.51	43	12294	26.01 ug/L	98
9) 1,1-DICHLOROETHENE	2.59	96	41619	22.74 ug/L	98
10) 1,1,2-Trichlorotrifluoroet	2.56	101	51454	23.90 ug/L #	78
11) Carbon Disulfide	2.78	76	94953	25.80 ug/L	99
12) Methyl Acetate	2.76	74	2874	24.66 ug/L	93
13) Methylene chloride	2.90	84	27184	17.04 ug/L #	86
14) trans-1,2-Dichloroethene	3.09	96	42260	24.93 ug/L	96
15) Methyl-t-Butyl Ether	3.09	73	68350	25.29 ug/L	100
16) 1,1-Dichloroethane	3.42	63	49215	25.22 ug/L	98
17) cis-1,2-Dichloroethene	3.92	96	40843	26.12 ug/L	97
18) 2-Butanone (MEK)	3.92	43	11103	29.70 ug/L	94
19) CHLOROFORM	4.20	83	97363	24.88 ug/L	99
21) 1,1,1-Trichloroethane	4.41	97	104948	23.97 ug/L #	5
22) Cyclohexane	4.47	56	28152	26.01 ug/L	91
24) Carbon tetrachloride	4.57	117	83777	25.18 ug/L	99
25) Benzene	4.75	78	88937	26.06 ug/L	99
26) 1,2-Dichloroethane	4.75	62	84182	25.24 ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062137.D
Acq On : 22 Jun 2004 2:41 am
Sample : LCS 25ppb
Misc : IS/Surr 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 22 14:56 2004

Vial: 37
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) Trichloroethene	5.41	95	53081	24.20 ug/L	98
28) 1,2-DICHLOROPROPANE	5.63	63	19461	27.43 ug/L	98
29) Methylcyclohexane	5.63	83	34095	26.30 ug/L	98
30) Bromodichloromethane	5.93	83	77583	24.88 ug/L	99
31) cis-1,3-Dichloropropene	6.43	75	43082	25.02 ug/L	99
32) 4-Methyl-2-Pentanone (MIBK	6.61	43	25201	30.19 ug/L	100
34) TOLUENE	6.83	92	74037	26.11 ug/L	99
35) trans-1,3-Dichloropropene	7.08	75	48217	25.18 ug/L	98
36) 1,1,2-Trichloroethane	7.30	83	22883	27.03 ug/L	96
37) Tetrachloroethene	7.51	166	38806	24.24 ug/L	97
38) 2-Hexanone (MBK)	7.62	43	16298	30.66 ug/L	99
40) Dibromochloromethane	7.79	129	42610	25.53 ug/L	98
41) 1,2-Dibromoethane	7.93	107	40425	25.77 ug/L	99
42) Chlorobenzene	8.57	112	85965	24.21 ug/L	94
43) ETHYLBENZENE	8.72	91	154120	25.03 ug/L	99
44) m&p-Xylene	8.89	106	105814	49.74 ug/L	98
45) o-Xylene	9.40	106	52567	24.50 ug/L	96
46) Styrene	9.42	104	90813	25.59 ug/L	99
47) Bromoform	9.65	173	37838	24.59 ug/L	99
49) Isopropylbenzene	9.91	105	134240	24.19 ug/L	99
51) 1,1,2,2-Tetrachloroethane	10.32	83	28765	28.67 ug/L	99
52) 1,3-Dichlorobenzene	11.63	146	53351	24.07 ug/L	99
53) 1,4-Dichlorobenzene	11.76	146	54704	24.02 ug/L	99
54) 1,2-Dichlorobenzene	12.29	146	53680	24.33 ug/L	100
55) 1,2-Dibromo-3-chloropropan	13.40	75	7647	28.44 ug/L	100
56) 1,2,4-Trichlorobenzene	14.61	180	33306	25.64 ug/L	99
57) Naphthalene	14.95	128	239	Not Detected	

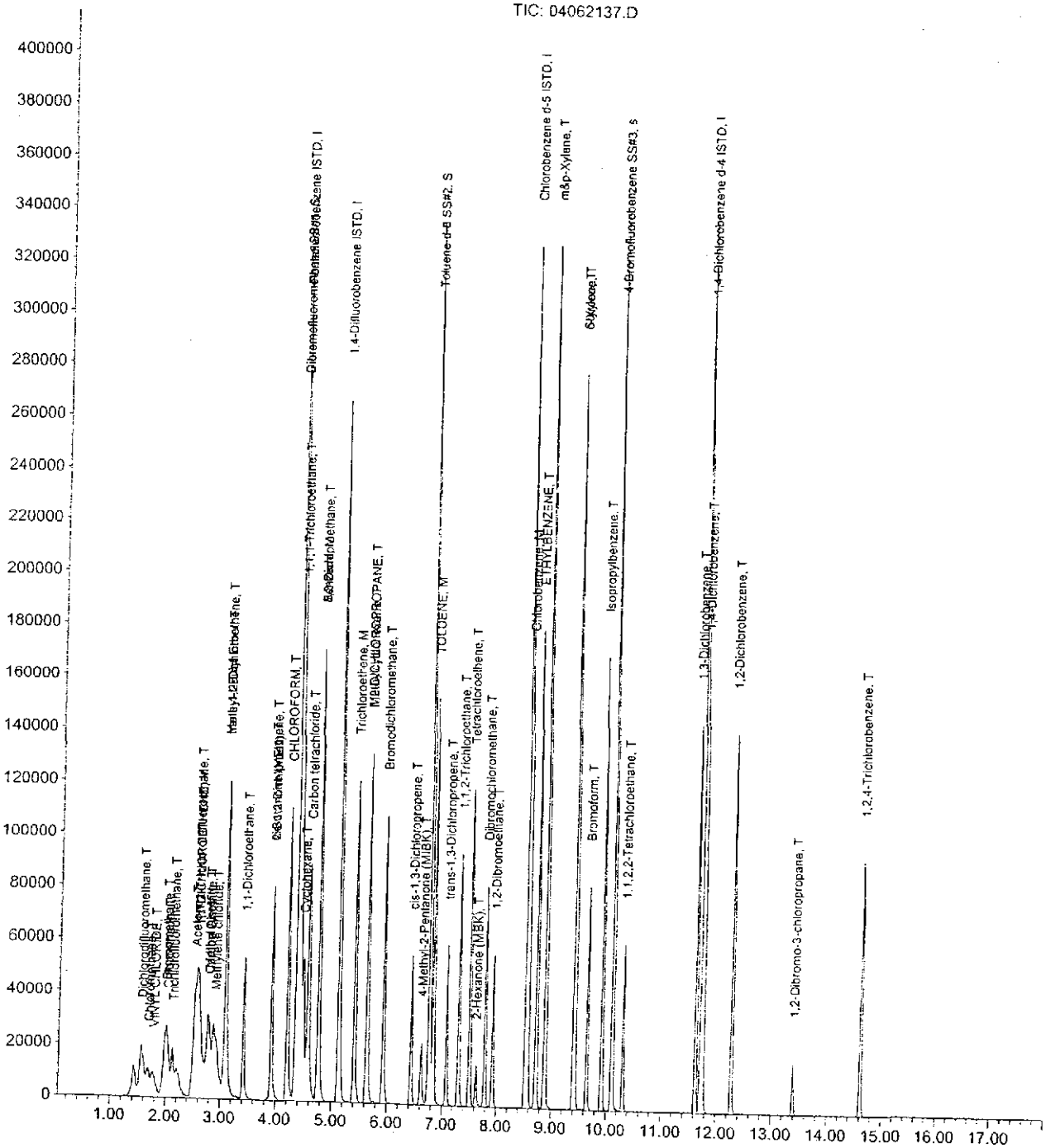
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040621\04062137.D
Acq On : 22 Jun 2004 2:41 am
Sample : LCS 25ppb
Misc : IS/Surr 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 22 14:56 2004

Vial: 37
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062138.D
Acq On : 22 Jun 2004 3:07 am
Sample : LCS-DUP 25ppb
Misc : IS/Surr 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 22 14:56 2004

Vial: 38
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.38	168	157415	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.12	114	233919	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.54	117	190660	50.00 ug/L	0.01
48) 1,4-Dichlorobenzene d-4 IS	11.73	152	87672	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	4.35	113	120562	50.38 ug/L	0.00
Spiked Amount 50.000			Recovery	= 100.76%	
33) Toluene d-8 SS#2	6.76	98	257911	50.77 ug/L	0.00
Spiked Amount 50.000			Recovery	= 101.54%	
50) 4-Bromofluorobenzene SS#3	10.11	95	133508	50.65 ug/L	0.00
Spiked Amount 50.000			Recovery	= 101.30%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.56	85	56368	20.82 ug/L	100
3) Chloromethane	1.68	50	19232	24.16 ug/L	98
4) VINYL CHLORIDE	1.78	62	21266	22.61 ug/L	92
5) Bromomethane	1.98	94	43191	22.91 ug/L	99
6) Chloroethane	2.01	64	13616	28.12 ug/L	81
7) Trichlorofluoromethane	2.12	101	53734m	22.64 ug/L	
8) Acetone	2.51	43	12750	27.36 ug/L	92
9) 1,1-DICHLOROETHENE	2.57	96	40035	22.18 ug/L	96
10) 1,1,2-Trichlorotrifluoroet	2.56	101	50011	23.56 ug/L	94
11) Carbon Disulfide	2.79	76	92330	25.45 ug/L	98
12) Methyl Acetate	2.76	74	3112	27.08 ug/L	93
13) Methylene chloride	2.87	84	38403	24.41 ug/L #	45
14) trans-1,2-Dichloroethene	3.08	96	39927	23.89 ug/L	97
15) Methyl-t-Butyl Ether	3.08	73	67231	25.22 ug/L	100
16) 1,1-Dichloroethane	3.41	63	48621	25.27 ug/L	98
17) cis-1,2-Dichloroethene	3.92	96	38334	24.87 ug/L	96
18) 2-Butanone (MEK)	3.91	43	11602	31.47 ug/L	93
19) CHLOROFORM	4.20	83	94539	24.50 ug/L	100
21) 1,1,1-Trichloroethane	4.41	97	100567	23.29 ug/L #	2
22) Cyclohexane	4.47	56	27499	25.77 ug/L	89
24) Carbon tetrachloride	4.57	117	79166	23.75 ug/L	96
25) Benzene	4.75	78	88893	25.99 ug/L	100
26) 1,2-Dichloroethane	4.75	62	81184	24.30 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062138.D
Acq On : 22 Jun 2004 3:07 am
Sample : LCS-DUP 25ppb
Misc : IS/Surr 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 22 14:56 2004

Vial: 38
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) Trichloroethene	5.41	95	52347	23.82 ug/L	99
28) 1,2-DICHLOROPROPANE	5.63	63	18376	25.85 ug/L	99
29) Methylcyclohexane	5.64	83	32330	24.89 ug/L	96
30) Bromodichloromethane	5.93	83	75829	24.27 ug/L	100
31) cis-1,3-Dichloropropene	6.43	75	42431	24.59 ug/L	99
32) 4-Methyl-2-Pentanone (MIBK	6.62	43	24977	29.86 ug/L	98
34) TOLUENE	6.84	92	72290	25.44 ug/L	99
35) trans-1,3-Dichloropropene	7.09	75	46582	24.28 ug/L	100
36) 1,1,2-Trichloroethane	7.31	83	22566	26.60 ug/L	97
37) Tetrachloroethene	7.50	166	38149	23.78 ug/L	99
38) 2-Hexanone (MBK)	7.63	43	15931	29.91 ug/L	98
40) Dibromochloromethane	7.79	129	41651	24.48 ug/L	100
41) 1,2-Dibromoethane	7.93	107	40726	25.46 ug/L	98
42) Chlorobenzene	8.57	112	86646	23.93 ug/L	96
43) ETHYLBENZENE	8.73	91	157567	25.10 ug/L	99
44) m&p-Xylene	8.88	106	105506	48.64 ug/L	99
45) o-Xylene	9.41	106	53557	24.48 ug/L	96
46) Styrene	9.43	104	89676	24.78 ug/L	96
47) Bromoform	9.66	173	39681	25.29 ug/L	99
49) Isopropylbenzene	9.92	105	134382	24.39 ug/L	100
51) 1,1,2,2-Tetrachloroethane	10.31	83	28265	28.38 ug/L	99
52) 1,3-Dichlorobenzene	11.64	146	53446	24.29 ug/L	99
53) 1,4-Dichlorobenzene	11.77	146	54665	24.17 ug/L	97
54) 1,2-Dichlorobenzene	12.29	146	51786	23.64 ug/L	99
55) 1,2-Dibromo-3-chloropropan	13.40	75	7640	28.62 ug/L	97
56) 1,2,4-Trichlorobenzene	14.62	180	32078	24.88 ug/L	98
57) Naphthalene	14.96	128	333	Not Detected	

(#) = qualifier out of range (m) = manual integration

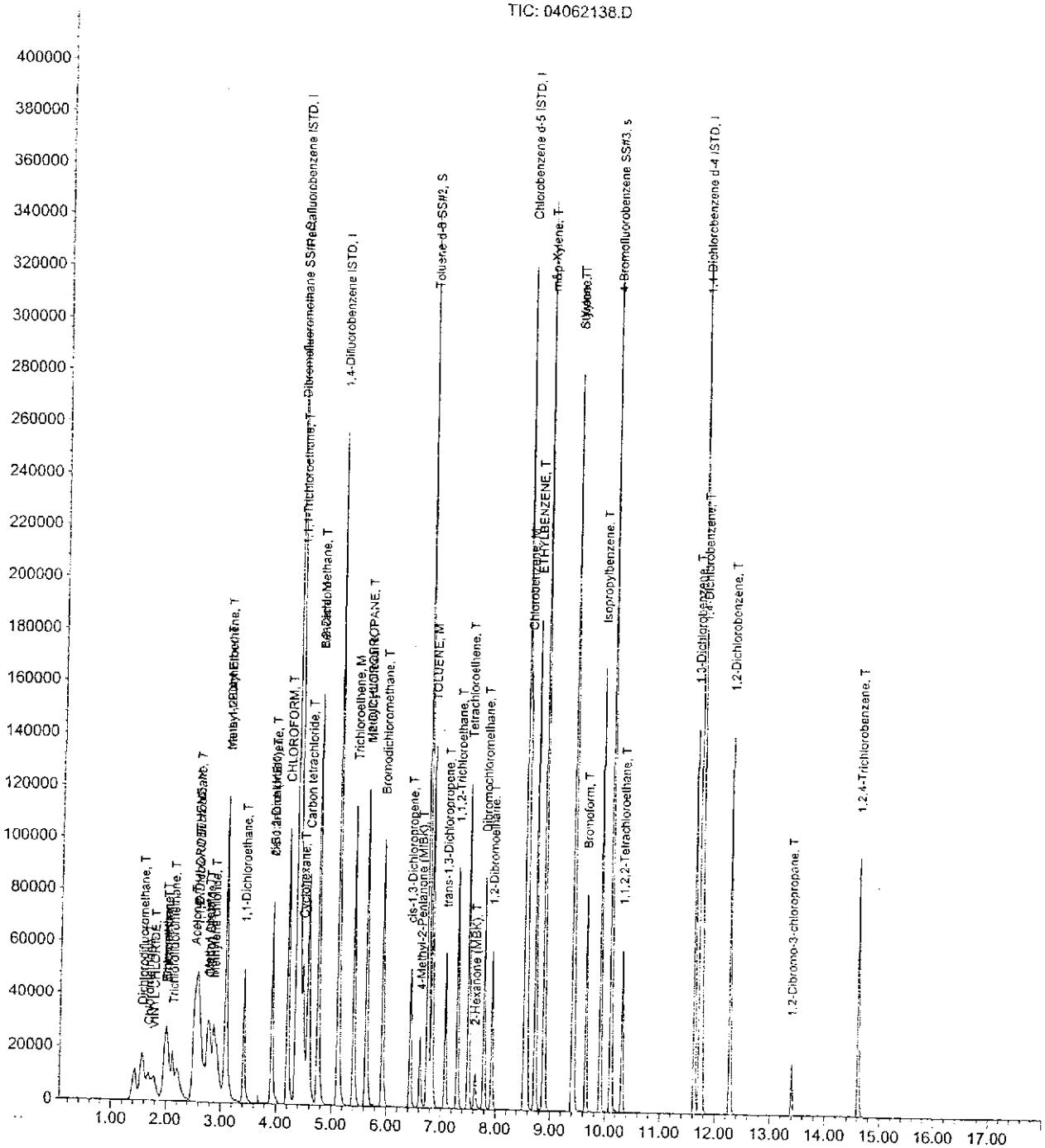
Quantitation Report

Data File : C:\HPCHEM\2\DATA\040621\04062138.D
Acq On : 22 Jun 2004 3:07 am
Sample : LCS-DUP 25ppb
Misc : IS/Surr 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 22 14:56 2004

Vial: 38
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration

TIC: 04062138.D



Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration

Non-Spiked Sample: 04062105.D

Spike Sample	Spike Duplicate Sample
File ID : 04062137.D	04062138.D
Sample : LCS 25ppb	LCS-DUP 25ppb
Acq Time: 22 Jun 2004 2:41 am	22 Jun 2004 3:07 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-DICHLOROETHENE	0.0	25	23	22	91	89	2	22	59-172
Benzene	0.0	25	26	26	104	104	0	21	66-142
Trichloroethene	0.0	25	24	24	97	95	2	24	62-137
TOLUENE	0.0	25	26	25	104	102	3	21	59-139
Chlorobenzene	0.0	25	24	24	97	96	1	21	60-133

- Fails Limit Check

TCL-W.M Tue Jun 22 14:57:19 2004

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MARYLAND 21228
410-747-8770
800-932-9047
410-788-8723 Fax
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PHASE SEPARATION SCIENCE, INC.

VOLATILE ORGANIC COMPOUNDS
METHOD BLANK SUMMARY

ANALYSIS:	**GC/MS Volatiles**	**LAB CODE:**	**Method Blank**
METHOD:	***EPA 8260***	**LAB SAMPLE ID:**	**MBW**
LAB FILE ID:	**04062105.D**	**DATE/TIME ANALYZED:**	**06/21/04 12:45**
MATRIX:	**Water**		

This Method Blank applies to the following samples:

Sample ID	Lab Sample ID	Lab File ID	Date/Time Analyzed
LCS	LCS 25ppb	04062137.D	06/22/04 02:41:00 AM
TB061604	04061717-01	04062110.D	06/21/04 03:01:00 PM
DMW-8D-061604	04061717-02	04062111.D	06/21/04 03:27:00 PM
DMW-8I-061604	04061717-04	04062112.D	06/21/04 03:53:00 PM
DMW-2B-061604	04061717-06	04062113.D	06/21/04 04:19:00 PM
DMW-2A-061604	04061717-08	04062114.D	06/21/04 04:45:00 PM
DMW-5S-061704	04061717-10	04062115.D	06/21/04 05:11:00 PM
DMW-4I-061704	04061717-12	04062132.D	06/22/04 12:32:00 AM

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062105.D
Acq On : 21 Jun 2004 12:45 pm
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 21 14:47 2004

Vial: 5
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.37	168	190988	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.11	114	277046	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.53	117	225549	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.73	152	101034	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	4.35	113	141552	48.75 ug/L	0.00
Spiked Amount 50.000			Recovery =	97.50%	
33) Toluene d-8 SS#2	6.75	98	312279	51.91 ug/L	0.00
Spiked Amount 50.000			Recovery =	103.82%	
50) 4-Bromofluorobenzene SS#3	10.11	95	152313	50.14 ug/L	0.00
Spiked Amount 50.000			Recovery =	100.28%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85	0	Not Detected	
3) Chloromethane	1.69	50	60	Not Detected	
4) VINYL CHLORIDE	1.78	62	51	Not Detected	
5) Bromomethane	1.98	94	52	Not Detected	
6) Chloroethane	2.04	64	62	Not Detected	
7) Trichlorofluoromethane	0.00	101	0	Not Detected	
8) Acetone	2.49	43	388	Not Detected	
9) 1,1-DICHLOROETHENE	0.00	96	0	Not Detected	
10) 1,1,2-Trichlorotrifluoroet	0.00	101	0	Not Detected	
11) Carbon Disulfide	0.00	76	0	Not Detected	
12) Methyl Acetate	0.00	74	0	Not Detected	
13) Methylene chloride	2.87	84	20424m	10.70 ug/L	
14) trans-1,2-Dichloroethene	3.07	96	61	Not Detected	
15) Methyl-t-Butyl Ether	3.15	73	54	Not Detected	
16) 1,1-Dichloroethane	0.00	63	0	Not Detected	
17) cis-1,2-Dichloroethene	0.00	96	0	Not Detected	
18) 2-Butanone (MEK)	3.92	43	113	Not Detected	
19) CHLOROFORM	4.19	83	58	Not Detected	
21) 1,1,1-Trichloroethane	0.00	97	0	Not Detected	
22) Cyclohexane	0.00	56	0	Not Detected d	
24) Carbon tetrachloride	0.00	117	0	Not Detected	
25) Benzene	0.00	78	0	Not Detected	
26) 1,2-Dichloroethane	0.00	62	0	Not Detected	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062105.D
Acq On : 21 Jun 2004 12:45 pm
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 21 14:47 2004

Vial: 5
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) Trichloroethene	0.00	95	0	Not Detected	
28) 1,2-DICHLOROPROPANE	0.00	63	0	Not Detected	
29) Methylcyclohexane	0.00	83	0	Not Detected	
30) Bromodichloromethane	0.00	83	0	Not Detected	
31) cis-1,3-Dichloropropene	0.00	75	0	Not Detected	
32) 4-Methyl-2-Pentanone (MIBK	0.00	43	0	Not Detected	d
34) TOLUENE	0.00	92	0	Not Detected	
35) trans-1,3-Dichloropropene	0.00	75	0	Not Detected	
36) 1,1,2-Trichloroethane	0.00	83	0	Not Detected	
37) Tetrachloroethene	0.00	166	0	Not Detected	
38) 2-Hexanone (MBK)	7.79	43	112	Not Detected	
40) Dibromochloromethane	0.00	129	0	Not Detected	
41) 1,2-Dibromoethane	0.00	107	0	Not Detected	
42) Chlorobenzene	8.58	112	51	Not Detected	
43) ETHYLBENZENE	8.88	91	195	Not Detected	
44) m&p-Xylene	0.00	106	0	Not Detected	
45) o-Xylene	0.00	106	0	Not Detected	
46) Styrene	0.00	104	0	Not Detected	
47) Bromoform	0.00	173	0	Not Detected	
49) Isopropylbenzene	10.10	105	327	Not Detected	
51) 1,1,2,2-Tetrachloroethane	0.00	83	0	Not Detected	
52) 1,3-Dichlorobenzene	11.64	146	70	Not Detected	
53) 1,4-Dichlorobenzene	11.76	146	1237	Not Detected	
54) 1,2-Dichlorobenzene	0.00	146	0	Not Detected	
55) 1,2-Dibromo-3-chloropropan	0.00	75	0	Not Detected	
56) 1,2,4-Trichlorobenzene	14.61	180	52	Not Detected	
57) Naphthalene	14.96	128	1373	Not Detected	

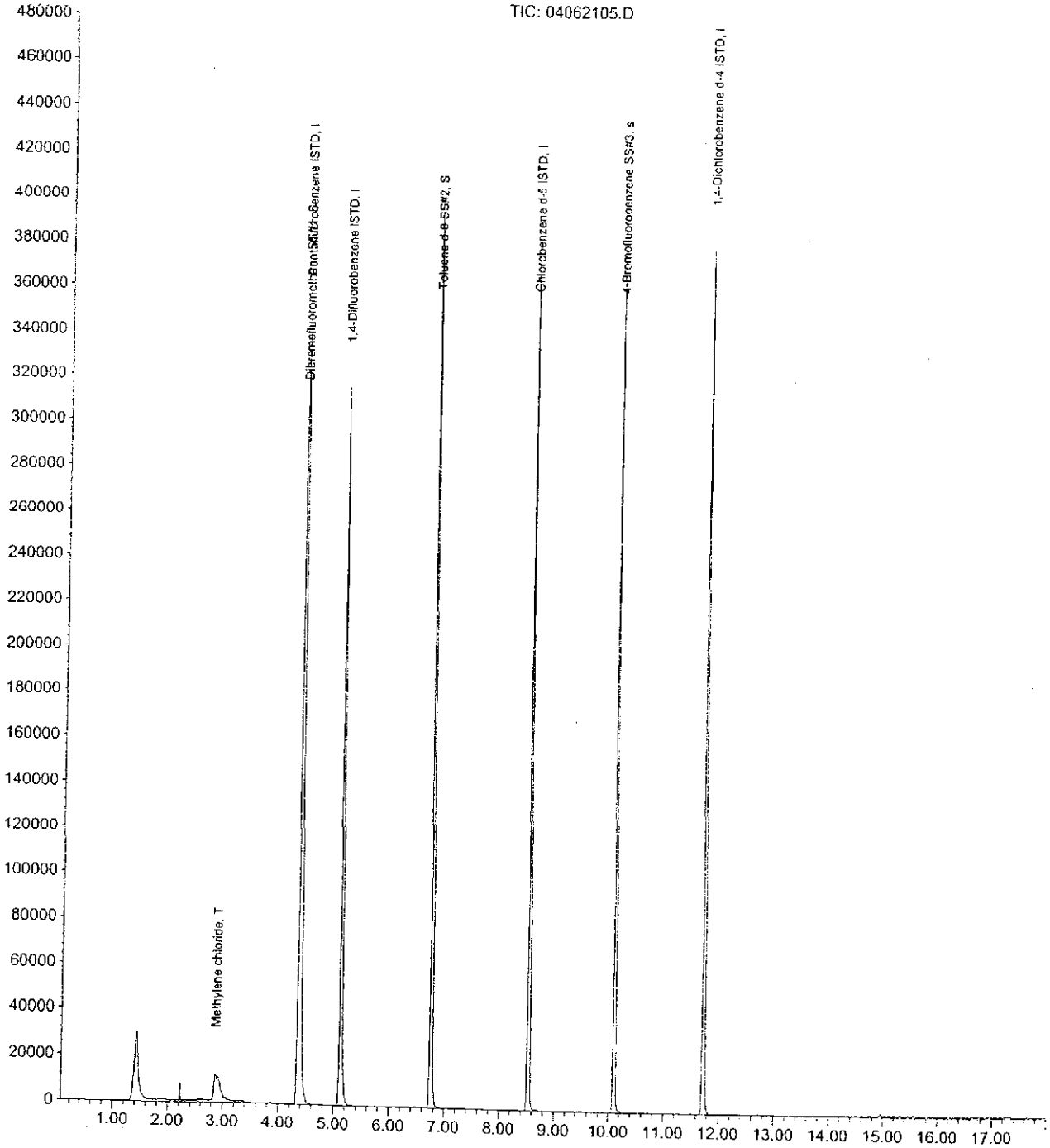
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040621\04062105.D
Acq On : 21 Jun 2004 12:45 pm
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 21 14:47 2004

Vial: 5
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062105.D
Acq On : 21 Jun 2004 12:45 pm
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 21 14:48 2004

Vial: 5
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 14:06:06 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentaflourobenzene	4.37	168	190988	50.00 ug/L	0.00
12) 1,4-Difluorobenzene	5.11	114	277046	50.00 ug/L	0.00
19) Chlorobenzene d-5	8.53	117	225549	50.00 ug/L	0.00
27) 1,4-Dichlorobenzene d-4	11.73	152	101034	50.00 ug/L	0.00

System Monitoring Compounds

11) Dibromofluoromethane SS#1	4.35	113	141552	48.50 ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.00%		
18) Toluene d-8 SS#2	6.75	98	312279	51.94 ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.88%		
23) 4-Bromofluorobenzene SS#3	10.11	95	152313	48.66 ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.32%		

Target Compounds

				Qvalue
2) acrolein	2.39	56	61	Not Detected
3) iodomethne	0.00	142	0	Not Detected
4) acrylonitrile	3.08	53	60	Not Detected
5) tert-butanol	3.00	59	50	Not Detected
6) vinyl acetate	3.45	43	84	Not Detected
7) diisopropyl ether	0.00	45	0	Not Detected
8) tert-Butyl ethyl ether	0.00	59	0	Not Detected
9) 2,2-Dichloropropane	0.00	77	0	Not Detected
10) Bromochloromethane	0.00	128	0	Not Detected
13) 1,1-Dichloropropene	0.00	75	0	Not Detected
14) tert-amyl methyl ether	0.00	73	0	Not Detected
15) Dibromomethane	0.00	93	0	Not Detected
16) 1,4-dioxane	0.00	58	0	Not Detected
17) 2-Chloroethylvinyl Ether	0.00	63	0	Not Detected
20) 1,3-Dichloropropane	0.00	76	0	Not Detected
21) 1,1,1,2-Tetrachloroethane	0.00	131	0	Not Detected
22) 1,2,3-Trichloropropane	0.00	110	0	Not Detected
24) Bromobenzene	0.00	156	0	Not Detected
25) trans-1,4-dichloro-2-buten	0.00	75	0	Not Detected d
26) n-Propylbenzene	10.50	91	327	Not Detected
28) 2-Chlorotoluene	10.50	91	327	Not Detected
29) 4-Chlorotoluene	10.50	91	327	Not Detected
30) 1,3,5-Trimethylbenzene	0.00	105	0	Not Detected

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062105.D
Acq On : 21 Jun 2004 12:45 pm
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 21 14:48 2004

Vial: 5
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 14:06:06 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) tert-Butylbenzene	0.00	119	0	Not Detected	
32) 1,2,4-Trimethylbenzene	0.00	105	0	Not Detected	
33) sec-Butylbenzene	11.25	105	359	Not Detected	
34) 4-Isopropyltoluene	11.19	119	77	Not Detected	
35) n-Butylbenzene	11.72	91	399	Not Detected	
36) 1,2,3-Trichlorobenzene	15.33	180	194	Not Detected	

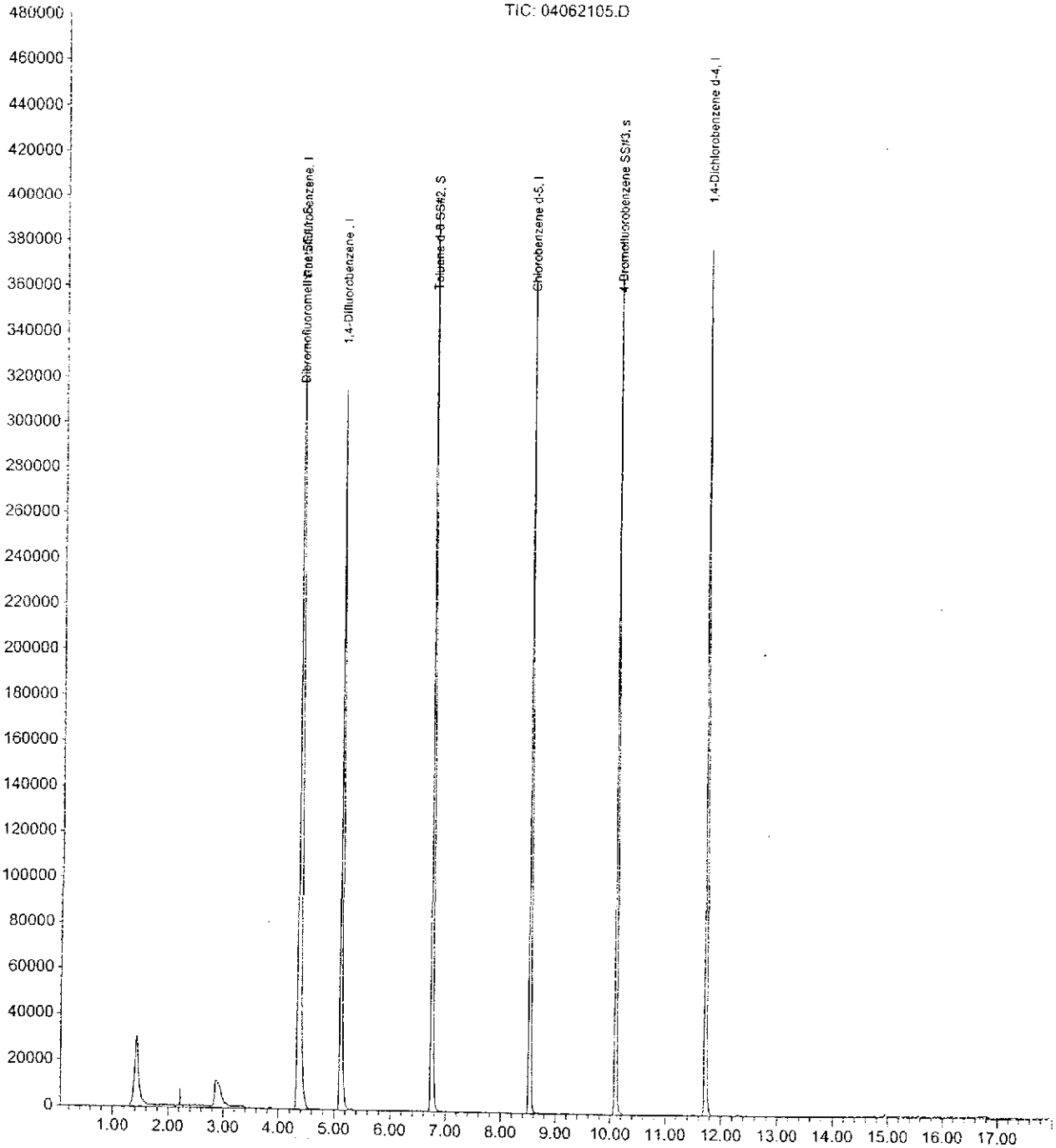
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040621\04062105.D
Acq On : 21 Jun 2004 12:45 pm
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 21 14:48 2004

Vial: 5
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 14:06:06 2004
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\040621\04062102.D Vial: 2
Acq On : 21 Jun 2004 11:28 am Operator: MI
Sample : TCL-W, CCV 50ppb Inst : GC/MS Ins
Misc : IS/Surr 1uL #432, CCV 10uL #415 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene ISTD	1.000	1.000	0.0	106	0.00
2	T	Dichlorodifluoromethane	0.860	0.869	-1.0	106	0.01
3	T	Chloromethane	0.253	0.256	-1.2	112	0.00
4	T	VINYL CHLORIDE	0.299	0.288	3.7	106	0.01
5	T	Bromomethane	0.599	0.549	8.3	103	0.01
6	T	Chloroethane	0.154	0.161	-4.5	107	0.02
7	T	Trichlorofluoromethane	0.754	0.740	1.9	100	0.01
8	T	Acetone	0.148	0.167	-12.8	118	0.00
9	M	1,1-DICHLOROETHENE	0.573	0.527	8.0	101	0.03
10	T	1,1,2-Trichlorotrifluoroeth	0.674	0.587	12.9	98	0.02
11	T	Carbon Disulfide	1.152	1.149	0.3	105	0.01
12	T	Methyl Acetate	0.037	0.034	8.1	97	0.00
13	T	Methylene chloride	0.771	0.552	28.4#	101	0.03
14	T	trans-1,2-Dichloroethene	0.531	0.529	0.4	104	0.00
15	T	Methyl-t-Butyl Ether	0.847	0.828	2.2	107	0.00
16	T	1,1-Dichloroethane	0.611	0.615	-0.7	106	0.01
17	T	cis-1,2-Dichloroethene	0.490	0.484	1.2	105	0.00
18	T	2-Butanone (MEK)	0.117	0.120	-2.6	109	0.01
19	T	CHLOROFORM	1.225	1.163	5.1	102	0.00
20	S	Dibromofluoromethane SS#1	0.760	0.754	0.8	105	0.00
21	T	1,1,1-Trichloroethane	1.371	1.253	8.6	99	0.00
22	T	Cyclohexane	0.339	0.341	-0.6	115	0.01
23	I	1,4-Difluorobenzene ISTD	1.000	1.000	0.0	105	0.00
24	T	Carbon tetrachloride	0.713	0.697	2.2	102	0.00
25	M	Benzene	0.731	0.744	-1.8	108	0.00
26	T	1,2-Dichloroethane	0.714	0.664	7.0	99	0.00
27	M	Trichloroethene	0.470	0.431	8.3	98	0.01
28	T	1,2-DICHLOROPROPANE	0.152	0.160	-5.3	112	0.00
29	T	Methylcyclohexane	0.278	0.297	-6.8	112	0.01
30	T	Bromodichloromethane	0.668	0.633	5.2	101	0.00
31	T	cis-1,3-Dichloropropene	0.369	0.398	-7.9	113	0.01
32	T	4-Methyl-2-Pentanone (MIBK)	0.179	0.179	0.0	107	0.00
33	S	Toluene d-8 SS#2	1.086	1.110	-2.2	108	0.00
34	M	TOLUENE	0.607	0.620	-2.1	110	0.00
35	T	trans-1,3-Dichloropropene	0.410	0.440	-7.3	111	0.01
36	T	1,1,2-Trichloroethane	0.181	0.184	-1.7	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\040621\04062102.D Vial: 2
Acq On : 21 Jun 2004 11:28 am Operator: MI
Sample : TCL-W, CCV 50ppb Inst : GC/MS Ins
Misc : IS/Surr 1uL #432, CCV 10uL #415 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	T	Tetrachloroethene	0.343	0.334	2.6	105	0.00
38	T	2-Hexanone (MBK)	0.114	0.123	-7.9	111	0.01
39	I	Chlorobenzene d-5 ISTD	1.000	1.000	0.0	111	0.01
40	T	Dibromochloromethane	0.446	0.427	4.3	105	0.00
41	T	1,2-Dibromoethane	0.419	0.401	4.3	105	0.00
42	M	Chlorobenzene	0.950	0.917	3.5	108	0.00
43	T	ETHYLBENZENE	1.646	1.581	3.9	106	0.00
44	T	m&p-Xylene	0.569	0.555	2.5	108	0.00
45	T	o-Xylene	0.574	0.545	5.1	107	0.00
46	T	Styrene	0.949	0.939	1.1	109	0.00
47	T	Bromoform	0.412	0.389	5.6	102	0.01
48	I	1,4-Dichlorobenzene d-4 IST	1.000	1.000	0.0	111	0.00
49	T	Isopropylbenzene	3.143	3.023	3.8	107	0.00
50	s	4-Bromofluorobenzene SS#3	1.503	1.428	5.0	106	0.00
51	T	1,1,2,2-Tetrachloroethane	0.568	0.565	0.5	109	0.00
52	T	1,3-Dichlorobenzene	1.255	1.199	4.5	104	0.00
53	T	1,4-Dichlorobenzene	1.290	1.215	5.8	108	0.00
54	T	1,2-Dichlorobenzene	1.250	1.171	6.3	104	0.00
55	T	1,2-Dibromo-3-chloropropane	0.152	0.153	-0.7	108	0.00
56	T	1,2,4-Trichlorobenzene	0.735	0.778	-5.9	109	0.00
57	t	Naphthalene	1.077	1.083	-0.6	103	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration

Calibration Files
C1 =04061602.D C2 =04061604.D C3 =04061605.D
C4 =04061606.D C5 =04061607.D C6 =04061608.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
1)	I	Pentafluorobenzene IS	----------ISTD----------							
2)	T	Dichlorodifluoromet	0.762	0.898	0.903	0.869	0.868	0.859	0.860	5.95
3)	T	Chloromethane	0.263	0.270	0.259	0.243	0.243	0.239	0.253	5.06
4)	T	VINYL CHLORIDE	0.304	0.315	0.304	0.293	0.289	0.287	0.299	3.63
5)	T	Bromomethane	0.697	0.613	0.581	0.581	0.565	0.555	0.599	8.68
6)	T	Chloroethane	0.166	0.122	0.163	0.155	0.160	0.157	0.154	10.45
7)	T	Trichlorofluorometh	0.711	0.772	0.695	0.702	0.782	0.861	0.754	8.54
8)	T	Acetone		0.196	0.132	0.128	0.150	0.133	0.148	19.16
9)	M	1,1-DICHLOROETHENE		0.612	0.586	0.568	0.552	0.548	0.573	4.61
10)	T	1,1,2-Trichlorotrif	0.692	0.705	0.703	0.669	0.636	0.642	0.674	4.48
11)	T	Carbon Disulfide	1.115	1.190	1.135	1.157	1.164	1.154	1.152	2.20
12)	T	Methyl Acetate		0.030	0.038	0.040	0.038	0.037	0.037	9.63
13)	T	Methylene chloride		1.197	0.895	0.691	0.579	0.491	0.771	36.59
14)	T	trans-1,2-Dichloroe	0.479	0.566	0.530	0.535	0.541	0.534	0.531	5.38
15)	T	Methyl-t-Butyl Ethe	0.890	0.898	0.846	0.829	0.823	0.792	0.847	4.84
16)	T	1,1-Dichloroethane	0.587	0.626	0.621	0.609	0.617	0.608	0.611	2.26
17)	T	cis-1,2-Dichloroeth	0.455	0.521	0.495	0.489	0.488	0.489	0.490	4.27
18)	T	2-Butanone (MEK)	0.135	0.112	0.110	0.116	0.116	0.112	0.117	7.91
19)	T	CHLOROFORM	1.176	1.288	1.249	1.229	1.210	1.200	1.225	3.20
20)	S	Dibromofluoromethan	0.766	0.756	0.756	0.757	0.762	0.764	0.760	0.58
21)	T	1,1,1-Trichloroetha	1.397	1.435	1.373	1.363	1.342	1.319	1.371	2.97
22)	T	Cyclohexane	0.399	0.365	0.312	0.323	0.316	0.319	0.339	10.37
23)	I	1,4-Difluorobenzene I	----------ISTD-							
24)	T	Carbon tetrachlorid	0.684	0.731	0.751	0.693	0.713	0.703	0.713	3.50
25)	M	Benzene	0.703	0.764	0.752	0.715	0.720	0.732	0.731	3.15
26)	T	1,2-Dichloroethane	0.650	0.777	0.746	0.706	0.703	0.703	0.714	6.06
27)	M	Trichloroethene	0.441	0.505	0.488	0.470	0.459	0.455	0.470	4.95
28)	T	1,2-DICHLOROPROPANE	0.143	0.160	0.154	0.150	0.150	0.154	0.152	3.75
29)	T	Methylcyclohexane	0.260	0.284	0.285	0.276	0.278	0.284	0.278	3.44
30)	T	Bromodichloromethan	0.659	0.700	0.682	0.656	0.657	0.654	0.668	2.81
31)	T	cis-1,3-Dichloropro	0.308	0.403	0.383	0.367	0.369	0.383	0.369	8.86
32)	T	4-Methyl-2-Pentanon	0.185	0.179	0.185	0.175	0.176	0.174	0.179	2.82
33)	S	Toluene d-8 SS#2	1.081	1.080	1.103	1.075	1.075	1.101	1.086	1.15
34)	M	TOLUENE	0.579	0.611	0.645	0.596	0.592	0.623	0.607	3.92
35)	T	trans-1,3-Dichlorop	0.370	0.427	0.417	0.402	0.416	0.429	0.410	5.35
36)	T	1,1,2-Trichloroetha	0.164	0.186	0.199	0.176	0.181	0.182	0.181	6.29
37)	T	Tetrachloroethene	0.336	0.357	0.359	0.333	0.333	0.340	0.343	3.44
38)	T	2-Hexanone (MBK)	0.106	0.117	0.112	0.117	0.115	0.115	0.114	3.59

(#) = Out of Range

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration

Calibration Files
C1 =04061602.D C2 =04061604.D C3 =04061605.D
C4 =04061606.D C5 =04061607.D C6 =04061608.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
39)	I	Chlorobenzene d-5 IST	----------ISTD----------							
40)	T	Dibromochloromethan	0.406	0.461	0.455	0.460	0.450	0.445	0.446	4.66
41)	T	1,2-Dibromoethane	0.373	0.437	0.434	0.428	0.425	0.420	0.419	5.59
42)	M	Chlorobenzene	0.916	0.978	0.963	0.944	0.941	0.954	0.950	2.22
43)	T	ETHYLBENZENE	1.524	1.701	1.673	1.630	1.656	1.694	1.646	3.96
44)	T	m&p-Xylene	0.541	0.581	0.561	0.562	0.571	0.597	0.569	3.37
45)	T	o-Xylene	0.580	0.586	0.563	0.569	0.567	0.577	0.574	1.51
46)	T	Styrene	0.882	0.954	0.950	0.949	0.958	1.002	0.949	4.05
47)	T	Bromoform	0.357	0.422	0.416	0.425	0.423	0.426	0.412	6.60
48)	I	1,4-Dichlorobenzene d	----------ISTD----------							
49)	T	Isopropylbenzene	3.080	3.216	3.192	3.061	3.138	3.167	3.143	1.97
50)	s	4-Bromofluorobenzen	1.513	1.534	1.522	1.472	1.493	1.486	1.503	1.55
51)	T	1,1,2,2-Tetrachloro	0.540	0.600	0.571	0.556	0.573	0.569	0.568	3.47
52)	T	1,3-Dichlorobenzene	1.115	1.324	1.309	1.259	1.272	1.252	1.255	5.92
53)	T	1,4-Dichlorobenzene	1.382	1.332	1.293	1.244	1.246	1.242	1.290	4.46
54)	T	1,2-Dichlorobenzene	1.313	1.265	1.240	1.215	1.242	1.222	1.250	2.87
55)	T	1,2-Dibromo-3-chlor	0.135	0.162	0.146	0.154	0.157	0.159	0.152	6.67
56)	T	1,2,4-Trichlorobenz	0.588	0.769	0.714	0.738	0.789	0.815	0.735	10.98
57)	t	Naphthalene	0.923	1.031	1.061	1.095	1.168	1.188	1.077	9.01

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062102.D
Acq On : 21 Jun 2004 11:28 am
Sample : TCL-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p
Quant Time: Jun 21 11:54 2004

Vial: 2
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.38	168	190968	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.12	114	280341	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.54	117	233590	50.00 ug/L	0.01
48) 1,4-Dichlorobenzene d-4 IS	11.72	152	107974	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	4.35	113	143895	49.56 ug/L	0.00
Spiked Amount 50.000			Recovery =	99.12%	
33) Toluene d-8 SS#2	6.75	98	311136	51.11 ug/L	0.00
Spiked Amount 50.000			Recovery =	102.22%	
50) 4-Bromofluorobenzene SS#3	10.11	95	154233	47.51 ug/L	0.00
Spiked Amount 50.000			Recovery =	95.02%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.57	85	165916	50.52 ug/L	100
3) Chloromethane	1.69	50	48793	50.53 ug/L	99
4) VINYL CHLORIDE	1.78	62	55069	48.27 ug/L	100
5) Bromomethane	2.00	94	104780	45.82 ug/L	98
6) Chloroethane	2.03	64	30695	52.25 ug/L	71
7) Trichlorofluoromethane	2.22	101	141229m	49.06 ug/L	
8) Acetone	2.51	43	31954	56.53 ug/L	99
9) 1,1-DICHLOROETHENE	2.58	96	100605	45.95 ug/L	99
10) 1,1,2-Trichlorotrifluoroet	2.58	101	112153	43.55 ug/L	98
11) Carbon Disulfide	2.79	76	219452	49.86 ug/L	100
12) Methyl Acetate	2.75	74	6543	46.93 ug/L	88
13) Methylene chloride	2.93	84	105437	55.25 ug/L #	72
14) trans-1,2-Dichloroethene	3.08	96	100959	49.80 ug/L	99
15) Methyl-t-Butyl Ether	3.08	73	158184	48.92 ug/L	100
16) 1,1-Dichloroethane	3.42	63	117485	50.32 ug/L	98
17) cis-1,2-Dichloroethene	3.92	96	92450	49.44 ug/L	99
18) 2-Butanone (MEK)	3.91	43	22835	51.06 ug/L	95
19) CHLOROFORM	4.20	83	222052	47.44 ug/L	99
21) 1,1,1-Trichloroethane	4.40	97	239373	45.70 ug/L #	58
22) Cyclohexane	4.48	56	65167	50.34 ug/L	89
24) Carbon tetrachloride	4.57	117	195387	48.91 ug/L	98
25) Benzene	4.75	78	208534	50.88 ug/L	100
26) 1,2-Dichloroethane	4.75	62	186048	46.46 ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062102.D
Acq On : 21 Jun 2004 11:28 am
Sample : TCL-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p
Quant Time: Jun 21 11:54 2004

Vial: 2
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) Trichloroethene	5.41	95	120960	45.93 ug/L	97
28) 1,2-DICHLOROPROPANE	5.63	63	44776	52.56 ug/L	98
29) Methylcyclohexane	5.64	83	83255	53.48 ug/L	100
30) Bromodichloromethane	5.92	83	177345	47.36 ug/L	99
31) cis-1,3-Dichloropropene	6.43	75	111457	53.90 ug/L	99
32) 4-Methyl-2-Pentanone (MIBK	6.61	43	50201	50.09 ug/L	100
34) TOLUENE	6.83	92	173680	51.00 ug/L	99
35) trans-1,3-Dichloropropene	7.08	75	123330	53.63 ug/L	100
36) 1,1,2-Trichloroethane	7.30	83	51549	50.71 ug/L	99
37) Tetrachloroethene	7.50	166	93737	48.76 ug/L	99
38) 2-Hexanone (MBK)	7.63	43	34393	53.89 ug/L	97
40) Dibromochloromethane	7.79	129	99798	47.87 ug/L	99
41) 1,2-Dibromoethane	7.93	107	93576	47.75 ug/L	98
42) Chlorobenzene	8.57	112	214155	48.28 ug/L	98
43) ETHYLBENZENE	8.73	91	369251	48.01 ug/L	99
44) m&p-Xylene	8.88	106	259409	97.61 ug/L	94
45) o-Xylene	9.41	106	127273	47.49 ug/L	97
46) Styrene	9.42	104	219241	49.45 ug/L	99
47) Bromoform	9.65	173	90823	47.24 ug/L	99
49) Isopropylbenzene	9.92	105	326384	48.09 ug/L	99
51) 1,1,2,2-Tetrachloroethane	10.31	83	61041	49.76 ug/L	97
52) 1,3-Dichlorobenzene	11.63	146	129509	47.78 ug/L	99
53) 1,4-Dichlorobenzene	11.76	146	131207	47.11 ug/L	98
54) 1,2-Dichlorobenzene	12.28	146	126437	46.86 ug/L	99
55) 1,2-Dibromo-3-chloropropan	13.39	75	16469	50.09 ug/L	98
56) 1,2,4-Trichlorobenzene	14.62	180	83997	52.89 ug/L	99
57) Naphthalene	14.95	128	116953	50.27 ug/L	100

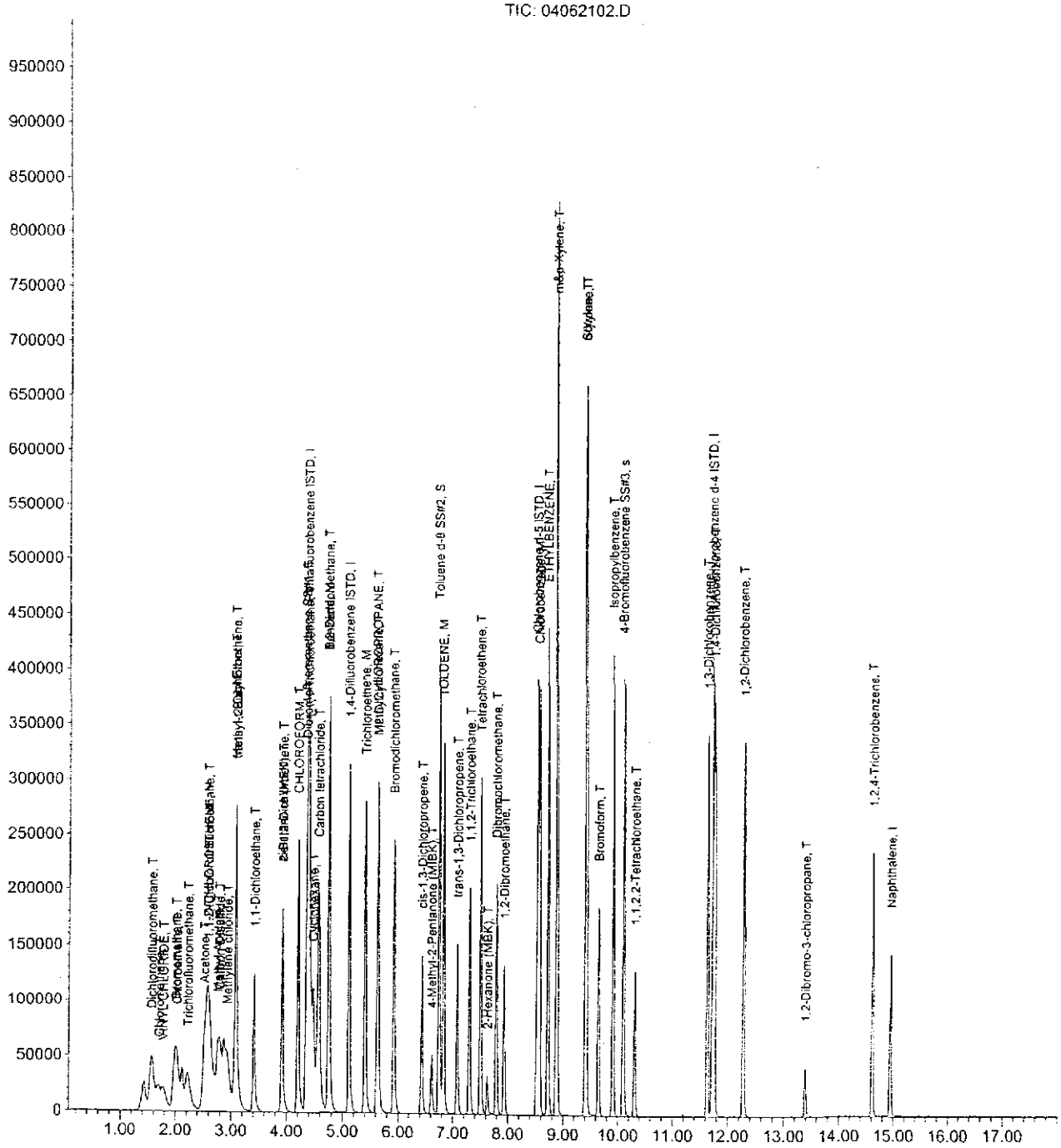
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040621\04062102.D Vial: 2
Acq On : 21 Jun 2004 11:28 am Operator: MI
Sample : TCL-W, CCV 50ppb Inst : GC/MS Ins
Misc : IS/Surr 1uL #432, CCV 10uL #415 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 21 11:54 2004

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration

TIC: 04062102.D



Response Factor Report GC/MS Ins

Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 14:06:06 2004
Response via : Initial Calibration

Calibration Files
C1 =04061603.D C2 =04061611.D C3 =04061612.D
C4 =04061613.D C5 =04061614.D C6 =04061615.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
1)	I	Pentaflourobenzene	----------ISTD----------							
2)	t	acrolein		0.023	0.040	0.032	0.029	0.033	0.032	19.31
3)	t	iodomethne	1.128	0.958	0.951	0.918	0.916	0.932	0.967	8.33
4)	t	acrylonitrile		0.066	0.080	0.069	0.065	0.063	0.069	9.86
5)	t	tert-butanol		0.046	0.046	0.047	0.048	0.048	0.047	1.67
6)	t	vinyl acetate	1.421	1.222	1.260	1.205	1.205	1.239	1.259	6.53
7)	t	diisopropyl ether	0.990	0.855	0.915	0.871	0.847	0.882	0.893	5.94
8)	t	tert-Butyl ethyl et	1.024	0.950	0.981	0.911	0.880	0.860	0.934	6.68
9)	T	2,2-Dichloropropane	0.994	0.813	0.815	0.763	0.757	0.755	0.816	11.16
10)	T	Bromochloromethane	0.215	0.221	0.227	0.224	0.223	0.221	0.222	1.77
11)	S	Dibromofluoromethan	0.756	0.757	0.777	0.756	0.762	0.776	0.764	1.28
12)	I	1,4-Difluorobenzene	----------ISTD----------							
13)	T	1,1-Dichloropropene	0.500	0.426	0.413	0.391	0.386	0.400	0.420	10.05
14)	t	tert-amyl methyl et	0.643	0.615	0.612	0.591	0.579	0.563	0.601	4.78
15)	T	Dibromomethane	0.404	0.347	0.349	0.337	0.330	0.338	0.351	7.71
16)	t	1,4-dioxane					0.000	0.000	0.000	10.06
17)	T	2-Chloroethylvinyl	0.101	0.096	0.091	0.093	0.092	0.095	0.094	3.65
18)	S	Toluene d-8 SS#2	1.081	1.091	1.066	1.095	1.075	1.102	1.085	1.24
19)	I	Chlorobenzene d-5	----------ISTD----------							
20)	T	1,3-Dichloropropane	0.437	0.394	0.431	0.405	0.410	0.410	0.414	3.90
21)	T	1,1,1,2-Tetrachloro	0.388	0.315	0.309	0.295	0.304	0.311	0.320	10.56
22)	T	1,2,3-Trichloroprop	0.172	0.149	0.152	0.145	0.144	0.143	0.151	7.16
23)	s	4-Bromofluorobenzen	0.705	0.693	0.691	0.692	0.683	0.700	0.694	1.08
24)	T	Bromobenzene	0.443	0.398	0.405	0.394	0.379	0.396	0.402	5.34
25)	t	trans-1,4-dichloro-		0.328	0.319	0.324	0.316	0.324	0.322	1.42
26)	T	n-Propylbenzene	1.908	1.645	1.658	1.591	1.596	1.773	1.695	7.27
27)	I	1,4-Dichlorobenzene d	----------ISTD----------							
28)	T	2-Chlorotoluene	4.162	3.592	3.597	3.472	3.427	3.548	3.633	7.37
29)	T	4-Chlorotoluene	3.063	2.743	2.715	2.611	2.560	2.525	2.703	7.25
30)	T	1,3,5-Trimethylbenz	3.154	2.875	2.938	2.860	2.856	2.948	2.938	3.84
31)	T	tert-Butylbenzene	0.339	0.251	0.252	0.264	0.265	0.266	0.273	12.20
32)	T	1,2,4-Trimethylbenz	3.154	2.875	2.938	2.860	2.856	2.948	2.938	3.84
33)	T	sec-Butylbenzene	3.336	2.866	2.962	2.817	2.818	2.914	2.952	6.64
34)	T	4-Isopropyltoluene	2.124	1.883	1.910	1.814	1.855	1.881	1.911	5.73
35)	T	n-Butylbenzene	1.029	0.828	0.739	0.727	0.741	0.749	0.802	14.58
36)	T	1,2,3-Trichlorobenz	0.638	0.605	0.647	0.651	0.683	0.707	0.655	5.44

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062103.D
Acq On : 21 Jun 2004 11:53 am
Sample : UNREG-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #463
MS Integration Params: rteint.p
Quant Time: Jun 21 15:29 2004

Vial: 3
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 14:06:06 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentaflourobenzene	4.38	168	192549	50.00 ug/L	0.00
12) 1,4-Difluorobenzene	5.12	114	282195	50.00 ug/L	0.00
19) Chlorobenzene d-5	8.53	117	227186	50.00 ug/L	0.00
27) 1,4-Dichlorobenzene d-4	11.73	152	103054	50.00 ug/L	0.00
System Monitoring Compounds					
11) Dibromofluoromethane SS#1	4.35	113	144546	49.12 ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 98.24%					
18) Toluene d-8 SS#2	6.75	98	311375	50.84 ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 101.68%					
23) 4-Bromofluorobenzene SS#3	10.11	95	155132	49.21 ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 98.42%					
Target Compounds					Qvalue
2) acrolein	2.40	56	5240	43.08 ug/L #	100
3) iodomethne	2.69	142	174305	46.79 ug/L	96
4) acrylonitrile	3.03	53	12526	47.30 ug/L	97
5) tert-butanol	2.95	59	8084m	44.58 ug/L	
6) vinyl acetate	3.43	43	245443	50.64 ug/L	100
7) diisopropyl ether	3.46	45	182340	53.01 ug/L	98
8) tert-Butyl ethyl ether	3.79	59	183483	50.99 ug/L	98
9) 2,2-Dichloropropane	3.94	77	156891	49.90 ug/L	99
10) Bromochloromethane	4.14	128	43265	50.63 ug/L	98
13) 1,1-Dichloropropene	4.55	75	110880	46.83 ug/L	99
14) tert-amyl methyl ether	4.87	73	174441	51.47 ug/L	97
15) Dibromomethane	5.75	93	91846	46.38 ug/L	97
16) 1,4-dioxane	5.85	58	50	47.47 ug/L #	1
17) 2-Chloroethylvinyl Ether	6.26	63	27118	50.85 ug/L	98
20) 1,3-Dichloropropane	7.50	76	95810	50.88 ug/L	100
21) 1,1,1,2-Tetrachloroethane	8.68	131	69715	47.88 ug/L	99
22) 1,2,3-Trichloropropane	10.36	110	31035	45.29 ug/L	100
24) Bromobenzene	10.31	156	88488	48.39 ug/L	98
25) trans-1,4-dichloro-2-buten	10.36	75	73384	50.13 ug/L #	100
26) n-Propylbenzene	10.49	91	373424	48.48 ug/L	98
28) 2-Chlorotoluene	10.49	91	373424	49.87 ug/L #	100
29) 4-Chlorotoluene	10.59	91	268742	48.24 ug/L	99
30) 1,3,5-Trimethylbenzene	10.74	105	304490	50.28 ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062103.D
Acq On : 21 Jun 2004 11:53 am
Sample : UNREG-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #463
MS Integration Params: rteint.p
Quant Time: Jun 21 15:29 2004

Vial: 3
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 14:06:06 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) tert-Butylbenzene	10.73	119	28259	50.25 ug/L #	91
32) 1,2,4-Trimethylbenzene	10.74	105	304490	50.28 ug/L	98
33) sec-Butylbenzene	11.26	105	300959	49.46 ug/L #	100
34) 4-Isopropyltoluene	11.19	119	198387	50.36 ug/L	99
35) n-Butylbenzene	11.72	91	78058	47.20 ug/L	98
36) 1,2,3-Trichlorobenzene	15.33	180	74713	55.31 ug/L	100

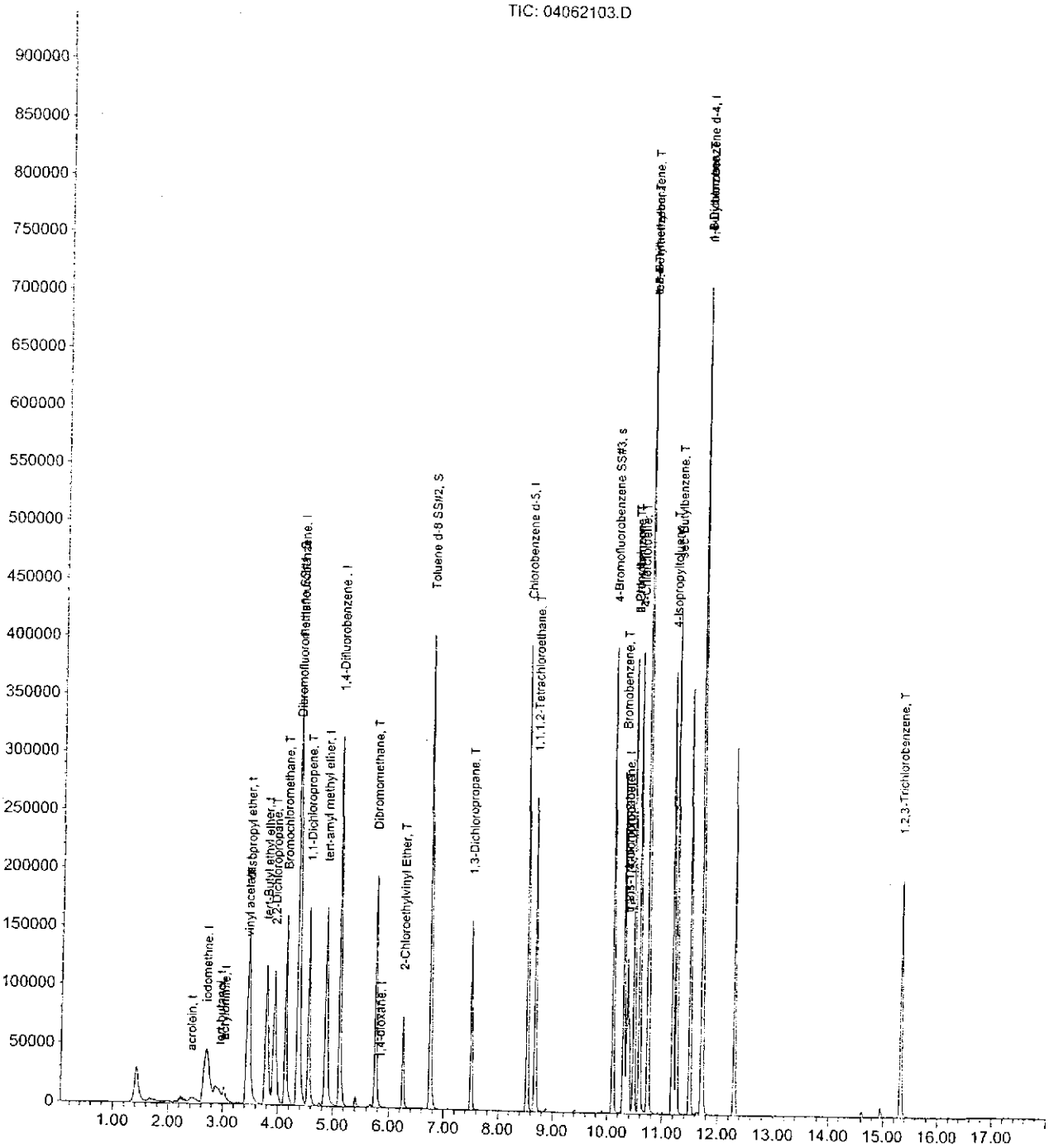
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040621\04062103.D
Acq On : 21 Jun 2004 11:53 am
Sample : UNREG-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #463
MS Integration Params: rteint.p
Quant Time: Jun 21 15:29 2004

Vial: 3
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 14:06:06 2004
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\040621\04062117.D Vial: 17
Acq On : 21 Jun 2004 6:03 pm Operator: MI
Sample : TCL-W, CCV 50ppb Inst : GC/MS Ins
Misc : IS/Surr 1uL #432, CCV 10uL #415 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene ISTD	1.000	1.000	0.0	106	0.00
2	T	Dichlorodifluoromethane	0.860	0.749	12.9	92	0.00
3	T	Chloromethane	0.253	0.247	2.4	108	0.00
4	T	VINYL CHLORIDE	0.299	0.307	-2.7	113	0.00
5	T	Bromomethane	0.599	0.542	9.5	102	0.00
6	T	Chloroethane	0.154	0.165	-7.1	110	0.01
7	T	Trichlorofluoromethane	0.754	0.629	16.6	86	-0.09
8	T	Acetone	0.148	0.142	4.1	101	0.00
9	M	1,1-DICHLOROETHENE	0.573	0.528	7.9	102	0.03
10	T	1,1,2-Trichlorotrifluoroeth	0.674	0.611	9.3	102	0.01
11	T	Carbon Disulfide	1.152	1.175	-2.0	107	0.00
12	T	Methyl Acetate	0.037	0.042	-13.5	118	0.01
13	T	Methylene chloride	0.771	0.488	36.7#	90	0.00
14	T	trans-1,2-Dichloroethene	0.531	0.511	3.8	101	0.00
15	T	Methyl-t-Butyl Ether	0.847	0.844	0.4	109	0.00
16	T	1,1-Dichloroethane	0.611	0.620	-1.5	107	0.01
17	T	cis-1,2-Dichloroethene	0.490	0.488	0.4	106	0.00
18	T	2-Butanone (MEK)	0.117	0.118	-0.9	108	0.01
19	T	CHLOROFORM	1.225	1.149	6.2	101	0.01
20	S	Dibromofluoromethane SS#1	0.760	0.747	1.7	104	0.01
21	T	1,1,1-Trichloroethane	1.371	1.212	11.6	96	0.00
22	T	Cyclohexane	0.339	0.355	-4.7	120	0.01
23	I	1,4-Difluorobenzene ISTD	1.000	1.000	0.0	104	0.00
24	T	Carbon tetrachloride	0.713	0.659	7.6	96	0.00
25	M	Benzene	0.731	0.765	-4.7	111	0.01
26	T	1,2-Dichloroethane	0.714	0.660	7.6	98	0.01
27	M	Trichloroethene	0.470	0.483	-2.8	110	0.01
28	T	1,2-DICHLOROPROPANE	0.152	0.162	-6.6	113	0.01
29	T	Methylcyclohexane	0.278	0.288	-3.6	108	0.01
30	T	Bromodichloromethane	0.668	0.610	8.7	97	0.00
31	T	cis-1,3-Dichloropropene	0.369	0.387	-4.9	109	0.01
32	T	4-Methyl-2-Pentanone (MIBK)	0.179	0.189	-5.6	113	0.01
33	S	Toluene d-8 SS#2	1.086	1.092	-0.6	106	0.00
34	M	TOLUENE	0.607	0.615	-1.3	108	0.01
35	T	trans-1,3-Dichloropropene	0.410	0.418	-2.0	105	0.01
36	T	1,1,2-Trichloroethane	0.181	0.186	-2.8	107	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\040621\04062117.D Vial: 17
Acq On : 21 Jun 2004 6:03 pm Operator: MI
Sample : TCL-W, CCV 50ppb Inst : GC/MS Ins
Misc : IS/Surr 1uL #432, CCV 10uL #415 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	T	Tetrachloroethene	0.343	0.322	6.1	101	0.00
38	T	2-Hexanone (MBK)	0.114	0.117	-2.6	106	0.01
39	I	Chlorobenzene d-5 ISTD	1.000	1.000	0.0	107	0.01
40	T	Dibromochloromethane	0.446	0.421	5.6	100	0.00
41	T	1,2-Dibromoethane	0.419	0.396	5.5	100	0.00
42	M	Chlorobenzene	0.950	0.900	5.3	102	0.00
43	T	ETHYLBENZENE	1.646	1.611	2.1	104	0.00
44	T	m&p-Xylene	0.569	0.548	3.7	103	0.00
45	T	o-Xylene	0.574	0.547	4.7	103	0.00
46	T	Styrene	0.949	0.930	2.0	104	0.00
47	T	Bromoform	0.412	0.392	4.9	99	0.01
48	I	1,4-Dichlorobenzene d-4 IST	1.000	1.000	0.0	106	0.01
49	T	Isopropylbenzene	3.143	3.008	4.3	102	0.00
50	s	4-Bromofluorobenzene SS#3	1.503	1.481	1.5	105	0.00
51	T	1,1,2,2-Tetrachloroethane	0.568	0.590	-3.9	109	0.00
52	T	1,3-Dichlorobenzene	1.255	1.244	0.9	104	0.00
53	T	1,4-Dichlorobenzene	1.290	1.235	4.3	105	0.01
54	T	1,2-Dichlorobenzene	1.250	1.206	3.5	103	0.00
55	T	1,2-Dibromo-3-chloropropane	0.152	0.149	2.0	101	0.00
56	T	1,2,4-Trichlorobenzene	0.735	0.818	-11.3	110	0.00
57	t	Naphthalene	1.077	1.098	-1.9	100	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062117.D
Acq On : 21 Jun 2004 6:03 pm
Sample : TCL-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p
Quant Time: Jun 21 22:54 2004

Vial: 17
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.38	168	191369	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.12	114	279035	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.54	117	224763	50.00 ug/L	0.01
48) 1,4-Dichlorobenzene d-4 IS	11.73	152	103262	50.00 ug/L	0.01
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	4.35	113	142977	49.14 ug/L	0.01
Spiked Amount 50.000			Recovery =	98.28%	
33) Toluene d-8 SS#2	6.75	98	304688	50.28 ug/L	0.00
Spiked Amount 50.000			Recovery =	100.56%	
50) 4-Bromofluorobenzene SS#3	10.11	95	152907	49.25 ug/L	0.00
Spiked Amount 50.000			Recovery =	98.50%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.56	85	143291	43.54 ug/L	100
3) Chloromethane	1.68	50	47200	48.78 ug/L	97
4) VINYL CHLORIDE	1.77	62	58677	51.33 ug/L	99
5) Bromomethane	1.99	94	103631	45.22 ug/L	98
6) Chloroethane	2.02	64	31612	53.69 ug/L	96
7) Trichlorofluoromethane	2.12	101	120404m	41.73 ug/L	
8) Acetone	2.51	43	27221	48.05 ug/L	98
9) 1,1-DICHLOROETHENE	2.58	96	100978	46.02 ug/L	98
10) 1,1,2-Trichlorotrifluoroet	2.57	101	116862	45.28 ug/L	98
11) Carbon Disulfide	2.79	76	224857	50.98 ug/L	100
12) Methyl Acetate	2.76	74	7970	57.04 ug/L	88
13) Methylene chloride	2.90	84	93293m	48.79 ug/L	
14) trans-1,2-Dichloroethene	3.08	96	97844	48.16 ug/L	98
15) Methyl-t-Butyl Ether	3.08	73	161437	49.82 ug/L	100
16) 1,1-Dichloroethane	3.42	63	118704	50.74 ug/L	98
17) cis-1,2-Dichloroethene	3.92	96	93474	49.88 ug/L	97
18) 2-Butanone (MEK)	3.91	43	22525	50.27 ug/L	99
19) CHLOROFORM	4.21	83	219951	46.89 ug/L	100
21) 1,1,1-Trichloroethane	4.40	97	231935	44.19 ug/L #	58
22) Cyclohexane	4.48	56	67913	52.36 ug/L	89
24) Carbon tetrachloride	4.57	117	183945	46.26 ug/L	99
25) Benzene	4.76	78	213362	52.30 ug/L	100
26) 1,2-Dichloroethane	4.76	62	184126	46.19 ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062117.D Vial: 17
Acq On : 21 Jun 2004 6:03 pm Operator: MI
Sample : TCL-W, CCV 50ppb Inst : GC/MS Ins
Misc : IS/Surr 1uL #432, CCV 10uL #415 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 21 22:54 2004

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) Trichloroethene	5.41	95	134684	51.38 ug/L	96
28) 1,2-DICHLOROPROPANE	5.64	63	45256	53.37 ug/L	99
29) Methylcyclohexane	5.64	83	80482	51.94 ug/L	98
30) Bromodichloromethane	5.92	83	170142	45.65 ug/L	99
31) cis-1,3-Dichloropropene	6.43	75	107969	52.46 ug/L	99
32) 4-Methyl-2-Pentanone (MIBK	6.61	43	52865	52.99 ug/L	99
34) TOLUENE	6.84	92	171610	50.63 ug/L	98
35) trans-1,3-Dichloropropene	7.08	75	116603	50.95 ug/L	100
36) 1,1,2-Trichloroethane	7.30	83	52006	51.40 ug/L	97
37) Tetrachloroethene	7.50	166	89954	47.01 ug/L	99
38) 2-Hexanone (MBK)	7.63	43	32722	51.51 ug/L	92
40) Dibromochloromethane	7.79	129	94685	47.20 ug/L	99
41) 1,2-Dibromoethane	7.93	107	89068	47.23 ug/L	98
42) Chlorobenzene	8.57	112	202304	47.39 ug/L	98
43) ETHYLBENZENE	8.73	91	362144	48.93 ug/L	100
44) m&p-Xylene	8.88	106	246404	96.35 ug/L	96
45) o-Xylene	9.41	106	122962	47.68 ug/L	96
46) Styrene	9.42	104	208956	48.98 ug/L	100
47) Bromoform	9.65	173	88140	47.65 ug/L	99
49) Isopropylbenzene	9.92	105	310568	47.85 ug/L	99
51) 1,1,2,2-Tetrachloroethane	10.31	83	60877	51.89 ug/L	99
52) 1,3-Dichlorobenzene	11.63	146	128417	49.54 ug/L	100
53) 1,4-Dichlorobenzene	11.77	146	127538	47.88 ug/L	100
54) 1,2-Dichlorobenzene	12.28	146	124580	48.27 ug/L	100
55) 1,2-Dibromo-3-chloropropan	13.39	75	15401	48.98 ug/L	95
56) 1,2,4-Trichlorobenzene	14.62	180	84499	55.63 ug/L	100
57) Naphthalene	14.95	128	113342	50.94 ug/L	100

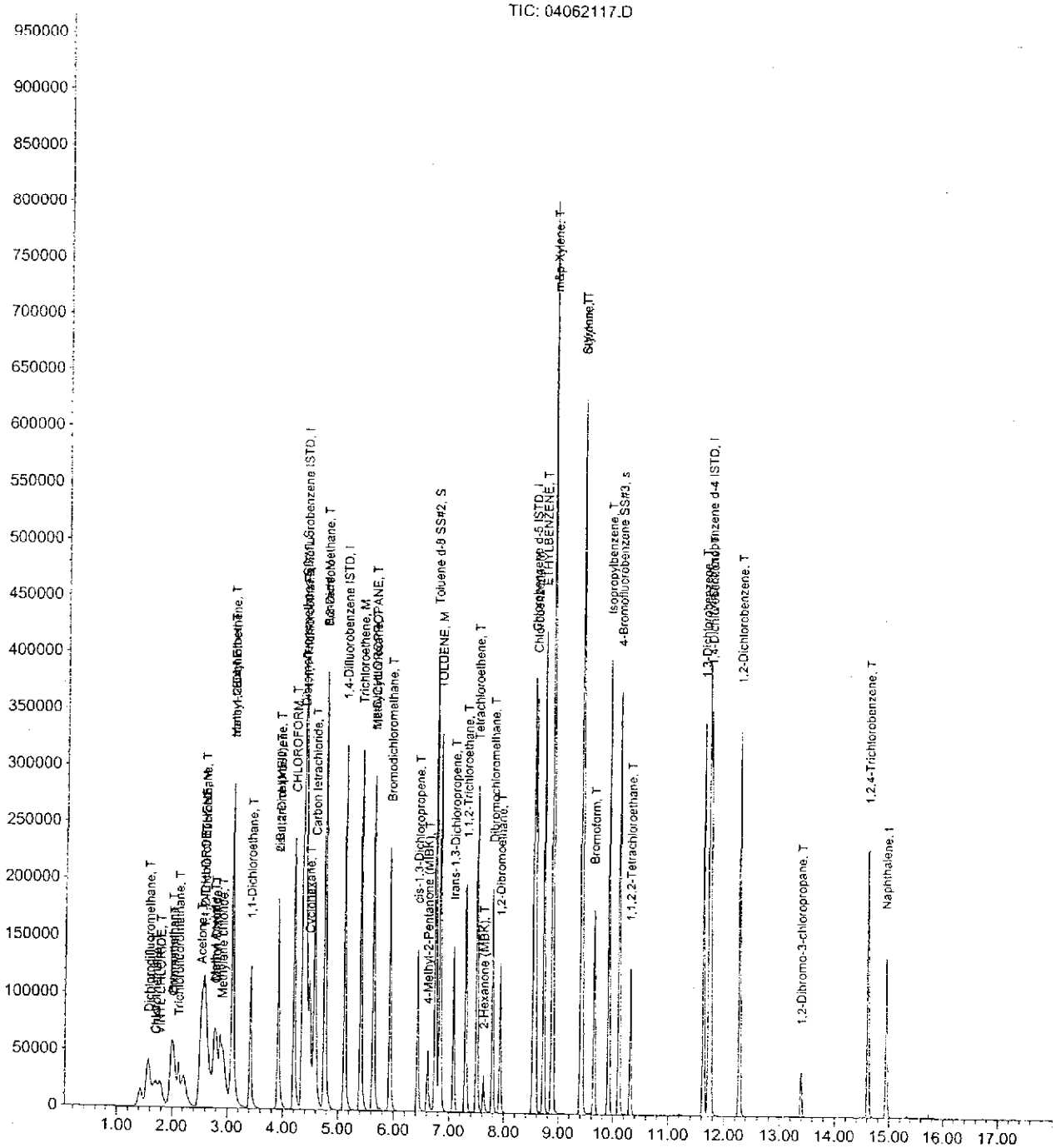
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040621\04062117.D
Acq On : 21 Jun 2004 6:03 pm
Sample : TCL-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p
Quant Time: Jun 21 22:54 2004

Vial: 17
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062118.D Vial: 18
Acq On : 21 Jun 2004 6:28 pm Operator: MI
Sample : UNREG-W, CCV 50ppb Inst : GC/MS Ins
Misc : IS/Surr 1uL #432, CCV 10uL #463 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 22 14:34 2004

Quant Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Mon Jun 21 15:31:55 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentaflourobenzene	4.38	168	185535	50.00 ug/L	0.00
12) 1,4-Difluorobenzene	5.12	114	272382	50.00 ug/L	0.00
19) Chlorobenzene d-5	8.54	117	222293	50.00 ug/L	0.01
27) 1,4-Dichlorobenzene d-4	11.73	152	100913	50.00 ug/L	0.01
System Monitoring Compounds					
11) Dibromofluoromethane SS#1	4.35	113	137847	48.62 ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 97.24%					
18) Toluene d-8 SS#2	6.75	98	301503	51.01 ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 102.02%					
23) 4-Bromofluorobenzene SS#3	10.11	95	146622	47.53 ug/L	0.01
Spiked Amount 50.000 Range 80 - 120 Recovery = 95.06%					
Target Compounds					Qvalue
2) acrolein	2.41	56	6849m	58.43 ug/L	
3) iodomethne	2.69	142	172035	47.92 ug/L	94
4) acrylonitrile	3.02	53	11867	46.50 ug/L	94
5) tert-butanol	2.97	59	8477m	48.52 ug/L	
6) vinyl acetate	3.43	43	236421	50.62 ug/L	100
7) diisopropyl ether	3.47	45	179712	54.22 ug/L	97
8) tert-Butyl ethyl ether	3.80	59	178252	51.41 ug/L	98
9) 2,2-Dichloropropane	3.93	77	142751	47.12 ug/L	98
10) Bromochloromethane	4.14	128	40634	49.34 ug/L	98
13) 1,1-Dichloropropene	4.55	75	107881	47.20 ug/L	99
14) tert-amyl methyl ether	4.86	73	168447	51.49 ug/L	97
15) Dibromomethane	5.76	93	84550	44.24 ug/L	97
16) 1,4-dioxane	0.00	58	0	Not Detected	
17) 2-Chloroethylvinyl Ether	6.26	63	25668	49.86 ug/L	97
20) 1,3-Dichloropropane	7.51	76	92923	50.43 ug/L	99
21) 1,1,1,2-Tetrachloroethane	8.68	131	66780	46.87 ug/L	99
22) 1,2,3-Trichloropropane	10.37	110	30194	45.03 ug/L	100
24) Bromobenzene	10.31	156	83554	46.69 ug/L	100
25) trans-1,4-dichloro-2-buten	10.36	75	72654	50.73 ug/L #	100
26) n-Propylbenzene	10.48	91	360770	47.87 ug/L	99
28) 2-Chlorotoluene	10.48	91	360770	49.20 ug/L #	100
29) 4-Chlorotoluene	10.59	91	254375	46.63 ug/L	98
30) 1,3,5-Trimethylbenzene	10.74	105	287219	48.43 ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040621\04062118.D
Acq On : 21 Jun 2004 6:28 pm
Sample : UNREG-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #463
MS Integration Params: rteint.p
Quant Time: Jun 22 14:34 2004

Vial: 18
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Mon Jun 21 15:31:55 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) tert-Butylbenzene	10.74	119	26969	48.98 ug/L #	94
32) 1,2,4-Trimethylbenzene	10.74	105	287219	48.43 ug/L	98
33) sec-Butylbenzene	11.26	105	285394	47.90 ug/L #	100
34) 4-Isopropyltoluene	11.19	119	190036	49.27 ug/L	98
35) n-Butylbenzene	11.72	91	73389	45.31 ug/L	97
36) 1,2,3-Trichlorobenzene	15.33	180	71235	53.85 ug/L	99

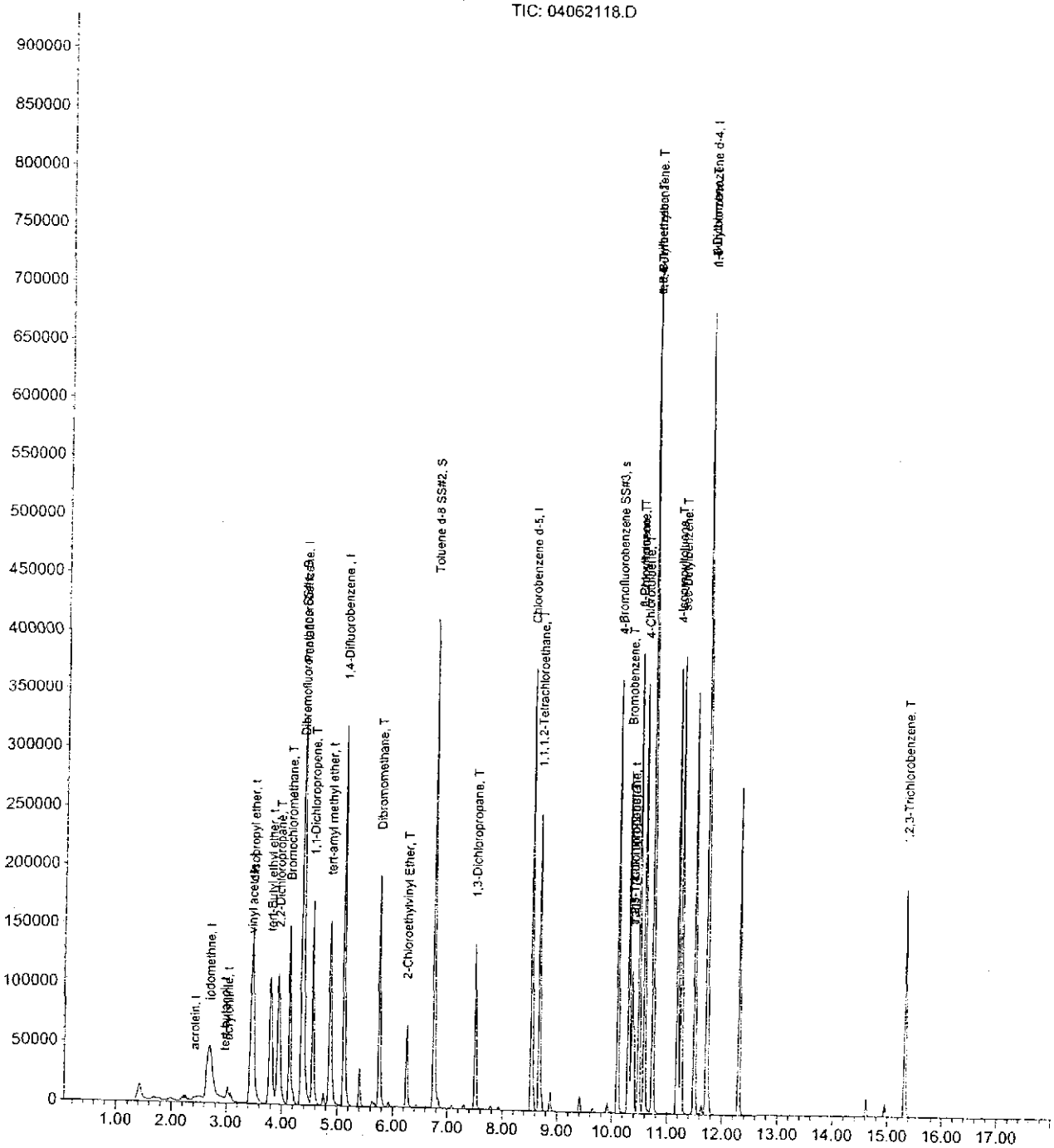
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040621\04062118.D
Acq On : 21 Jun 2004 6:28 pm
Sample : UNREG-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #463
MS Integration Params: rteint.p
Quant Time: Jun 22 14:34 2004

Vial: 18
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Mon Jun 21 15:31:55 2004
Response via : Initial Calibration



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VOLATILE ORGANIC COMPOUNDS
INSTRUMENT AND PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

ANALYSIS:	**GC/MS Volatiles**	**LAB CODE:**	**BFBW**
METHOD:	**EPA 8260**	**LAB SAMPLE ID:**	**BFB Tune**
LAB FILE ID:	**04062101.D**	**DATE/TIME ANALYZED:**	**06/21/04 10:40**

Target Mass	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	22.1
75	30.0 - 60.0% of mass 95	51.8
95	Base peak, 100% relative mass abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than2.0% of mass 174	0.0
174	Greater than 50.0% of mass 95	72.9
175	5.0 - 9.0% of mass 174	8.0
176	Greater than 95.0%, but less than 101.0% of mass 174	96.7
177	5.0 - 9.0% of mass 176	6.6

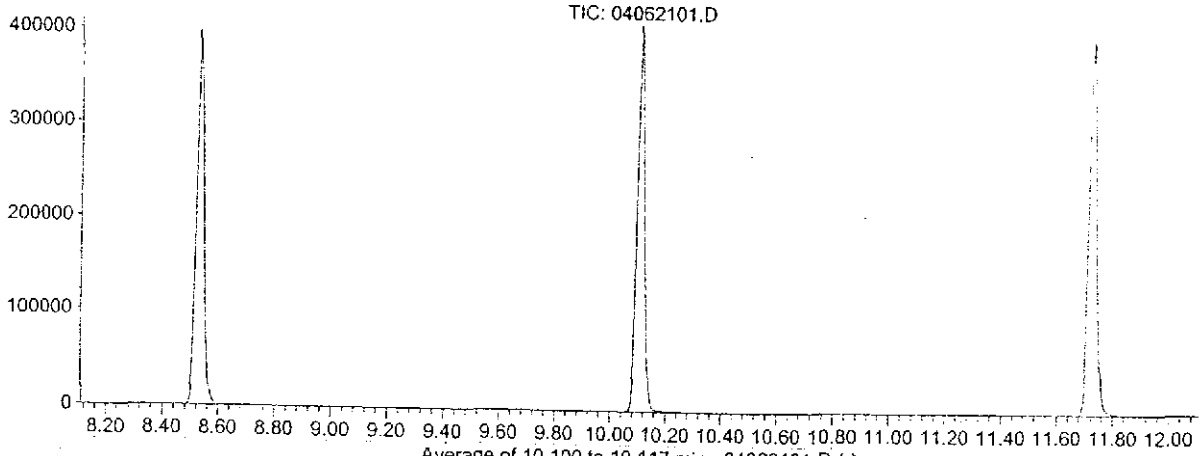
This Tune applies to the following samples:

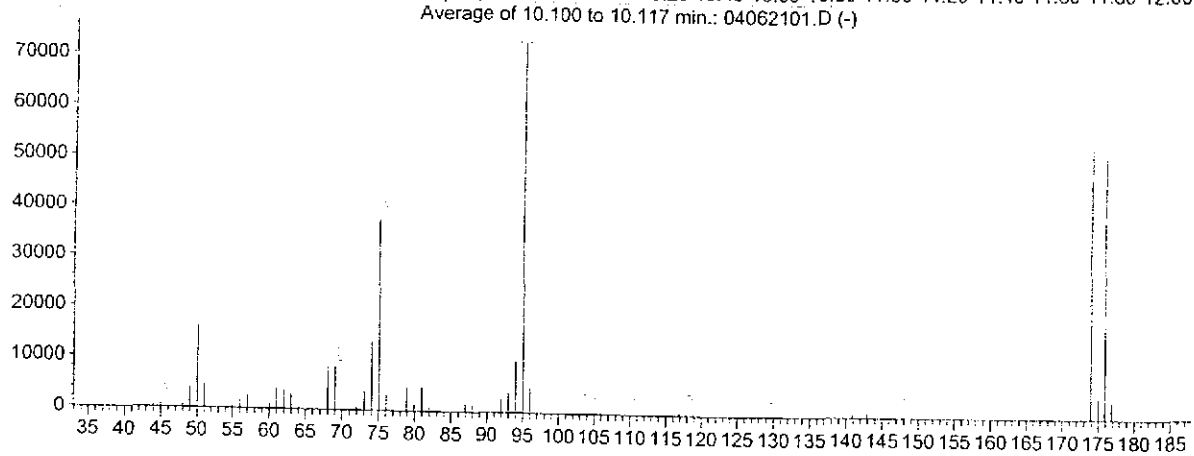
Sample ID	Lab Sample ID	Lab File ID	Date/Time Analyzed
LCS	LCS 25ppb	04062137.D	06/22/04 02:41:00 AM
TB061604	04061717-01	04062110.D	06/21/04 03:01:00 PM
DMW-8D-061604	04061717-02	04062111.D	06/21/04 03:27:00 PM
DMW-8I-061604	04061717-04	04062112.D	06/21/04 03:53:00 PM
DMW-2B-061604	04061717-06	04062113.D	06/21/04 04:19:00 PM
DMW-2A-061604	04061717-08	04062114.D	06/21/04 04:45:00 PM
DMW-5S-061704	04061717-10	04062115.D	06/21/04 05:11:00 PM
DMW-4I-061704	04061717-12	04062132.D	06/22/04 12:32:00 AM

BFB

Data File : C:\HPCHEM\2\DATA\040621\04062101.D
Acq On : 21 Jun 2004 10:40 am
Sample : BFB TUNE Water 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics

Vial: 1
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00





AutoFind: Scans 1225, 1226, 1227; Background Corrected with Scan 1218

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.1	16150	PASS
75	95	30	60	51.8	37819	PASS
95	95	100	100	100.0	72987	PASS
96	95	5	9	6.9	5034	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	72.9	53213	PASS
175	174	5	9	8.0	4282	PASS
176	174	95	101	96.7	51461	PASS
177	176	5	9	6.6	3390	PASS

04062101.D TCL-W.M Mon Jun 21 11:53:32 2004

Injection Log

Directory: c:\hpchem\2\data\040621

.ine	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
49	48	04062148.d	1.	04062109-02 5.07g	IS/Surr 1uL #432	22 Jun 04 07:3
0	49	04062149.d	1.	04062109-03 5.09g	IS/Surr 1uL #432	22 Jun 04 08:0
1	50	04062150.d	1.	04062109-04 5.02g	IS/Surr 1uL #432	22 Jun 04 08:3
52	51	04062151.d	1.	04062109-01 MS 40ppb	IS/Surr 1uL #432, MS 1uL #350	22 Jun 04 08:5
53	52	04062152.d	1.	04062109-01 MSD 40ppb	IS/Surr 1uL #432, MS 1uL #350	22 Jun 04 09:2
4	53	04062153.d	1.	LCS 40ppb	IS/Surr 1uL #432, LCS 1uL #350	22 Jun 04 09:5
55	54	04062154.d	1.	LCS-DUP 40ppb	IS/Surr 1uL #432, LCS 1uL #350	22 Jun 04 10:2
6	55	04062155.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	22 Jun 04 10:4

Injection Log

Directory: c:\hpchem\2\data\040621

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1		04062156.d	1.			
2	1	04062101.d	1.	BFB TUNE Water 5mL	IS/Surr 1uL #432	21 Jun 04 10:4
3	2	04062102.d	1.	TCL-W, CCV 50ppb	IS/Surr 1uL #432, CCV 10uL #415	21 Jun 04 11:2
4	3	04062103.d	1.	UNREG-W, CCV 50ppb	IS/Surr 1uL #432, CCV 10uL #463	21 Jun 04 11:5
5	4	04062104.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	21 Jun 04 12:1
6	5	04062105.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	21 Jun 04 12:4
7	6	04062106.d	1.	04061131-08 5mL	IS/Surr 1uL #432	21 Jun 04 13:1
8	7	04062107.d	1.	04061708-02 10D	IS/Surr 1uL #432	21 Jun 04 13:3
9	8	04062108.d	1.	04061708-03 10D	IS/Surr 1uL #432	21 Jun 04 14:0
10	9	04062109.d	1.	04061131-07 100D	IS/Surr 1uL #432	21 Jun 04 14:3
11	10	04062110.d	1.	04061717-01 5mL	IS/Surr 1uL #432	21 Jun 04 15:0
12	11	04062111.d	1.	04061717-02 5mL	IS/Surr 1uL #432	21 Jun 04 15:2
13	12	04062112.d	1.	04061717-04 5mL	IS/Surr 1uL #432	21 Jun 04 15:5
14	13	04062113.d	1.	04061717-06 5mL	IS/Surr 1uL #432	21 Jun 04 16:1
15	14	04062114.d	1.	04061717-08 5mL	IS/Surr 1uL #432	21 Jun 04 16:4
16	15	04062115.d	1.	04061717-10 5mL	IS/Surr 1uL #432	21 Jun 04 17:1
17	16	04062116.d	1.	04062123-02 5mL	IS/Surr 1uL #432	21 Jun 04 17:3
18	17	04062117.d	1.	TCL-W, CCV 50ppb	IS/Surr 1uL #432, CCV 10uL #415	21 Jun 04 18:0
19	18	04062118.d	1.	UNREG-W, CCV 50ppb	IS/Surr 1uL #432, CCV 10uL #463	21 Jun 04 18:2
20	19	04062119.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	21 Jun 04 18:5
21	20	04062120.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	21 Jun 04 19:2
22	21	04062121.d	1.	04061829-01 5mL	IS/Surr 1uL #432	21 Jun 04 19:4
23	22	04062122.d	1.	04061829-02 5mL	IS/Surr 1uL #432	21 Jun 04 20:1
24	23	04062123.d	1.	04061829-03 5mL	IS/Surr 1uL #432	21 Jun 04 20:3
25	24	04062124.d	1.	04061829-04 5mL	IS/Surr 1uL #432	21 Jun 04 21:0
26	25	04062125.d	1.	04061829-05 5mL	IS/Surr 1uL #432	21 Jun 04 21:2
27	26	04062126.d	1.	04061829-06 5mL	IS/Surr 1uL #432	21 Jun 04 21:5
28	27	04062127.d	1.	04061829-07 5mL	IS/Surr 1uL #432	21 Jun 04 22:2
29	28	04062128.d	1.	04061829-08 5mL	IS/Surr 1uL #432	21 Jun 04 22:4
30	29	04062129.d	1.	04061829-09 5mL	IS/Surr 1uL #432	21 Jun 04 23:1
31	30	04062130.d	1.	04061829-12 5mL	IS/Surr 1uL #432	21 Jun 04 23:3
32	31	04062131.d	1.	04061829-13 5mL	IS/Surr 1uL #432	22 Jun 04 00:0
33	32	04062132.d	1.	04061717-12 100D	IS/Surr 1uL #432	22 Jun 04 00:3
34	33	04062133.d	1.	04061829-10 MS 25ppb	IS/Surr 1uL #432, MS 5uL #350	22 Jun 04 00:5
35	34	04062134.d	1.	04061829-11 MSD 25ppb	IS/Surr 1uL #432, MS 5uL #350	22 Jun 04 01:2
36	35	04062135.d	1.	04061717-02 MS 25ppb	IS/Surr 1uL #432, MS 5uL #350	22 Jun 04 01:4
37	36	04062136.d	1.	04061717-02 MSD 25ppb	IS/Surr 1uL #432, MS 5uL #350	22 Jun 04 02:1
38	37	04062137.d	1.	LCS 25ppb	IS/Surr 1uL #432, LCS 5uL #350	22 Jun 04 02:4
39	38	04062138.d	1.	LCS-DUP 25ppb	IS/Surr 1uL #432, LCS 5uL #350	22 Jun 04 03:0
40	39	04062139.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	22 Jun 04 03:3
41	40	04062140.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	22 Jun 04 03:5
42	41	04062141.d	1.	BFB TUNE Soil 5mL	IS/Surr 1uL #432	22 Jun 04 04:2
43	42	04062142.d	1.	TCL-S, CCV 80ppb	IS/Surr 1uL #432, CCV 2uL #415	22 Jun 04 04:5
44	43	04062143.d	1.	TCL-S, CCV 80ppb	IS/Surr 1uL #432, CCV 2uL #415	22 Jun 04 05:2
45	44	04062144.d	1.	UNREG-S, CCV 80ppb	IS/Surr 1uL #432, CCV 2uL #463	22 Jun 04 05:4
46	45	04062145.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	22 Jun 04 06:1
47	46	04062146.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	22 Jun 04 06:4
48	47	04062147.d	1.	04062109-01 5.05g	IS/Surr 1uL #432	22 Jun 04 07:1

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QA/QC SUMMARY DATA

Metals

- *Initial Calibration Verification Summary*
- *Continuing Calibration Verification Summary*
- *Duplicate Summary*
- *Matrix Spike Summary (LFM)*
- *Method Blank Summary (PB)*
- *LCS Summary*

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Data File List

Directory : C:\ICPCHEM\1\DATA\040618A.B

Line	File Name	Sample Name	Misc Info	Acquired Date
1	001CALB.D	Blank		2004/06/18 10:34
2	002CALB.D	Blank		2004/06/18 10:39
3	003CALS.D	5 ppb / 500 PPB/0.2 HG	0.025 ML #446; 0.010ML A097-	2004/06/18 10:44
4	004CALS.D	40 ppb / 5000 ppb/1 HG	0.2 ML #446; 0.05 ML A097-50	2004/06/18 10:48
5	005CALS.D	100 ppb / 10000 PPB/ 4 HG	0.5 ML #97; O.2 ML # A097-50	2004/06/18 10:53
6	006ICV1.D	ICV-50 PPB ; 2 PPB HG	0.25 ML #444; 0.1 ML #A098-5	2004/06/18 10:58
7	007_ICB.D	icb		2004/06/18 11:03
8	008SMPL.D	1 PPB CHECK		2004/06/18 11:07
9	009ICSA.D	ICSA STD	2.5 ML #448 - 25 ML	2004/06/18 11:12
10	010SMPL.D	rinse		2004/06/18 11:17
11	011ICSB.D	ICSB STD	2.5 ML #448, 0.05 ML #449 -	2004/06/18 11:22
12	012SMPL.D	RINSE		2004/06/18 11:27
13	013AREF.D	04061717-03	BATCH 1069	2004/06/18 11:31
14	014DUP1.D	04061717-03	BATCH 1069	2004/06/18 11:36
15	015LFM1.D	04061717-03	BATCH 1069	2004/06/18 11:41
16	016SMPL.D	04061717-05	BATCH 1069	2004/06/18 11:46
17	017SMPL.D	04061717-07	BATCH 1069	2004/06/18 11:50
18	018SMPL.D	04061717-09	BATCH 1069	2004/06/18 11:55
19	019SMPL.D	04061717-11	BATCH 1069	2004/06/18 12:00
20	020SMPL.D	RINSE		2004/06/18 12:05
21	021CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/18 12:09
22	022_CCB.D	CCB		2004/06/18 12:14
23	023SMPL.D	04061717-13	BATCH 1069	2004/06/18 12:19
24	024SMPL.D	04061515-01	BATCH 1069	2004/06/18 12:24
25	025__PB.D	PB	BATCH 1081	2004/06/18 12:29
26	026_LCS.D	LCS	BATCH 1081	2004/06/18 12:34
27	027SMPL.D	04061718-01	BATCH 1081	2004/06/18 12:38
28	028AREF.D	04061717-12	BATCH 1081	2004/06/18 12:43
29	029DUP1.D	04061717-12 DUP	BATCH 1081	2004/06/18 12:48
30	030LFM1.D	04061717-12 LFM	BATCH 1081	2004/06/18 12:53
31	031PDS1.D	04061717-12 PDS	BATCH 1081	2004/06/18 12:57
32	032DIL1.D	04061717-12 DIL	BATCH 1081	2004/06/18 13:02
33	033SMPL.D	RINSE		2004/06/18 13:07
34	034CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/18 13:12
35	035CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/18 13:16
36	036_CCB.D	CCB		2004/06/18 13:21
37	037SMPL.D	04061717-02	BATCH 1081	2004/06/18 13:26
38	038SMPL.D	04061717-04	BATCH 1081	2004/06/18 13:31
39	039SMPL.D	04061717-06	BATCH 1081	2004/06/18 13:35
40	040SMPL.D	04061717-08	BATCH 1081	2004/06/18 13:40
41	041SMPL.D	04061717-10	BATCH 1081	2004/06/18 13:45
42	042SMPL.D	04061706-02	BATCH 1081	2004/06/18 13:50
43	043SMPL.D	RINSE		2004/06/18 13:55
44	044AREF.D	04061514-01	BATCH 1067	2004/06/18 14:00
45	045DUP1.D	04061514-01 DUP	BATCH 1067	2004/06/18 14:04
46	046LFM1.D	04061514-01 LFM	BATCH 1067	2004/06/18 14:09
47	047SMPL.D	RINSE		2004/06/18 14:14
48	048CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/18 14:19
49	049_CCB.D	CCB		2004/06/18 14:24
50	050SMPL.D	04061514-02	BATCH 1067	2004/06/18 14:29
51	051SMPL.D	04061514-03	BATCH 1067	2004/06/18 14:34
52	052SMPL.D	04061514-04	BATCH 1067	2004/06/18 14:39
53	053SMPL.D	04061514-05	BATCH 1067	2004/06/18 14:44
54	054SMPL.D	04061514-06	BATCH 1067	2004/06/18 14:48
55	055SMPL.D	04061514-07	BATCH 1067	2004/06/18 14:53
56	056SMPL.D	04061514-08	BATCH 1067	2004/06/18 14:58
57	057__PB.D	PB	BATCH 1069-67	2004/06/18 15:03
58	058SMPL.D	04061801-01	BATCH 1081	2004/06/18 15:08
59	059_LCS.D	LCS RR	BATCH 1081	2004/06/18 15:13
60	060SMPL.D	RINSE		2004/06/18 15:18
61	061CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/18 15:23

Directory : C:\ICPCHEM\1\DATA\040618A.B

Data File List

Line	File Name	Sample Name	Misc Info	Acquired Date
62	062_CCB.D	CCB		2004/06/18 15:28
63	063SMPL.D	RINSE		2004/06/18 15:33
64	064CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/18 15:37
65	065_CCB.D	CCB		2004/06/18 15:42
66	066ICSA.D	5 ML #448		2004/06/18 15:47
67	067SMPL.D			2004/06/18 15:52
68	068ICSB.D	5 ML #448;0.05 ML449		2004/06/18 15:57
69	069SMPL.D			2004/06/18 16:02
70	070SMPL.D	LRC 5 PPM		2004/06/18 16:07
71	071SMPL.D			2004/06/18 16:11
72	072SMPL.D			2004/06/18 16:16
73	073SMPL.D			2004/06/18 16:21
74	074SMPL.D			2004/06/18 16:26
75	075SMPL.D			2004/06/18 16:31
76	076SMPL.D			2004/06/18 16:36

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PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-10I-062504 (Dissolved) / 04062901-09						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Beryllium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Cadmium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Chromium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Copper	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Lead	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/5/2004
Nickel	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Selenium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Zinc	ND	ug/L	EPA 6020	50	7/2/2004	7/5/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Matt Clifee
Quality Assurance Chemist

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PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-4S-062504 / 04062901-10						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Beryllium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Cadmium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Chromium	46	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Copper	ND	ug/L	EPA 6020	20	7/2/2004	7/8/2004
Lead	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/8/2004
Nickel	40	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Selenium	7.0	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Zinc	170	ug/L	EPA 6020	50	7/2/2004	7/8/2004
Volatile Organic Compounds						
Benzene	2	ug/L	EPA 8260B	1		7/3/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
Bromoform	ND	ug/L	EPA 8260B	1		7/3/2004
Bromomethane	ND	ug/L	EPA 8260B	1		7/3/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	1		7/3/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Chloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
Chloroform	ND	ug/L	EPA 8260B	1		7/3/2004
Chloromethane	j 1	ug/L	EPA 8260B	1		7/3/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		7/3/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		7/3/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		7/3/2004
	ND	ug/L	EPA 8260B	1		7/3/2004

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CERTIFICATE OF ANALYSIS
No. 04062901 Page 21 of 31
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-4S-062504 / 04062901-10						
Volatile Organic Compounds						
Dibromomethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloroethane	8	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichloroethane	22	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloroethene	27	ug/L	EPA 8260B	1		7/3/2004
cis-1,2-Dichloroethene	190	ug/L	EPA 8260B	1		7/3/2004
trans-1,2-Dichloroethene	4	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004
Ethylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		7/3/2004
Methylene chloride	b 1	ug/L	EPA 8260B	1		7/3/2004
Naphthalene	ND	ug/L	EPA 8260B	1		7/3/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Styrene	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
Tetrachloroethene	3	ug/L	EPA 8260B	1		7/3/2004
Toluene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,2-Trichloroethane	2	ug/L	EPA 8260B	1		7/3/2004
Trichloroethene	E 3,900	ug/L	EPA 8260B	10		7/7/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004

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CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-4S-062504 / 04062901-10						
Volatile Organic Compounds						
Vinyl chloride	68	ug/L	EPA 8260B	1		7/3/2004
m&p-Xylene	ND	ug/L	EPA 8260B	3		7/3/2004
o-Xylene	ND	ug/L	EPA 8260B	3		7/3/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		7/3/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		7/3/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		7/3/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		7/3/2004
Acetone	j 6	ug/L	EPA 8260B	10		7/3/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		7/3/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		7/3/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		7/3/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		7/3/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004

Reviewed By: Matt Oblue
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.
E - estimated value, exceeds calibration range.
j - estimated value, less than quantitation limit.

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Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-4S-062504 (Dissolved) / 04062901-11						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Beryllium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Cadmium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Chromium	**5.5**	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Copper	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Lead	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/5/2004
Nickel	**35**	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Selenium	**5.5**	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Zinc	**140**	ug/L	EPA 6020	50	7/2/2004	7/5/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Matt Orlin
Quality Assurance Chemist

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CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-SI-062504 / 04062901-12						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Beryllium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Cadmium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Chromium	**24**	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Copper	ND	ug/L	EPA 6020	20	7/2/2004	7/8/2004
Lead	**15**	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/8/2004
Nickel	**60**	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Selenium	**22**	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Zinc	**220**	ug/L	EPA 6020	50	7/2/2004	7/8/2004
Volatile Organic Compounds						
Benzene	ND	ug/L	EPA 8260B	10		7/3/2004
Bromobenzene	ND	ug/L	EPA 8260B	10		7/3/2004
Bromochloromethane	ND	ug/L	EPA 8260B	10		7/3/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	10		7/3/2004
Bromoform	ND	ug/L	EPA 8260B	10		7/3/2004
Bromomethane	ND	ug/L	EPA 8260B	10		7/3/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	10		7/3/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	10		7/3/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	10		7/3/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	10		7/3/2004
Chlorobenzene	ND	ug/L	EPA 8260B	10		7/3/2004
Chloroethane	ND	ug/L	EPA 8260B	10		7/3/2004
Chloroform	ND	ug/L	EPA 8260B	10		7/3/2004
Chloromethane	ND	ug/L	EPA 8260B	10		7/3/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	10		7/3/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	10		7/3/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	10		7/3/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	10		7/3/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	10		7/3/2004

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Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-5I-062504 / 04062901-12						
Volatile Organic Compounds						
Dibromomethane	ND	ug/L	EPA 8260B	10		7/3/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	10		7/3/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	10		7/3/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	10		7/3/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	10		7/3/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	10		7/3/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	10		7/3/2004
1,1-Dichloroethene	ND	ug/L	EPA 8260B	10		7/3/2004
cis-1,2-Dichloroethene	170	ug/L	EPA 8260B	10		7/3/2004
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260B	10		7/3/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	10		7/3/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	10		7/3/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	10		7/3/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	10		7/3/2004
Ethylbenzene	ND	ug/L	EPA 8260B	10		7/3/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	10		7/3/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	10		7/3/2004
Methylene chloride	b 19	ug/L	EPA 8260B	10		7/3/2004
Naphthalene	ND	ug/L	EPA 8260B	10		7/3/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	10		7/3/2004
Styrene	ND	ug/L	EPA 8260B	10		7/3/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	10		7/3/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	10		7/3/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	10		7/3/2004
Toluene	ND	ug/L	EPA 8260B	10		7/3/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	10		7/3/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	10		7/3/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	10		7/3/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	10		7/3/2004
Trichloroethene	730	ug/L	EPA 8260B	10		7/3/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	10		7/3/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	10		7/3/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	10		7/3/2004

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CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-5I-062504 / 04062901-12						
Volatile Organic Compounds						
Vinyl chloride	ND	ug/L	EPA 8260B	10		7/3/2004
m&p-Xylene	ND	ug/L	EPA 8260B	30		7/3/2004
o-Xylene	ND	ug/L	EPA 8260B	30		7/3/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	10		7/3/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	100		7/3/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	100		7/3/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	100		7/3/2004
Acetone	ND	ug/L	EPA 8260B	100		7/3/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	50		7/3/2004
Carbon disulfide	ND	ug/L	EPA 8260B	10		7/3/2004
Vinyl acetate	ND	ug/L	EPA 8260B	10		7/3/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	10		7/3/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	10		7/3/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	10		7/3/2004

Reviewed By: Matt Pillu
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.

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Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-5I-062504 (Dissolved) / 04062901-13						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Beryllium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Cadmium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Chromium	**11**	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Copper	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Lead	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/5/2004
Nickel	**48**	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Selenium	**15**	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Zinc	**150**	ug/L	EPA 6020	50	7/2/2004	7/5/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Matt Orlau
Quality Assurance Chemist

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CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: MW-5-062504 / 04062901-14						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Beryllium	**7.4**	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Cadmium	**7.4**	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Chromium	**110**	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Copper	**70**	ug/L	EPA 6020	20	7/2/2004	7/8/2004
Lead	**15**	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/8/2004
Nickel	**130**	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Selenium	**74**	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Zinc	**310**	ug/L	EPA 6020	50	7/2/2004	7/8/2004
Volatile Organic Compounds						
Benzene	**160**	ug/L	EPA 8260B	100		7/3/2004
Bromobenzene	ND	ug/L	EPA 8260B	100		7/3/2004
Bromochloromethane	ND	ug/L	EPA 8260B	100		7/3/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	100		7/3/2004
Bromoform	ND	ug/L	EPA 8260B	100		7/3/2004
Bromomethane	ND	ug/L	EPA 8260B	100		7/3/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	100		7/3/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	100		7/3/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	100		7/3/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	100		7/3/2004
Chlorobenzene	ND	ug/L	EPA 8260B	100		7/3/2004
Chloroethane	ND	ug/L	EPA 8260B	100		7/3/2004
Chloroform	ND	ug/L	EPA 8260B	100		7/3/2004
Chloromethane	ND	ug/L	EPA 8260B	100		7/3/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	100		7/3/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	100		7/3/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	100		7/3/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	100		7/3/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	100		7/3/2004

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

Sample ID: MW-5-062504 / 04062901-14

	Result	Unit	Method	PQL	Prepared	Analyzed
Volatile Organic Compounds						
Dibromomethane	ND	ug/L	EPA 8260B	100		7/3/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	100		7/3/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	100		7/3/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	100		7/3/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	100		7/3/2004
1,1-Dichloroethane	**1,200**	ug/L	EPA 8260B	100		7/3/2004
1,2-Dichloroethane	**600**	ug/L	EPA 8260B	100		7/3/2004
1,1-Dichloroethene	**1,700**	ug/L	EPA 8260B	100		7/3/2004
cis-1,2-Dichloroethene	**110,000**	ug/L	EPA 8260B	4000		7/7/2004
trans-1,2-Dichloroethene	**1,800**	ug/L	EPA 8260B	100		7/3/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	100		7/3/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	100		7/3/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	100		7/3/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	100		7/3/2004
Ethylbenzene	**430**	ug/L	EPA 8260B	100		7/3/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	100		7/3/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	100		7/3/2004
Methylene chloride	**b 1,300**	ug/L	EPA 8260B	100		7/3/2004
Naphthalene	ND	ug/L	EPA 8260B	100		7/3/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	100		7/3/2004
Styrene	ND	ug/L	EPA 8260B	100		7/3/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	100		7/3/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	100		7/3/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	100		7/3/2004
Toluene	**9,900**	ug/L	EPA 8260B	100		7/3/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	100		7/3/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	100		7/3/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	100		7/3/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	100		7/3/2004
Trichloroethene	**35,000**	ug/L	EPA 8260B	4000		7/7/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	100		7/3/2004
1,2,4-Trimethylbenzene	**480**	ug/L	EPA 8260B	100		7/3/2004
1,3,5-Trimethylbenzene	**140**	ug/L	EPA 8260B	100		7/3/2004

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: MW-5-062504 / 04062901-14						
Volatile Organic Compounds						
Vinyl chloride	**550**	ug/L	EPA 8260B	100		7/3/2004
m&p-Xylene	**610**	ug/L	EPA 8260B	300		7/3/2004
o-Xylene	**j 230**	ug/L	EPA 8260B	300		7/3/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	100		7/3/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	1000		7/3/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	1000		7/3/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	1000		7/3/2004
Acetone	ND	ug/L	EPA 8260B	1000		7/3/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	500		7/3/2004
Carbon disulfide	ND	ug/L	EPA 8260B	100		7/3/2004
Vinyl acetate	ND	ug/L	EPA 8260B	100		7/3/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	100		7/3/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	100		7/3/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	100		7/3/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.
j - estimated value, less than quantitation limit.

Reviewed By: Quality Assurance Chemist

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CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: MW-5-062504 (Dissolved) / 04062901-15						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Beryllium	7.2	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Cadmium	6.6	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Chromium	41	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Copper	48	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Lead	5.9	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/5/2004
Nickel	110	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Selenium	51	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Zinc	270	ug/L	EPA 6020	50	7/2/2004	7/5/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Matt Calice
Quality Assurance Chemist

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

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email: info@phaseonline.com

(1)

CLIENT: Tetra Tech PHONE NO.: (916) 276-7846

PROJECT MGR: Nisha Bansal FAX NO.: ( )

EMAIL: Nisha.bansal@TetraTech.com

PROJECT NAME: Martin State Airport - Quarterly Sampling

SITE LOCATION: Martin State Airport

PROJECT NO.: N7339-0677D P.O. NO.:

PSS Project #: 0406290

PAGE 1 OF 1

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	Volatile Organic Compounds (8260B)	TOTAL Priority Pollutant Metals (6020)	Dissolved Priority Pollutant Metals (6020)							REMARKS
	Preservatives Used						HCL	HNO3	HNO3							
	Analysis Required (3)															
	TB-062504	9/25/04	0000	GW	2	G	X									
	DMW-11I-062504	↓	0925	↓	5	↓	X	X	X							
	DMW-11S-062504		1015		5		X	X	X							1 voa missing
	MW-3-062504		1114		5		X	X	X							1 voa missing
	DMW-10I-062504		1341		5		X	X	X							1 voa missing
	DMW-4S-062504		1456		5		X	X	X							
	DMW-5I-062504		1554		5		X	X	X							
	MW-5-062504	↓	1700	↓	5	↓	X	X	X							

(5)

Collected / Relinquished By: (1)	Date	Time	Received By:
[signature]	6/29	9:25	[signature] 14°C
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Collected / Relinquished By: (4)	Date	Time	Received By:

(4)

Requested Turnaround Time
- ☐ 5-Day (Std.) ☐ 3-Day ☐ 2-Day
- ☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required:

Sample Condition Upon Receipt: GOOD

Custody Seal:

Shipping Carrier: UPS

Shipping Ticket No.:

Special Instructions:

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The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if colleciton becomes necessary

PHASE SEPARATION SCIENCE, INC.

Analytical Chemistry Environmental Science

QA/QC SUMMARY DATA

Volatile Organic Compounds

- *Surrogate Summary*
- *Method Blank Summary*
- *Continuing Calibration Verification Summary*
- *LCS Summary*
- *MS/MSD Summary*
- *BFB Tune Summary*

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PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

VOLATILE ORGANIC COMPOUNDS
SYSTEM MONITORING COMPOUND RECOVERY
(SURROGATES)

ANALYSIS: GC/MS Volatiles **LAB CODE:** SURR

METHOD: EPA 8260 **MATRIX:** Water

Date/Time Analyzed	Sample ID / Lab ID	SMC-1 (DBF) #	SMC-2 (TOL) #	SMC-3 (BFB) #	Total Out
	Upper Limit	113	110	113	
	Lower Limit	84	83	67	
07/03/04 03:38:00 AM	Calibration Verification	103	104	101	
07/03/04 04:50:00 AM	Method Blank	101	105	100	
07/03/04 03:20:00 PM	LCS / LCS 25ppb	103	105	101	
07/03/04 10:25:00 AM	TB-062504 / 04062901-01	103	103	101	
07/03/04 10:49:00 AM	DMW-11I-062504 / 04062901-02	103	105	102	
07/03/04 11:13:00 AM	DMW-11S-062504 / 04062901-04	106	102	102	
07/03/04 12:01:00 PM	DMW-10I-062504 / 04062901-08	101	105	101	
07/03/04 12:25:00 PM	DMW-4S-062504 / 04062901-10	102	102	101	
07/03/04 12:51:00 PM	DMW-5I-062504 / 04062901-12	101	105	103	
07/03/04 01:45:00 PM	MW-5-062504 / 04062901-14	104	107	102	

	Water Control Limits	Soil Control Limits
SMC-1 (DBF): Dibromofluoromethane	84-113	74-131
SMC-2 (TOL): Toluene-d-8	83-110	82-115
SMC-3 (BFB): Bromofluorobenzene	67-113	59-157

Column used to flag recovery values
* = Values outside QC limits
D: Surrogate diluted out

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PHASE SEPARATION SCIENCE, INC.

VOLATILE ORGANIC COMPOUNDS
SYSTEM MONITORING COMPOUND RECOVERY
(SURROGATES)

ANALYSIS: GC/MS Volatiles **LAB CODE:** SURR

METHOD: EPA 8260 **MATRIX:** Water

Date/Time Analyzed	Sample ID / Lab ID	SMC-1 (DBF)	#	SMC-2 (TOL)	#	SMC-3 (BFB)	#	Total Out
	Upper Limit	113		110		113		
	Lower Limit	84		83		67		
07/07/04 11:33:00 AM	Calibration Verification	101		101		100		
07/07/04 12:49:00 PM	Method Blank	100		101		101		
07/08/04 05:01:00 AM	LCS / LCS 25ppb	99		102		96		
07/07/04 01:12:00 PM	MW-3-062504 / 04062901-06	102		101		106		

	Water Control Limits	Soil Control Limits
SMC-1 (DBF): Dibromofluoromethane	84-113	74-131
SMC-2 (TOL): Toluene d-8	83-110	82-115
SMC-3 (BFB): Bromofluorobenzene	67-113	59-157

Column used to flag recovery values
* = Values outside QC limits
D: Surrogate diluted out

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

VOLATILE ORGANICS COMPOUNDS
SAMPLE SPIKE AND SAMPLE SPIKE DUPLICATE SUMMARY

DATE ANALYZED:	**07/03/04**	**BATCH NUMBER:**	**VOC040702**
METHOD:	**EPA 8260**	**LAB FILE IDs:**	**04070258.D** **04070259.D**
MATRIX:	**Water**		

Client Sample ID: 04070119-01 MS

SAMPLE SPIKE COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPIKE CONC (ug/L)	SPIKE REC (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	27	106	61-145
Benzene	25	ND	25	98	76-127
Trichloroethene	25	ND	27	109	71-120
Toluene	25	ND	24	97	76-125
Chlorobenzene	25	ND	24	96	75-130

Client Sample ID: 04070119-01 MSD

SAMPLE SPIKE DUP COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPK DUP CONC (ug/L)	SPIKE DUP REC (%)	RPD (%)	QC RPD (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	25	101	5.4	14	61-145
Benzene	25	ND	24	95	3.6	11	76-127
Trichloroethene	25	ND	25	100	8.7	14	71-120
Toluene	25	ND	24	97	0.0	13	76-125
Chlorobenzene	25	ND	23	93	3.0	13	75-130

* - Values outside of QC Limits

Calculation: spike or spike dup %Recovery
*=[(spike conc - original sample conc)/(spike added)]*100*
Calculation: spike/spike dup Relative Percent Difference
*=absolute value [(spike dup conc - spike conc)/((spike dup conc + spike conc)/2))]*100*
Note: QC limits are based on CLP OLM04.2

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VOLATILE ORGANIC COMPOUNDS
METHOD BLANK SUMMARY

ANALYSIS:	**GC/MS Volatiles**	**LAB CODE:**	**Method Blank**
METHOD:	**EPA 8260**	**LAB SAMPLE ID:**	**MBW**
LAB FILE ID:	**04070706.D**	**DATE/TIME ANALYZED:**	**07/07/04 12:49**
MATRIX:	**Water**		

This Method Blank applies to the following samples:

Sample ID	Lab Sample ID	Lab File ID	Date/Time Analyzed
LCS	LCS 25ppb	04070746.D	07/08/04 05:01:00 AM
MW-3-062504	04062901-06	04070707.D	07/07/04 01:12:00 PM

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VOLATILE ORGANIC COMPOUNDS
METHOD BLANK SUMMARY

ANALYSIS:	**GC/MS Volatiles**	**LAB CODE:**	**Method Blank**
METHOD:	**EPA 8260**	**LAB SAMPLE ID:**	**MBW**
LAB FILE ID:	**04070234.D**	**DATE/TIME ANALYZED:**	**07/03/04 04:50**
MATRIX:	**Water**		

This Method Blank applies to the following samples:

Sample ID	Lab Sample ID	Lab File ID	Date/Time Analyzed
LCS	LCS 25ppb	04070260.D	07/03/04 03:20:00 PM
TB-062504	04062901-01	04070248.D	07/03/04 10:25:00 AM
DMW-11I-062504	04062901-02	04070249.D	07/03/04 10:49:00 AM
DMW-11S-062504	04062901-04	04070250.D	07/03/04 11:13:00 AM
DMW-10I-062504	04062901-08	04070252.D	07/03/04 12:01:00 PM
DMW-4S-062504	04062901-10	04070253.D	07/03/04 12:25:00 PM
DMW-5I-062504	04062901-12	04070254.D	07/03/04 12:51:00 PM
MW-5-062504	04062901-14	04070256.D	07/03/04 01:45:00 PM

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040707\04070706.D
Acq On : 7 Jul 2004 12:49 pm
Sample : METHOD BLANK 5mL
Misc : IS/S 1uL #432
MS Integration Params: rteint.p
Quant Time: Jul 7 15:47 2004

Vial: 6
Operator: DJP
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.01	168	164460	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	4.72	114	315799	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.05	117	264200	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.20	152	81695	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	3.98	113	97834	50.08 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 100.16%		
33) Toluene d-8 SS#2	6.30	98	339140	50.62 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.24%		
50) 4-Bromofluorobenzene SS#3	9.61	95	118012	50.62 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.24%		

Target Compounds				Qvalue
2) Dichlorodifluoromethane	0.00	85	0	Not Detected
3) Chloromethane	0.00	50	0	Not Detected
4) VINYL CHLORIDE	0.00	62	0	Not Detected
5) Bromomethane	0.00	94	0	Not Detected
6) Chloroethane	0.00	64	0	Not Detected
7) Trichlorofluoromethane	0.00	101	0	Not Detected
8) Acetone	0.00	43	0	Not Detected d
9) 1,1-DICHLOROETHENE	0.00	96	0	Not Detected
10) 1,1,2-Trichlorotrifluoroet	0.00	101	0	Not Detected
11) Carbon Disulfide	0.00	76	0	Not Detected
12) Methyl Acetate	0.00	74	0	Not Detected
13) Methylene chloride	2.60	84	467	Not Detected
14) trans-1,2-Dichloroethene	0.00	96	0	Not Detected
15) Methyl-t-Butyl Ether	0.00	73	0	Not Detected
16) 1,1-Dichloroethane	0.00	63	0	Not Detected
17) cis-1,2-Dichloroethene	0.00	96	0	Not Detected
18) 2-Butanone (MEK)	0.00	43	0	Not Detected
19) CHLOROFORM	0.00	83	0	Not Detected
21) 1,1,1-Trichloroethane	0.00	97	0	Not Detected
22) Cyclohexane	0.00	56	0	Not Detected d
24) Carbon tetrachloride	0.00	117	0	Not Detected
25) Benzene	4.34	78	190	Not Detected
26) 1,2-Dichloroethane	0.00	62	0	Not Detected
27) Trichloroethene	0.00	95	0	Not Detected
28) 1,2-DICHLOROPROPANE	0.00	63	0	Not Detected
29) Methylcyclohexane	0.00	83	0	Not Detected
30) Bromodichloromethane	0.00	83	0	Not Detected

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040707\04070706.D
Acq On : 7 Jul 2004 12:49 pm
Sample : METHOD BLANK 5mL
Misc : IS/S 1uL #432
MS Integration Params: rteint.p
Quant Time: Jul 7 15:47 2004

Vial: 6
Operator: DJP
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) cis-1,3-Dichloropropene	0.00	75	0	Not Detected	
32) 4-Methyl-2-Pentanone (MIBK	6.30	43	1849	Not Detected	
34) TOLUENE	0.00	92	0	Not Detected	
35) trans-1,3-Dichloropropene	0.00	75	0	Not Detected	
36) 1,1,2-Trichloroethane	0.00	83	0	Not Detected	
37) Tetrachloroethene	0.00	166	0	Not Detected	
38) 2-Hexanone (MBK)	0.00	43	0	Not Detected	
40) Dibromochloromethane	0.00	129	0	Not Detected	
41) 1,2-Dibromoethane	0.00	107	0	Not Detected	
42) Chlorobenzene	0.00	112	0	Not Detected	
43) ETHYLBENZENE	8.24	91	51	Not Detected	
44) m&p-Xylene	0.00	106	0	Not Detected	
45) o-Xylene	0.00	106	0	Not Detected	
46) Styrene	0.00	104	0	Not Detected	
47) Bromoform	0.00	173	0	Not Detected	
49) Isopropylbenzene	0.00	105	0	Not Detected	
51) 1,1,2,2-Tetrachloroethane	0.00	83	0	Not Detected	
52) 1,3-Dichlorobenzene	11.24	146	630	Not Detected	
53) 1,4-Dichlorobenzene	11.24	146	630	Not Detected	
54) 1,2-Dichlorobenzene	0.00	146	0	Not Detected	
55) 1,2-Dibromo-3-chloropropan	0.00	75	0	Not Detected	
56) 1,2,4-Trichlorobenzene	14.06	180	91	Not Detected	
57) Naphthalene	14.40	128	797	Not Detected	

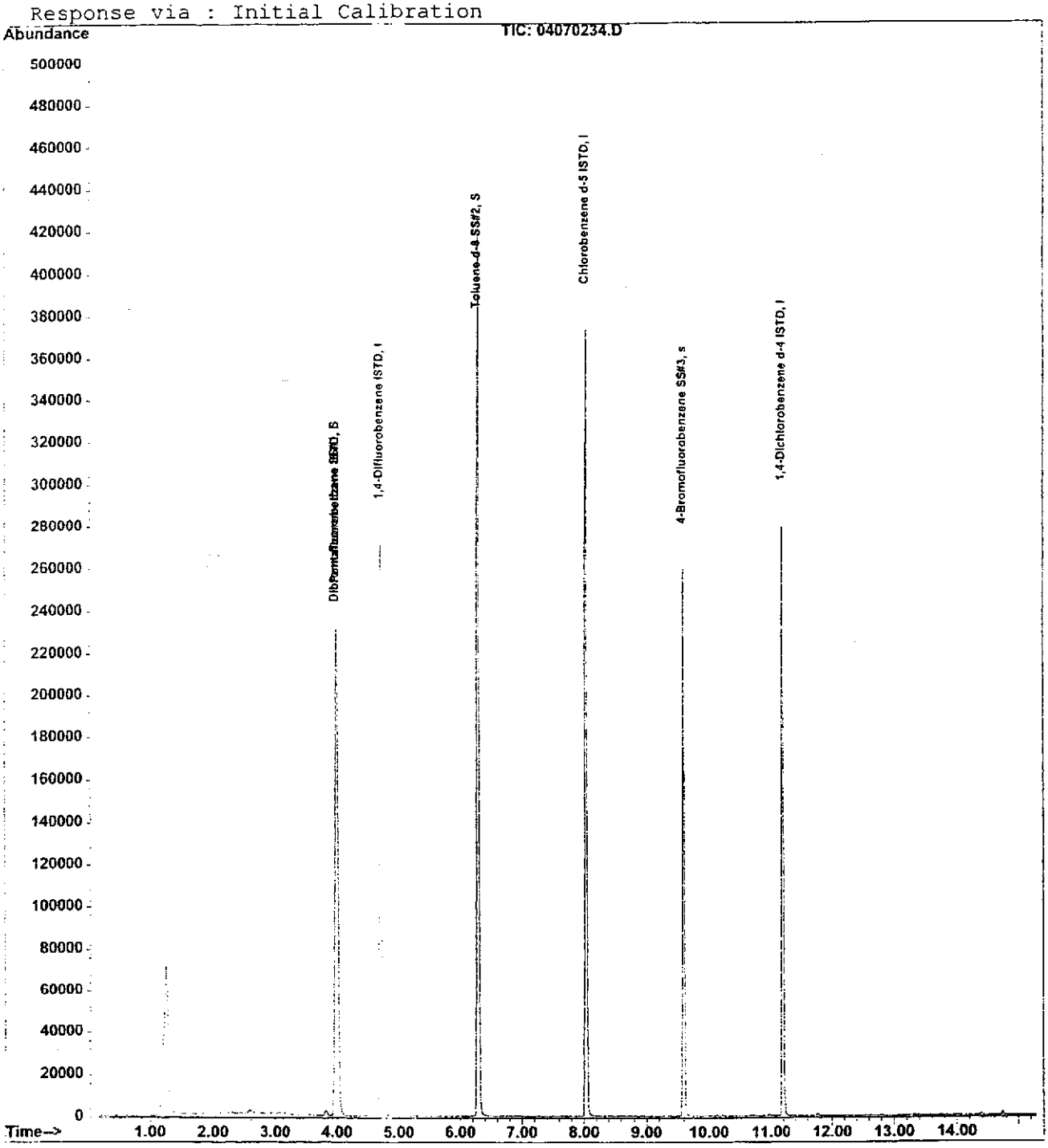
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040702\04070234.D
Acq On : 3 Jul 2004 4:50 am
Sample : METHOD BLANK 5mL
Misc : IS/S 1uL #432
MS Integration Params: rteint.p
Quant Time: Jul 6 14:43 2004

Vial: 34
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070234.D Vial: 34
Acq On : 3 Jul 2004 4:50 am Operator: MI
Sample : METHOD BLANK 5mL Inst : Instrumen
Misc : IS/S 1uL #432 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 6 14:43 2004

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.00	168	161506	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	4.71	114	303282	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.04	117	252587	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.20	152	79885	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	3.98	113	97101	50.61 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.22%		
33) Toluene d-8 SS#2	6.29	98	337431	52.45 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 104.90%		
50) 4-Bromofluorobenzene SS#3	9.60	95	114075	50.04 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 100.08%		

Target Compounds				Qvalue
2) Dichlorodifluoromethane	0.00	85	0	Not Detected
3) Chloromethane	0.00	50	0	Not Detected
4) VINYL CHLORIDE	0.00	62	0	Not Detected
5) Bromomethane	0.00	94	0	Not Detected
6) Chloroethane	0.00	64	0	Not Detected
7) Trichlorofluoromethane	0.00	101	0	Not Detected
8) Acetone	2.24	43	321	Not Detected
9) 1,1-DICHLOROETHENE	0.00	96	0	Not Detected
10) 1,1,2-Trichlorotrifluoroet	0.00	101	0	Not Detected
11) Carbon Disulfide	2.45	76	53	Not Detected
12) Methyl Acetate	0.00	74	0	Not Detected
13) Methylene chloride	2.59	84	1449	Not Detected
14) trans-1,2-Dichloroethene	0.00	96	0	Not Detected
15) Methyl-t-Butyl Ether	0.00	73	0	Not Detected
16) 1,1-Dichloroethane	0.00	63	0	Not Detected
17) cis-1,2-Dichloroethene	0.00	96	0	Not Detected
18) 2-Butanone (MEK)	0.00	43	0	Not Detected d
19) CHLOROFORM	0.00	83	0	Not Detected
21) 1,1,1-Trichloroethane	0.00	97	0	Not Detected
22) Cyclohexane	0.00	56	0	Not Detected d
24) Carbon tetrachloride	0.00	117	0	Not Detected
25) Benzene	4.37	78	156	Not Detected
26) 1,2-Dichloroethane	0.00	62	0	Not Detected
27) Trichloroethene	0.00	95	0	Not Detected
28) 1,2-DICHLOROPROPANE	0.00	63	0	Not Detected
29) Methylcyclohexane	0.00	83	0	Not Detected
30) Bromodichloromethane	0.00	83	0	Not Detected

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070234.D
Acq On : 3 Jul 2004 4:50 am
Sample : METHOD BLANK 5mL
Misc : IS/S 1uL #432
MS Integration Params: rteint.p
Quant Time: Jul 6 14:43 2004

Vial: 34
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) cis-1,3-Dichloropropene	0.00	75	0	Not Detected	
32) 4-Methyl-2-Pentanone (MIBK	6.29	43	1801	Not Detected	
34) TOLUENE	0.00	92	0	Not Detected	
35) trans-1,3-Dichloropropene	0.00	75	0	Not Detected	
36) 1,1,2-Trichloroethane	0.00	83	0	Not Detected	
37) Tetrachloroethene	0.00	166	0	Not Detected	
38) 2-Hexanone (MBK)	0.00	43	0	Not Detected	
40) Dibromochloromethane	0.00	129	0	Not Detected	
41) 1,2-Dibromoethane	0.00	107	0	Not Detected	
42) Chlorobenzene	0.00	112	0	Not Detected	
43) ETHYLBENZENE	8.22	91	56	Not Detected	
44) m&p-Xylene	0.00	106	0	Not Detected	
45) o-Xylene	0.00	106	0	Not Detected	
46) Styrene	8.91	104	50	Not Detected	
47) Bromoform	0.00	173	0	Not Detected	
49) Isopropylbenzene	0.00	105	0	Not Detected	
51) 1,1,2,2-Tetrachloroethane	0.00	83	0	Not Detected	
52) 1,3-Dichlorobenzene	11.23	146	1183	Not Detected	
53) 1,4-Dichlorobenzene	11.23	146	1183	Not Detected	
54) 1,2-Dichlorobenzene	0.00	146	0	Not Detected	
55) 1,2-Dibromo-3-chloropropan	0.00	75	0	Not Detected	
56) 1,2,4-Trichlorobenzene	14.06	180	137	Not Detected	
57) Naphthalene	14.40	128	984	Not Detected	

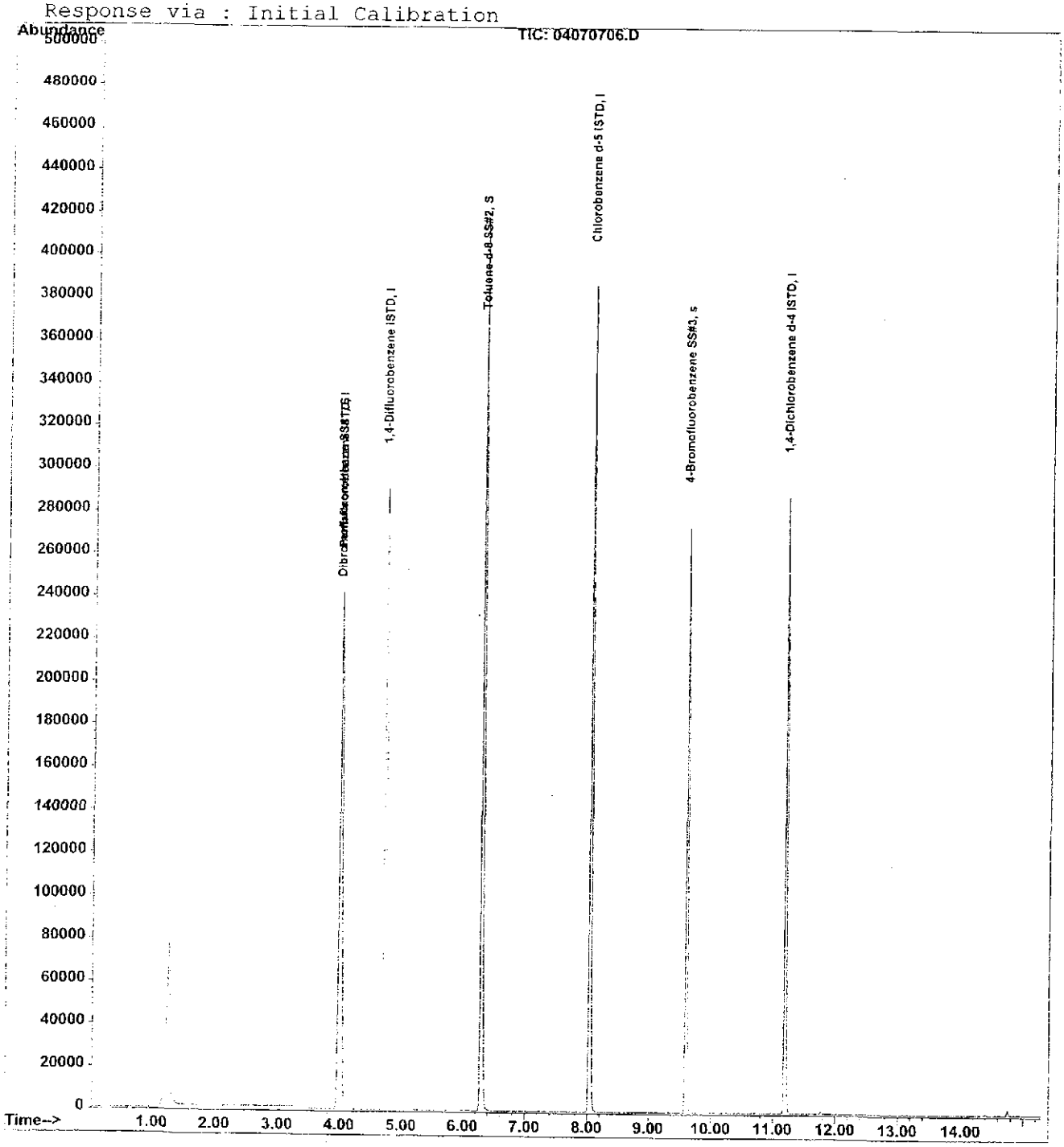
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040707\04070706.D
Acq On : 7 Jul 2004 12:49 pm
Sample : METHOD BLANK 5mL
Misc : IS/S 1uL #432
MS Integration Params: rteint.p
Quant Time: Jul 7 15:47 2004

Vial: 6
Operator: DJP
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040702\04070231.D
Acq On : 3 Jul 2004 3:38 am
Sample : TCL-W, CCV 50ppb
Misc : IS/S 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p

Vial: 31
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene ISTD	1.000	1.000	0.0	91	0.00
2	T	Dichlorodifluoromethane	0.537	0.580	-8.0	107	0.00
3	T	Chloromethane	0.894	0.892	0.2	99	0.00
4	T	VINYL CHLORIDE	0.767	0.867	-13.0	103	0.00
5	T	Bromomethane	0.581	0.552	5.0	99	0.00
6	T	Chloroethane	0.413	0.423	-2.4	99	0.00
7	T	Trichlorofluoromethane	0.343	0.455	-32.7#	112	0.00
8	T	Acetone	0.197	0.180	8.6	100	0.00
9	M	1,1-DICHLOROETHENE	0.574	0.585	-1.9	97	0.00
10	T	1,1,2-Trichlorotrifluoroeth	0.477	0.495	-3.8	96	0.00
11	T	Carbon Disulfide	2.014	2.080	-3.3	101	0.00
12	T	Methyl Acetate	0.079	0.083	-5.1	101	0.00
13	T	Methylene chloride	0.670	0.665	0.7	99	0.00
14	T	trans-1,2-Dichloroethene	0.651	0.633	2.8	96	0.00
15	T	Methyl-t-Butyl Ether	1.220	1.121	8.1	90	0.00
16	T	1,1-Dichloroethane	1.236	1.248	-1.0	99	0.00
17	T	cis-1,2-Dichloroethene	0.705	0.664	5.8	92	0.00
18	T	2-Butanone (MEK)	0.357	0.326	8.7	98	0.00
19	T	CHLOROFORM	1.108	1.033	6.8	93	0.00
20	S	Dibromofluoromethane SS#1	0.594	0.610	-2.7	94	0.00
21	T	1,1,1-Trichloroethane	0.815	0.779	4.4	93	0.00
22	T	Cyclohexane	0.966	0.911	5.7	93	0.00
23	I	1,4-Difluorobenzene ISTD	1.000	1.000	0.0	91	0.00
24	T	Carbon tetrachloride	0.372	0.346	7.0	91	0.00
25	M	Benzene	1.407	1.343	4.5	94	0.00
26	T	1,2-Dichloroethane	0.429	0.417	2.8	94	0.00
27	M	Trichloroethene	0.346	0.321	7.2	91	0.00
28	T	1,2-DICHLOROPROPANE	0.395	0.372	5.8	93	0.00
29	T	Methylcyclohexane	0.313	0.272	13.1	89	0.00
30	T	Bromodichloromethane	0.420	0.405	3.6	93	0.00
31	T	cis-1,3-Dichloropropene	0.541	0.521	3.7	92	0.00
32	T	4-Methyl-2-Pentanone (MIBK)	0.351	0.351	0.0	95	0.00
33	S	Toluene d-8 SS#2	1.061	1.103	-4.0	95	0.00
34	M	TOLUENE	0.816	0.754	7.6	90	0.00
35	T	trans-1,3-Dichloropropene	0.446	0.427	4.3	91	0.00
36	T	1,1,2-Trichloroethane	0.228	0.220	3.5	95	0.00
37	T	Tetrachloroethene	0.258	0.221	14.3	85	0.00
38	T	2-Hexanone (MBK)	0.226	0.234	-3.5	95	0.00
39	I	Chlorobenzene d-5 ISTD	1.000	1.000	0.0	93	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040702\04070231.D
Acq On : 3 Jul 2004 3:38 am
Sample : TCL-W, CCV 50ppb
Misc : IS/S 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p

Vial: 31
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40	T	Dibromochloromethane	0.351	0.329	6.3	91	0.00
41	T	1,2-Dibromoethane	0.329	0.310	5.8	90	0.00
42	M	Chlorobenzene	1.070	0.978	8.6	90	0.00
43	T	ETHYLBENZENE	1.535	1.411	8.1	90	0.00
44	T	m&p-Xylene	0.598	0.547	8.5	90	0.00
45	T	o-Xylene	0.585	0.548	6.3	91	0.00
46	T	Styrene	1.063	0.993	6.6	90	0.00
47	T	Bromoform	0.195	0.193	1.0	93	0.00
48	I	1,4-Dichlorobenzene d-4 IST	1.000	1.000	0.0	91	0.00
49	T	Isopropylbenzene	3.588	3.158	12.0	89	0.00
50	s	4-Bromofluorobenzene SS#3	1.427	1.448	-1.5	96	0.00
51	T	1,1,2,2-Tetrachloroethane	1.202	1.114	7.3	94	0.00
52	T	1,3-Dichlorobenzene	1.660	1.438	13.4	87	0.00
53	T	1,4-Dichlorobenzene	1.718	1.489	13.3	87	0.00
54	T	1,2-Dichlorobenzene	1.594	1.394	12.5	88	0.00
55	T	1,2-Dibromo-3-chloropropane	0.125	0.133	-6.4	93	0.00
56	T	1,2,4-Trichlorobenzene	0.738	0.635	14.0	87	0.00
57	T	Naphthalene	1.617	1.374	15.0	82	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Response Factor Report Instrumen

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration

Calibration Files
C1 =04061505.D C2 =04061507.D C3 =04061508.D
C4 =04061509.D C5 =04061510.D C6 =04061511.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
1)	I	Pentafluorobenzene IS	----------ISTD----------							
2)	T	Dichlorodifluoromet	0.545	0.571	0.552	0.545	0.495	0.512	0.537	5.21
3)	T	Chloromethane	1.055	0.975	0.905	0.873	0.819	0.740	0.894	12.50
4)	T	VINYL CHLORIDE	0.664	0.834	0.800	0.796	0.764	0.746	0.767	7.71
5)	T	Bromomethane	0.729	0.627	0.574	0.552	0.509	0.494	0.581	14.92
6)	T	Chloroethane	0.440	0.420	0.420	0.412	0.389	0.400	0.413	4.29
7)	T	Trichlorofluorometh		0.304	0.297	0.351	0.369	0.398	0.343	12.50
8)	T	Acetone		0.276	0.209	0.181	0.164	0.153	0.197	24.99
9)	M	1,1-DICHLOROETHENE	0.575	0.598	0.584	0.589	0.548	0.549	0.574	3.60
10)	T	1,1,2-Trichlorotrif	0.383	0.538	0.499	0.503	0.467	0.469	0.477	11.08
11)	T	Carbon Disulfide	2.166	2.105	2.024	2.014	1.869	1.904	2.014	5.66
12)	T	Methyl Acetate		0.086	0.080	0.080	0.074	0.075	0.079	5.88
13)	T	Methylene chloride		0.805	0.688	0.666	0.609	0.582	0.670	12.91
14)	T	trans-1,2-Dichloroe	0.729	0.700	0.651	0.640	0.601	0.582	0.651	8.65
15)	T	Methyl-t-Butyl Ethe	1.393	1.301	1.212	1.199	1.127	1.088	1.220	9.22
16)	T	1,1-Dichloroethane	1.397	1.292	1.230	1.224	1.150	1.121	1.236	8.07
17)	T	cis-1,2-Dichloroeth	0.797	0.745	0.704	0.688	0.657	0.642	0.705	8.19
18)	T	2-Butanone (MEK)	0.532	0.363	0.345	0.313	0.301	0.286	0.357	25.43
19)	T	CHLOROFORM	1.232	1.184	1.116	1.087	1.013	1.017	1.108	7.95
20)	S	Dibromofluoromethan	0.594	0.598	0.590	0.596	0.589	0.597	0.594	0.64
21)	T	1,1,1-Trichloroetha	0.869	0.888	0.819	0.799	0.762	0.753	0.815	6.74
22)	T	Cyclohexane	1.030	1.004	1.041	0.978	0.888	0.858	0.966	7.90
23)	I	1,4-Difluorobenzene I	----------ISTD----------							
24)	T	Carbon tetrachlorid	0.409	0.396	0.370	0.368	0.344	0.344	0.372	7.17
25)	M	Benzene	1.630	1.501	1.398	1.376	1.297	1.239	1.407	10.05
26)	T	1,2-Dichloroethane	0.482	0.453	0.433	0.420	0.403	0.387	0.429	8.04
27)	M	Trichloroethene	0.386	0.363	0.343	0.346	0.321	0.316	0.346	7.62
28)	T	1,2-DICHLOROPROPANE	0.458	0.411	0.393	0.388	0.363	0.354	0.395	9.47
29)	T	Methylcyclohexane	0.403	0.311	0.298	0.306	0.279	0.278	0.313	14.78
30)	T	Bromodichloromethan	0.485	0.430	0.414	0.408	0.394	0.388	0.420	8.42
31)	T	cis-1,3-Dichloropro	0.595	0.561	0.529	0.538	0.513	0.508	0.541	6.03
32)	T	4-Methyl-2-Pentanon	0.392	0.358	0.345	0.344	0.334	0.332	0.351	6.31
33)	S	Toluene d-8 SS#2	1.057	1.043	1.064	1.068	1.055	1.077	1.061	1.12
34)	M	TOLUENE	0.931	0.867	0.787	0.805	0.760	0.744	0.816	8.69
35)	T	trans-1,3-Dichlorop	0.495	0.450	0.433	0.442	0.428	0.426	0.446	5.85
36)	T	1,1,2-Trichloroetha	0.253	0.238	0.231	0.226	0.210	0.209	0.228	7.36
37)	T	Tetrachloroethene	0.309	0.269	0.256	0.246	0.236	0.232	0.258	11.06
38)	T	2-Hexanone (MBK)	0.233	0.227	0.226	0.224	0.224	0.224	0.226	1.48
39)	I	Chlorobenzene d-5 IST	----------ISTD----------							
40)	T	Dibromochloromethan	0.373	0.370	0.341	0.345	0.339	0.335	0.351	4.75
41)	T	1,2-Dibromoethane	0.349	0.337	0.334	0.323	0.323	0.305	0.329	4.53

(#) = Out of Range

Response Factor Report Instrumen

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration

Calibration Files
C1 =04061505.D C2 =04061507.D C3 =04061508.D
C4 =04061509.D C5 =04061510.D C6 =04061511.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
42)	M	Chlorobenzene	1.212	1.133	1.073	1.041	1.012	0.950	1.070	8.66
43)	T	ETHYLBENZENE	1.776	1.595	1.515	1.499	1.460	1.362	1.535	9.16
44)	T	m&p-Xylene	0.681	0.618	0.597	0.585	0.570	0.536	0.598	8.18
45)	T	o-Xylene	0.654	0.613	0.581	0.585	0.560	0.518	0.585	7.92
46)	T	Styrene	1.148	1.099	1.067	1.061	1.033	0.971	1.063	5.61
47)	T	Bromoform	0.202	0.197	0.195	0.192	0.195	0.191	0.195	2.12
48)	I	1,4-Dichlorobenzene d	----------	----------	ISTD	----------	----------	----------	----------	
49)	T	Isopropylbenzene	4.153	3.708	3.635	3.535	3.218	3.280	3.588	9.41
50)	s	4-Bromofluorobenzen	1.488	1.417	1.450	1.412	1.370	1.425	1.427	2.78
51)	T	1,1,2,2-Tetrachloro	1.420	1.235	1.236	1.156	1.078	1.088	1.202	10.54
52)	T	1,3-Dichlorobenzene	1.985	1.706	1.659	1.597	1.499	1.513	1.660	10.75
53)	T	1,4-Dichlorobenzene	2.088	1.779	1.694	1.672	1.553	1.523	1.718	11.89
54)	T	1,2-Dichlorobenzene	1.927	1.616	1.594	1.553	1.440	1.437	1.594	11.27
55)	T	1,2-Dibromo-3-chlor	0.083	0.131	0.135	0.138	0.130	0.132	0.125	16.54
56)	T	1,2,4-Trichlorobenz	0.922	0.708	0.732	0.717	0.666	0.686	0.738	12.59
57)	T	Naphthalene	2.035	1.420	1.574	1.565	1.529	1.580	1.617	13.19

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070231.D Vial: 31
Acq On : 3 Jul 2004 3:38 am Operator: MI
Sample : TCL-W, CCV 50ppb Inst : Instrumen
Misc : IS/S 1uL #432, CCV 10uL #415 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 6 14:40 2004

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.01	168	161360	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	4.71	114	304344	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.04	117	258163	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.20	152	81489	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	3.98	113	98494	51.38 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 102.76%					
33) Toluene d-8 SS#2	6.29	98	335657	51.99 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 103.98%					
50) 4-Bromofluorobenzene SS#3	9.60	95	117960	50.72 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 101.44%					
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.40	85	93603	54.06 ug/L	100
3) Chloromethane	1.48	50	143994	49.88 ug/L	99
4) VINYL CHLORIDE	1.58	62	139938	56.51 ug/L	100
5) Bromomethane	1.75	94	89084	47.53 ug/L	99
6) Chloroethane	1.79	64	68322	51.22 ug/L	100
7) Trichlorofluoromethane	1.93	101	73355	66.18 ug/L	99
8) Acetone	2.28	43	29068	45.81 ug/L	99
9) 1,1-DICHLOROETHENE	2.27	96	94429	50.98 ug/L	99
10) 1,1,2-Trichlorotrifluoroet	2.29	101	79851	51.92 ug/L	96
11) Carbon Disulfide	2.48	76	335643m	51.65 ug/L	
12) Methyl Acetate	2.49	74	13322	52.33 ug/L	96
13) Methylene chloride	2.59	84	107337	49.64 ug/L	97
14) trans-1,2-Dichloroethene	2.79	96	102153	48.66 ug/L	99
15) Methyl-t-Butyl Ether	2.79	73	180950	45.96 ug/L	100
16) 1,1-Dichloroethane	3.10	63	201354	50.49 ug/L	99
17) cis-1,2-Dichloroethene	3.58	96	107082	47.04 ug/L	97
18) 2-Butanone (MEK)	3.56	43	52532	56.69 ug/L	98
19) CHLOROFORM	3.84	83	166646	46.60 ug/L	99
21) 1,1,1-Trichloroethane	4.03	97	125732	47.79 ug/L #	58
22) Cyclohexane	4.09	56	147073	47.15 ug/L	99
24) Carbon tetrachloride	4.18	117	105312	46.54 ug/L	100
25) Benzene	4.35	78	408595	47.71 ug/L	100
26) 1,2-Dichloroethane	4.36	62	126884	48.54 ug/L	99
27) Trichloroethene	4.98	95	97766	46.43 ug/L	95
28) 1,2-DICHLOROPROPANE	5.21	63	113347	47.20 ug/L	98
29) Methylcyclohexane	5.19	83	82852	43.56 ug/L	98
30) Bromodichloromethane	5.50	83	123332	48.26 ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070231.D Vial: 31
Acq On : 3 Jul 2004 3:38 am Operator: MI
Sample : TCL-W, CCV 50ppb Inst : Instrumen
Misc : IS/S 1uL #432, CCV 10uL #415 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 6 14:40 2004

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) cis-1,3-Dichloropropene	5.99	75	158591	48.20 ug/L	97
32) 4-Methyl-2-Pentanone (MIBK	6.17	43	106881	50.06 ug/L	98
34) TOLUENE	6.37	92	229622	46.25 ug/L	99
35) trans-1,3-Dichloropropene	6.63	75	129992	47.93 ug/L	97
36) 1,1,2-Trichloroethane	6.84	83	67098	48.36 ug/L	98
37) Tetrachloroethene	7.02	166	67393	42.90 ug/L	99
38) 2-Hexanone (MBK)	7.16	43	71324	51.78 ug/L	98
40) Dibromochloromethane	7.32	129	84864	46.86 ug/L	100
41) 1,2-Dibromoethane	7.45	107	80015	47.15 ug/L	98
42) Chlorobenzene	8.08	112	252377	45.68 ug/L	97
43) ETHYLBENZENE	8.23	91	364212	45.97 ug/L	99
44) m&p-Xylene	8.39	106	282250	91.42 ug/L	98
45) o-Xylene	8.91	106	141510	46.82 ug/L	97
46) Styrene	8.92	104	256246	46.68 ug/L	98
47) Bromoform	9.15	173	49891	49.47 ug/L	99
49) Isopropylbenzene	9.41	105	257326	44.00 ug/L	99
51) 1,1,2,2-Tetrachloroethane	9.83	83	90757	46.32 ug/L	99
52) 1,3-Dichlorobenzene	11.10	146	117212	43.33 ug/L	99
53) 1,4-Dichlorobenzene	11.23	146	121305	43.32 ug/L	99
54) 1,2-Dichlorobenzene	11.74	146	113631	43.73 ug/L	98
55) 1,2-Dibromo-3-chloropropan	12.86	75	10826	50.31 ug/L	92
56) 1,2,4-Trichlorobenzene	14.05	180	51737	42.99 ug/L	99
57) Naphthalene	14.39	128	111937	42.47 ug/L	100

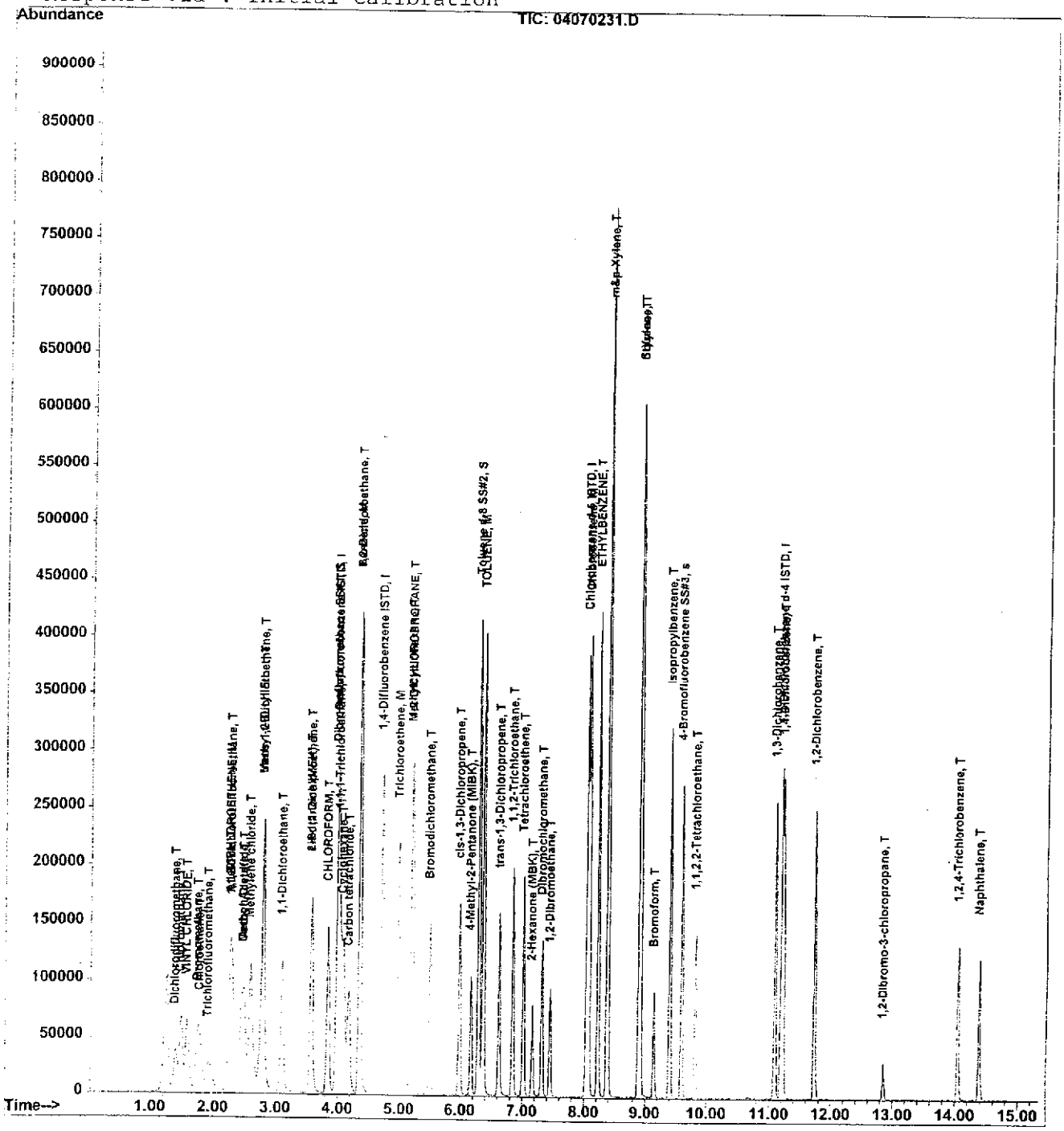
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040702\04070231.D
Acq On : 3 Jul 2004 3:38 am
Sample : TCL-W, CCV 50ppb
Misc : IS/S 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p
Quant Time: Jul 6 14:40 2004

Vial: 31
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040702\04070232.D Vial: 32
Acq On : 3 Jul 2004 4:02 am Operator: MI
Sample : UNREG-W, CCV 50ppb Inst : Instrumen
Misc : IS/S 1uL #432, CCV 10uL #463 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:27:21 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentaflourobenzene	1.000	1.000	0.0	91	0.00
2	t	acrolein	0.103	0.121	-17.5	100	0.01
3	t	iodomethane	0.857	0.939	-9.6	95	0.01
4	t	acrylonitrile	0.203	0.247	-21.7	104	0.01
5	t	tert-butanol	0.073	0.107	-46.6#	118	0.01
6	t	vinyl acetate	2.474	2.869	-16.0	104	0.00
7	t	diisopropyl ether	2.577	3.097	-20.2	105	0.00
8	t	tert-Butyl ethyl ether	1.708	1.755	-2.8	91	0.00
9	T	2,2-Dichloropropane	0.657	0.549	16.4	75	0.00
10	T	Bromochloromethane	0.304	0.327	-7.6	93	0.00
11	S	Dibromofluoromethane SS#1	0.594	0.610	-2.7	94	0.00
12	I	1,4-Difluorobenzene	1.000	1.000	0.0	92	0.00
13	T	1,1-Dichloropropene	0.409	0.447	-9.3	96	0.00
14	t	tert-amyl methyl ether	0.702	0.700	0.3	91	0.00
15	T	Dibromomethane	0.182	0.200	-9.9	97	0.00
16	t	1,4-dioxane	0.002	0.001	50.0#	88	0.01
17	T	2-Chloroethylvinyl Ether	0.048	0.031	35.4#	62	0.00
18	S	Toluene d-8 SS#2	1.065	1.082	-1.6	96	0.00
19	I	Chlorobenzene d-5	1.000	1.000	0.0	91	0.00
20	T	1,3-Dichloropropane	0.524	0.583	-11.3	99	0.00
21	T	1,1,1,2-Tetrachloroethane	0.296	0.313	-5.7	89	0.00
22	T	1,2,3-Trichloropropane	0.092	0.100	-8.7	94	0.00
23	s	4-Bromofluorobenzene SS#3	0.439	0.453	-3.2	94	0.00
24	T	Bromobenzene	0.307	0.325	-5.9	92	0.00
25	t	trans-1,4-dichloro-2-butene	0.317	0.387	-22.1	103	0.00
26	T	n-Propylbenzene	1.222	1.331	-8.9	95	0.00
27	I	1,4-Dichlorobenzene d-4	1.000	1.000	0.0	91	0.00
28	T	2-Chlorotoluene	2.633	2.800	-6.3	95	0.00
29	T	4-Chlorotoluene	2.936	3.237	-10.3	98	0.00
30	T	1,3,5-Trimethylbenzene	2.638	2.850	-8.0	96	0.00
31	T	tert-Butylbenzene	2.096	2.157	-2.9	93	0.00
32	T	1,2,4-Trimethylbenzene	2.767	2.956	-6.8	94	0.00
33	T	sec-Butylbenzene	3.050	3.183	-4.4	94	0.00
34	T	4-Isopropyltoluene	2.432	2.474	-1.7	91	0.00
35	T	n-Butylbenzene	2.092	2.221	-6.2	93	0.00
36	T	1,2,3-Trichlorobenzene	0.491	0.507	-3.3	92	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Response Factor Report Instrumen

Method : C:\HPCHEM\1\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:27:21 2004
Response via : Initial Calibration

Calibration Files
C1 =04061506.D C2 =04061513.D C3 =04061514.D
C4 =04061515.D C5 =04061516.D C6 =04061517.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
1)	I	Pentaflourobenzene	----------ISTD----------							
2)	t	acrolein		0.118	0.066	0.105	0.110	0.108	0.103	17.97
3)	t	iodomethane	0.964	0.952	0.492	0.908	0.903	0.924	0.857	21.07
4)	t	acrylonitrile	0.221	0.214	0.115	0.212	0.216	0.221	0.203	19.21
5)	t	tert-butanol		0.064	0.038	0.078	0.083	0.087	0.073	26.84
6)	t	vinyl acetate	3.167	2.794	1.358	2.509	2.523	2.533	2.474	22.36
7)	t	diisopropyl ether	3.040	2.908	1.501	2.676	2.689	2.677	2.577	19.50
8)	t	tert-Butyl ethyl et	2.048	1.892	0.993	1.818	1.753	1.768	1.708	19.70
9)	T	2,2-Dichloropropane	0.855	0.734	0.379	0.681	0.663	0.653	0.657	21.84
10)	T	Bromochloromethane	0.327	0.329	0.176	0.323	0.320	0.329	0.304	18.58
11)	S	Dibromofluoromethan	0.588	0.600	0.591	0.593	0.592	0.593	0.594	0.77
12)	I	1,4-Difluorobenzene	----------ISTD----------							
13)	T	1,1-Dichloropropene	0.490	0.432	0.232	0.444	0.427	0.419	0.409	19.99
14)	t	tert-amyl methyl et	0.877	0.753	0.392	0.763	0.709	0.704	0.702	21.23
15)	T	Dibromomethane	0.208	0.194	0.103	0.197	0.190	0.188	0.182	19.54
16)	t	1,4-dioxane					0.001	0.002	0.002	11.64
17)	T	2-Chloroethylvinyl	0.052	0.049	0.024	0.047	0.046	0.052	0.048	25.58
18)	S	Toluene d-8 SS#2	1.078	1.045	1.068	1.076	1.041	1.072	1.065	1.41
19)	I	Chlorobenzene d-5	----------ISTD----------							
20)	T	1,3-Dichloropropane	0.642	0.567	0.298	0.564	0.540	0.523	0.524	20.47
21)	T	1,1,1,2-Tetrachloro	0.325	0.313	0.162	0.324	0.321	0.310	0.296	20.01
22)	T	1,2,3-Trichloroprop	0.100	0.102	0.049	0.101	0.097	0.097	0.092	20.74
23)	s	4-Bromofluorobenzen	0.435	0.431	0.437	0.443	0.439	0.437	0.439	1.30
24)	T	Bromobenzene	0.335	0.330	0.174	0.334	0.324	0.324	0.307	19.07
25)	t	trans-1,4-dichloro-	0.379	0.332	0.172	0.341	0.343	0.360	0.317	21.89
26)	T	n-Propylbenzene	1.462	1.298	0.677	1.311	1.275	1.276	1.222	20.44
27)	I	1,4-Dichlorobenzene d	----------ISTD----------							
28)	T	2-Chlorotoluene	3.276	2.899	1.507	2.723	2.695	2.698	2.633	20.62
29)	T	4-Chlorotoluene	3.497	3.204	1.729	3.194	3.007	3.052	2.936	19.34
30)	T	1,3,5-Trimethylbenz	3.223	2.789	1.499	2.846	2.715	2.772	2.638	20.36
31)	T	tert-Butylbenzene	2.691	2.252	1.158	2.193	2.131	2.113	2.096	21.96
32)	T	1,2,4-Trimethylbenz	3.277	2.982	1.571	2.957	2.869	2.847	2.767	19.79
33)	T	sec-Butylbenzene	3.918	3.275	1.732	3.218	3.098	3.084	3.050	21.47
34)	T	4-Isopropyltoluene	3.105	2.606	1.328	2.501	2.490	2.484	2.432	22.01
35)	T	n-Butylbenzene	2.546	2.221	1.175	2.224	2.180	2.151	2.092	20.42
36)	T	1,2,3-Trichlorobenz	0.566	0.481	0.291	0.522	0.503	0.519	0.491	18.91

(#) = Out of Range ### Number of calibration levels exceeded format ###

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070232.D Vial: 32
Acq On : 3 Jul 2004 4:02 am Operator: MI
Sample : UNREG-W, CCV 50ppb Inst : Instrumen
Misc : IS/S 1uL #432, CCV 10uL #463 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 6 14:40 2004

Quant Method : C:\HPCHEM\1\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:27:21 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentaflourobenzene	4.00	168	162284	50.00	ug/L	0.00
12) 1,4-Difluorobenzene	4.71	114	309881	50.00	ug/L	0.00
19) Chlorobenzene d-5	8.04	117	254533	50.00	ug/L	0.00
27) 1,4-Dichlorobenzene d-4	11.20	152	82180	50.00	ug/L	0.00
System Monitoring Compounds						
11) Dibromofluoromethane SS#1	3.98	113	99035	51.38	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 102.76%						
18) Toluene d-8 SS#2	6.29	98	335386	50.81	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 101.62%						
23) 4-Bromofluorobenzene SS#3	9.60	95	115377	51.65	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 103.30%						
Target Compounds						Qvalue
2) acrolein	2.19	56	19632	58.82	ug/L #	85
3) iodomethane	2.39	142	152420	54.79	ug/L	100
4) acrylonitrile	2.75	53	40109	61.02	ug/L	100
5) tert-butanol	2.68	59	17437	60.27	ug/L	100
6) vinyl acetate	3.11	43	465608	57.98	ug/L	99
7) diisopropyl ether	3.13	45	502552	60.09	ug/L	97
8) tert-Butyl ethyl ether	3.44	59	284848	51.39	ug/L	99
9) 2,2-Dichloropropane	3.58	77	89156	41.80	ug/L	98
10) Bromochloromethane	3.77	128	53008	53.72	ug/L #	89
13) 1,1-Dichloropropene	4.16	75	138428	54.55	ug/L	97
14) tert-amyl methyl ether	4.46	73	216900	49.84	ug/L	97
15) Dibromomethane	5.33	93	61865	54.98	ug/L	97
16) 1,4-dioxane	5.37	58	440	41.52	ug/L	87
17) 2-Chloroethylvinyl Ether	5.82	63	9704	25.45	ug/L	96
20) 1,3-Dichloropropane	7.05	76	148325	55.65	ug/L	99
21) 1,1,1,2-Tetrachloroethane	8.19	131	79721	52.86	ug/L	98
22) 1,2,3-Trichloropropane	9.86	110	25359	54.12	ug/L	100
24) Bromobenzene	9.79	156	82789	53.05	ug/L	93
25) trans-1,4-dichloro-2-buten	9.86	75	98382	61.05	ug/L #	100
26) n-Propylbenzene	9.97	91	338689	54.45	ug/L	97
28) 2-Chlorotoluene	10.06	91	230090	53.18	ug/L	95
29) 4-Chlorotoluene	10.22	91	266039	55.12	ug/L	95
30) 1,3,5-Trimethylbenzene	10.23	105	234225	54.03	ug/L	96
31) tert-Butylbenzene	10.67	119	177265	51.45	ug/L	96
32) 1,2,4-Trimethylbenzene	10.74	105	242888	53.41	ug/L	97
33) sec-Butylbenzene	10.97	105	261561	52.18	ug/L	97
34) 4-Isopropyltoluene	11.20	119	203279	50.86	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070232.D
Acq On : 3 Jul 2004 4:02 am
Sample : UNREG-W, CCV 50ppb
Misc : IS/S 1uL #432, CCV 10uL #463
MS Integration Params: rteint.p
Quant Time: Jul 6 14:40 2004

Vial: 32
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:27:21 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

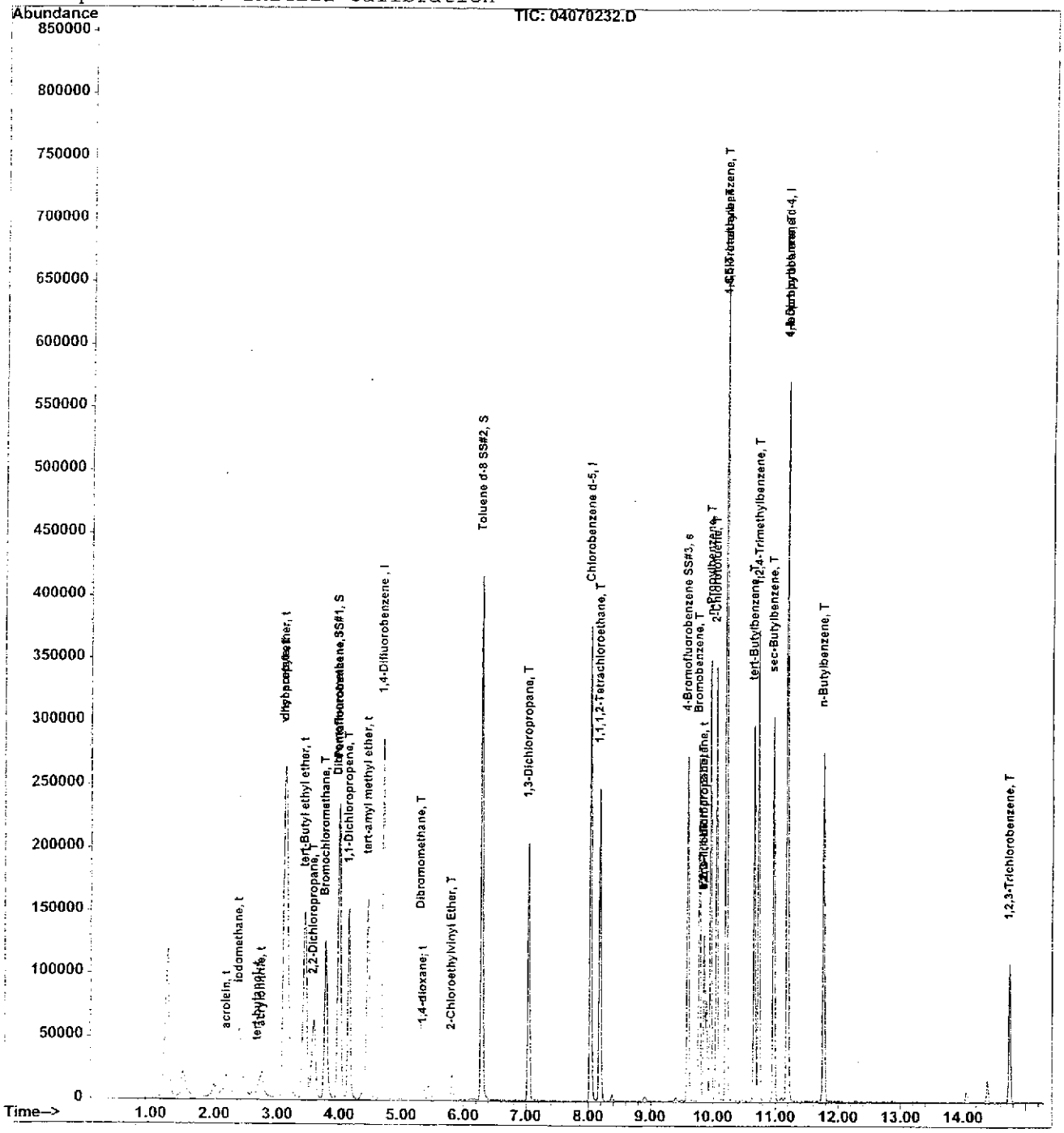
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
35) n-Butylbenzene	11.77	91	182520	53.09 ug/L	96
36) 1,2,3-Trichlorobenzene	14.75	180	41658	51.60 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040702\04070232.D Vial: 32
Acq On : 3 Jul 2004 4:02 am Operator: MI
Sample : UNREG-W, CCV 50ppb Inst : Instrumen
Misc : IS/S 1uL #432, CCV 10uL #463 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 6 14:40 2004

Method : C:\HPCHEM\1\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:27:21 2004
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040707\04070703.D Vial: 3
Acq On : 7 Jul 2004 11:33 am Operator: DJP
Sample : TCL-W, CCV 50ppb Inst : Instrumen
Misc : IS/S 1uL #432, CCV 10uL #415 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene ISTD	1.000	1.000	0.0	95	0.00
2	T	Dichlorodifluoromethane	0.537	0.522	2.8	100	0.00
3	T	Chloromethane	0.894	0.817	8.6	95	-0.02
4	T	VINYL CHLORIDE	0.767	0.778	-1.4	97	0.00
5	T	Bromomethane	0.581	0.504	13.3	94	0.00
6	T	Chloroethane	0.413	0.378	8.5	92	0.00
7	T	Trichlorofluoromethane	0.343	0.290	15.5	75	0.00
8	T	Acetone	0.197	0.314	-59.4#	182#	0.00
9	M	1,1-DICHLOROETHENE	0.574	0.557	3.0	97	0.00
10	T	1,1,2-Trichlorotrifluoroeth	0.477	0.469	1.7	96	0.00
11	T	Carbon Disulfide	2.014	1.913	5.0	97	-0.02
12	T	Methyl Acetate	0.079	0.069	12.7	88	0.00
13	T	Methylene chloride	0.670	0.609	9.1	95	0.00
14	T	trans-1,2-Dichloroethene	0.651	0.601	7.7	95	0.00
15	T	Methyl-t-Butyl Ether	1.220	0.974	20.2	82	0.00
16	T	1,1-Dichloroethane	1.236	1.127	8.8	93	0.00
17	T	cis-1,2-Dichloroethene	0.705	0.617	12.5	89	0.00
18	T	2-Butanone (MEK)	0.357	0.453	-26.9#	144	0.00
19	T	CHLOROFORM	1.108	0.965	12.9	91	0.00
20	S	Dibromofluoromethane SS#1	0.594	0.598	-0.7	97	0.00
21	T	1,1,1-Trichloroethane	0.815	0.713	12.5	89	0.00
22	T	Cyclohexane	0.966	0.864	10.6	93	0.00
23	I	1,4-Difluorobenzene ISTD	1.000	1.000	0.0	97	0.00
24	T	Carbon tetrachloride	0.372	0.317	14.8	89	0.00
25	M	Benzene	1.407	1.222	13.1	91	0.00
26	T	1,2-Dichloroethane	0.429	0.357	16.8	86	0.00
27	M	Trichloroethene	0.346	0.298	13.9	90	0.00
28	T	1,2-DICHLOROPROPANE	0.395	0.331	16.2	88	0.00
29	T	Methylcyclohexane	0.313	0.276	11.8	96	0.00
30	T	Bromodichloromethane	0.420	0.368	12.4	90	0.00
31	T	cis-1,3-Dichloropropene	0.541	0.481	11.1	91	0.00
32	T	4-Methyl-2-Pentanone (MIBK)	0.351	0.308	12.3	89	0.00
33	S	Toluene d-8 SS#2	1.061	1.071	-0.9	98	0.00
34	M	TOLUENE	0.816	0.716	12.3	91	0.00
35	T	trans-1,3-Dichloropropene	0.446	0.391	12.3	88	0.00
36	T	1,1,2-Trichloroethane	0.228	0.195	14.5	90	0.00
37	T	Tetrachloroethene	0.258	0.223	13.6	91	0.00
38	T	2-Hexanone (MBK)	0.226	0.316	-39.8#	136	0.00
39	I	Chlorobenzene d-5 ISTD	1.000	1.000	0.0	98	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040707\04070703.D Vial: 3
Acq On : 7 Jul 2004 11:33 am Operator: DJP
Sample : TCL-W, CCV 50ppb Inst : Instrumen
Misc : IS/S 1uL #432, CCV 10uL #415 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40	T	Dibromochloromethane	0.351	0.298	15.1	86	0.00
41	T	1,2-Dibromoethane	0.329	0.280	14.9	85	0.00
42	M	Chlorobenzene	1.070	0.910	15.0	89	0.00
43	T	ETHYLBENZENE	1.535	1.360	11.4	92	0.00
44	T	m&p-Xylene	0.598	0.516	13.7	89	0.00
45	T	o-Xylene	0.585	0.506	13.5	89	0.00
46	T	Styrene	1.063	0.937	11.9	89	0.00
47	T	Bromoform	0.195	0.177	9.2	90	0.00
48	I	1,4-Dichlorobenzene d-4 IST	1.000	1.000	0.0	93	0.00
49	T	Isopropylbenzene	3.588	3.195	11.0	92	0.00
50	s	4-Bromofluorobenzene SS#3	1.427	1.427	0.0	97	0.00
51	T	1,1,2,2-Tetrachloroethane	1.202	0.996	17.1	86	0.00
52	T	1,3-Dichlorobenzene	1.660	1.431	13.8	89	0.00
53	T	1,4-Dichlorobenzene	1.718	1.454	15.4	87	0.00
54	T	1,2-Dichlorobenzene	1.594	1.336	16.2	86	0.00
55	T	1,2-Dibromo-3-chloropropane	0.125	0.115	8.0	82	0.01
56	T	1,2,4-Trichlorobenzene	0.738	0.669	9.3	93	0.00
57	T	Naphthalene	1.617	1.248	22.8	76	0.00

Response Factor Report Instrumen

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration

Calibration Files
C1 =04061505.D C2 =04061507.D C3 =04061508.D
C4 =04061509.D C5 =04061510.D C6 =04061511.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
1)	I	Pentafluorobenzene IS	----------ISTD----------							
2)	T	Dichlorodifluoromet	0.545	0.571	0.552	0.545	0.495	0.512	0.537	5.21
3)	T	Chloromethane	1.055	0.975	0.905	0.873	0.819	0.740	0.894	12.50
4)	T	VINYL CHLORIDE	0.664	0.834	0.800	0.796	0.764	0.746	0.767	7.71
5)	T	Bromomethane	0.729	0.627	0.574	0.552	0.509	0.494	0.581	14.92
6)	T	Chloroethane	0.440	0.420	0.420	0.412	0.389	0.400	0.413	4.29
7)	T	Trichlorofluorometh		0.304	0.297	0.351	0.369	0.398	0.343	12.50
8)	T	Acetone		0.276	0.209	0.181	0.164	0.153	0.197	24.99
9)	M	1,1-DICHLOROETHENE	0.575	0.598	0.584	0.589	0.548	0.549	0.574	3.60
10)	T	1,1,2-Trichlorotrif	0.383	0.538	0.499	0.503	0.467	0.469	0.477	11.08
11)	T	Carbon Disulfide	2.166	2.105	2.024	2.014	1.869	1.904	2.014	5.66
12)	T	Methyl Acetate		0.086	0.080	0.080	0.074	0.075	0.079	5.88
13)	T	Methylene chloride		0.805	0.688	0.666	0.609	0.582	0.670	12.91
14)	T	trans-1,2-Dichloroe	0.729	0.700	0.651	0.640	0.601	0.582	0.651	8.65
15)	T	Methyl-t-Butyl Ethe	1.393	1.301	1.212	1.199	1.127	1.088	1.220	9.22
16)	T	1,1-Dichloroethane	1.397	1.292	1.230	1.224	1.150	1.121	1.236	8.07
17)	T	cis-1,2-Dichloroeth	0.797	0.745	0.704	0.688	0.657	0.642	0.705	8.19
18)	T	2-Butanone (MEK)	0.532	0.363	0.345	0.313	0.301	0.286	0.357	25.43
19)	T	CHLOROFORM	1.232	1.184	1.116	1.087	1.013	1.017	1.108	7.95
20)	S	Dibromofluoromethan	0.594	0.598	0.590	0.596	0.589	0.597	0.594	0.64
21)	T	1,1,1-Trichloroetha	0.869	0.888	0.819	0.799	0.762	0.753	0.815	6.74
22)	T	Cyclohexane	1.030	1.004	1.041	0.978	0.888	0.858	0.966	7.90
23)	I	1,4-Difluorobenzene I	----------ISTD----------							
24)	T	Carbon tetrachlorid	0.409	0.396	0.370	0.368	0.344	0.344	0.372	7.17
25)	M	Benzene	1.630	1.501	1.398	1.376	1.297	1.239	1.407	10.05
26)	T	1,2-Dichloroethane	0.482	0.453	0.433	0.420	0.403	0.387	0.429	8.04
27)	M	Trichloroethene	0.386	0.363	0.343	0.346	0.321	0.316	0.346	7.62
28)	T	1,2-DICHLOROPROPANE	0.458	0.411	0.393	0.388	0.363	0.354	0.395	9.47
29)	T	Methylcyclohexane	0.403	0.311	0.298	0.306	0.279	0.278	0.313	14.78
30)	T	Bromodichloromethan	0.485	0.430	0.414	0.408	0.394	0.388	0.420	8.42
31)	T	cis-1,3-Dichloropro	0.595	0.561	0.529	0.538	0.513	0.508	0.541	6.03
32)	T	4-Methyl-2-Pentanon	0.392	0.358	0.345	0.344	0.334	0.332	0.351	6.31
33)	S	Toluene d-8 SS#2	1.057	1.043	1.064	1.068	1.055	1.077	1.061	1.12
34)	M	TOLUENE	0.931	0.867	0.787	0.805	0.760	0.744	0.816	8.69
35)	T	trans-1,3-Dichlorop	0.495	0.450	0.433	0.442	0.428	0.426	0.446	5.85
36)	T	1,1,2-Trichloroetha	0.253	0.238	0.231	0.226	0.210	0.209	0.228	7.36
37)	T	Tetrachloroethene	0.309	0.269	0.256	0.246	0.236	0.232	0.258	11.06
38)	T	2-Hexanone (MBK)	0.233	0.227	0.226	0.224	0.224	0.224	0.226	1.48
39)	I	Chlorobenzene d-5 IST	----------ISTD----------							
40)	T	Dibromochloromethan	0.373	0.370	0.341	0.345	0.339	0.335	0.351	4.75
41)	T	1,2-Dibromoethane	0.349	0.337	0.334	0.323	0.323	0.305	0.329	4.53

(#) = Out of Range

Response Factor Report Instrumen

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration

Calibration Files
C1 =04061505.D C2 =04061507.D C3 =04061508.D
C4 =04061509.D C5 =04061510.D C6 =04061511.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
42)	M	Chlorobenzene	1.212	1.133	1.073	1.041	1.012	0.950	1.070	8.66
43)	T	ETHYLBENZENE	1.776	1.595	1.515	1.499	1.460	1.362	1.535	9.16
44)	T	m&p-Xylene	0.681	0.618	0.597	0.585	0.570	0.536	0.598	8.18
45)	T	o-Xylene	0.654	0.613	0.581	0.585	0.560	0.518	0.585	7.92
46)	T	Styrene	1.148	1.099	1.067	1.061	1.033	0.971	1.063	5.61
47)	T	Bromoform	0.202	0.197	0.195	0.192	0.195	0.191	0.195	2.12
48)	I	1,4-Dichlorobenzene d	----------ISTD----------							
49)	T	Isopropylbenzene	4.153	3.708	3.635	3.535	3.218	3.280	3.588	9.41
50)	s	4-Bromofluorobenzen	1.488	1.417	1.450	1.412	1.370	1.425	1.427	2.78
51)	T	1,1,2,2-Tetrachloro	1.420	1.235	1.236	1.156	1.078	1.088	1.202	10.54
52)	T	1,3-Dichlorobenzene	1.985	1.706	1.659	1.597	1.499	1.513	1.660	10.75
53)	T	1,4-Dichlorobenzene	2.088	1.779	1.694	1.672	1.553	1.523	1.718	11.89
54)	T	1,2-Dichlorobenzene	1.927	1.616	1.594	1.553	1.440	1.437	1.594	11.27
55)	T	1,2-Dibromo-3-chlor	0.083	0.131	0.135	0.138	0.130	0.132	0.125	16.54
56)	T	1,2,4-Trichlorobenz	0.922	0.708	0.732	0.717	0.666	0.686	0.738	12.59
57)	T	Naphthalene	2.035	1.420	1.574	1.565	1.529	1.580	1.617	13.19

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040707\04070703.D Vial: 3
Acq On : 7 Jul 2004 11:33 am Operator: DJP
Sample : TCL-W, CCV 50ppb Inst : Instrumen
Misc : IS/S 1uL #432, CCV 10uL #415 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 7 12:19 2004

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.01	168	169131	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	4.71	114	323756	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.04	117	271861	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.20	152	83308	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	3.98	113	101127	50.33 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 100.66%					
33) Toluene d-8 SS#2	6.30	98	346630	50.47 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 100.94%					
50) 4-Bromofluorobenzene SS#3	9.60	95	118859	49.99 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 99.98%					
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.40	85	88260	48.63 ug/L	100
3) Chloromethane	1.47	50	138182	45.67 ug/L	96
4) VINYL CHLORIDE	1.57	62	131594	50.70 ug/L	99
5) Bromomethane	1.74	94	85310	43.43 ug/L	99
6) Chloroethane	1.79	64	63945	45.73 ug/L	98
7) Trichlorofluoromethane	1.93	101	49045	42.22 ug/L	99
8) Acetone	2.27	43	53098	79.83 ug/L	99
9) 1,1-DICHLOROETHENE	2.27	96	94136	48.49 ug/L	97
10) 1,1,2-Trichlorotrifluoroet	2.28	101	79379	49.24 ug/L	98
11) Carbon Disulfide	2.45	76	323557	47.50 ug/L	99
12) Methyl Acetate	2.49	74	11640	43.63 ug/L	98
13) Methylene chloride	2.59	84	103040	45.46 ug/L	99
14) trans-1,2-Dichloroethene	2.79	96	101604	46.18 ug/L	96
15) Methyl-t-Butyl Ether	2.79	73	164720	39.92 ug/L	100
16) 1,1-Dichloroethane	3.10	63	190674	45.62 ug/L	100
17) cis-1,2-Dichloroethene	3.58	96	104369	43.74 ug/L	99
18) 2-Butanone (MEK)	3.56	43	76700	78.97 ug/L	97
19) CHLOROFORM	3.84	83	163242	43.55 ug/L	100
21) 1,1,1-Trichloroethane	4.02	97	120614	43.74 ug/L #	56
22) Cyclohexane	4.09	56	146120	44.69 ug/L #	86
24) Carbon tetrachloride	4.18	117	102735	42.68 ug/L	100
25) Benzene	4.36	78	395497	43.42 ug/L	100
26) 1,2-Dichloroethane	4.37	62	115532	41.55 ug/L	100
27) Trichloroethene	4.98	95	96522	43.09 ug/L	96
28) 1,2-DICHLOROPROPANE	5.21	63	107204	41.97 ug/L	99
29) Methylcyclohexane	5.20	83	89468	44.21 ug/L	99
30) Bromodichloromethane	5.50	83	119238	43.86 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040707\04070703.D
Acq On : 7 Jul 2004 11:33 am
Sample : TCL-W, CCV 50ppb
Misc : IS/S 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p
Quant Time: Jul 7 12:19 2004

Vial: 3
Operator: DJP
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) cis-1,3-Dichloropropene	6.00	75	155886	44.54 ug/L	100
32) 4-Methyl-2-Pentanone (MIBK	6.18	43	99678	43.89 ug/L	99
34) TOLUENE	6.37	92	231776	43.89 ug/L	100
35) trans-1,3-Dichloropropene	6.64	75	126705	43.91 ug/L	99
36) 1,1,2-Trichloroethane	6.85	83	63124	42.77 ug/L	98
37) Tetrachloroethene	7.02	166	72181	43.20 ug/L	98
38) 2-Hexanone (MBK)	7.17	43	102200	69.74 ug/L	98
40) Dibromochloromethane	7.33	129	80938	42.44 ug/L	100
41) 1,2-Dibromoethane	7.46	107	76008	42.54 ug/L	100
42) Chlorobenzene	8.08	112	247338	42.51 ug/L	98
43) ETHYLBENZENE	8.24	91	369801	44.32 ug/L	98
44) m&p-Xylene	8.40	106	280530	86.29 ug/L	98
45) o-Xylene	8.91	106	137640	43.24 ug/L	97
46) Styrene	8.93	104	254742	44.07 ug/L	100
47) Bromoform	9.15	173	48104	45.29 ug/L	99
49) Isopropylbenzene	9.41	105	266163	44.52 ug/L	99
51) 1,1,2,2-Tetrachloroethane	9.83	83	82956	41.42 ug/L	100
52) 1,3-Dichlorobenzene	11.11	146	119220	43.11 ug/L	100
53) 1,4-Dichlorobenzene	11.23	146	121103	42.30 ug/L	100
54) 1,2-Dichlorobenzene	11.75	146	111266	41.88 ug/L	100
55) 1,2-Dibromo-3-chloropropan	12.87	75	9567	43.49 ug/L	95
56) 1,2,4-Trichlorobenzene	14.06	180	55706	45.27 ug/L	99
57) Naphthalene	14.40	128	103979	38.59 ug/L	100

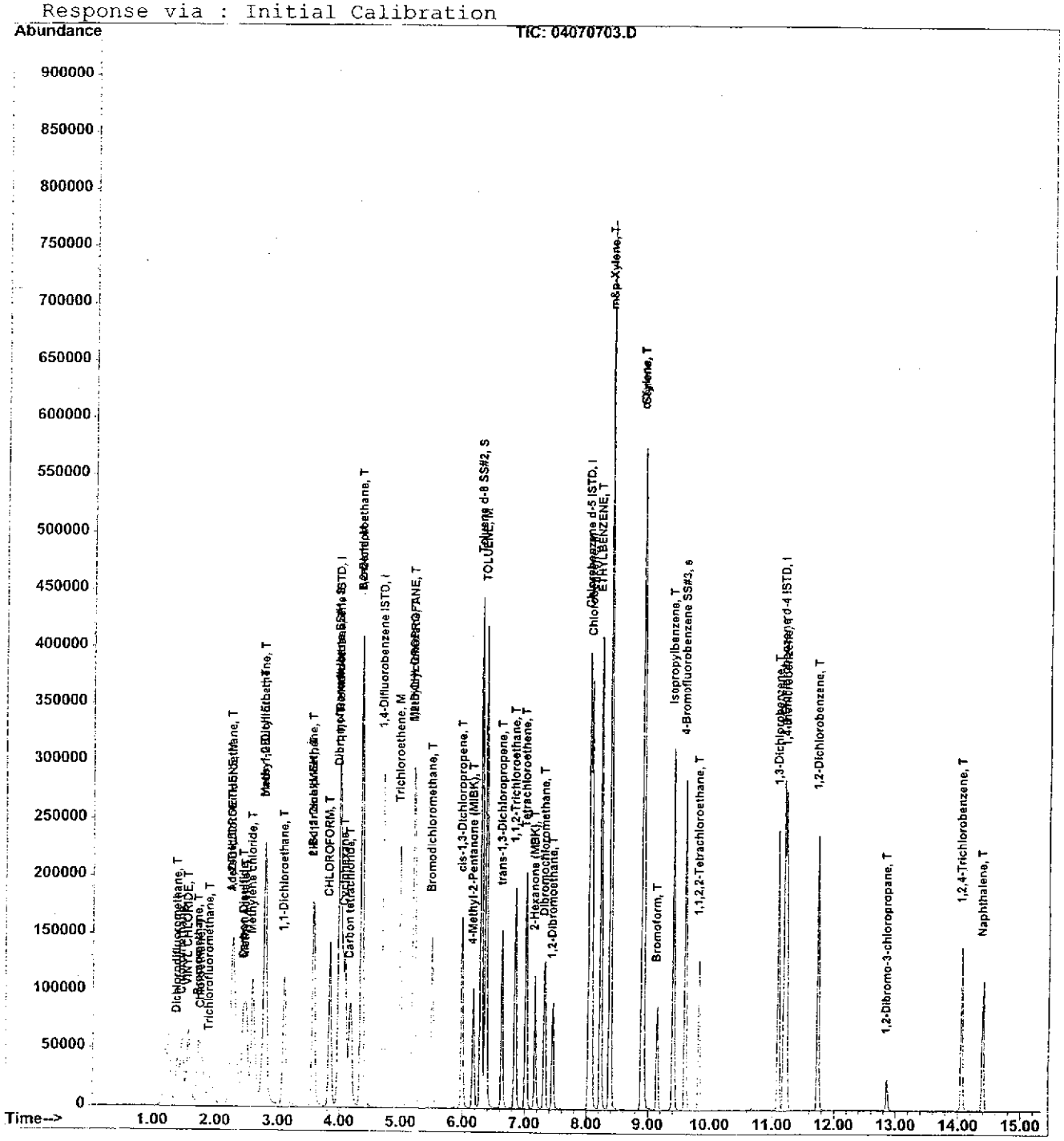
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040707\04070703.D
Acq On : 7 Jul 2004 11:33 am
Sample : TCL-W, CCV 50ppb
Misc : IS/S 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p
Quant Time: Jul 7 12:19 2004

Vial: 3
Operator: DJP
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040707\04070704.D Vial: 4
Acq On : 7 Jul 2004 12:01 pm Operator: DJP
Sample : UNREG-W, CCV 50ppb Inst : Instrumen
Misc : IS/S 1uL #432, CCV 10uL #463 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:27:21 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentaflourobenzene	1.000	1.000	0.0	94	0.00
2	t	acrolein	0.103	0.135	-31.1#	116	0.00
3	t	iodomethane	0.857	1.031	-20.3	108	0.00
4	t	acrylonitrile	0.203	0.257	-26.6#	112	0.02
5	t	tert-butanol	0.073	0.109	-49.3#	123	0.02
6	t	vinyl acetate	2.474	3.060	-23.7	114	0.00
7	t	diisopropyl ether	2.577	3.265	-26.7#	114	0.00
8	t	tert-Butyl ethyl ether	1.708	1.864	-9.1	100	0.00
9	T	2,2-Dichloropropane	0.657	0.788	-19.9	112	0.00
10	T	Bromochloromethane	0.304	0.351	-15.5	103	0.00
11	S	Dibromofluoromethane SS#1	0.594	0.597	-0.5	95	0.00
12	I	1,4-Difluorobenzene	1.000	1.000	0.0	96	0.00
13	T	1,1-Dichloropropene	0.409	0.477	-16.6	107	0.00
14	t	tert-amyl methyl ether	0.702	0.738	-5.1	100	0.00
15	T	Dibromomethane	0.182	0.209	-14.8	106	0.00
16	t	1,4-dioxane	0.002	0.001	50.0#	72	0.00
17	T	2-Chloroethylvinyl Ether	0.048	0.032	33.3#	67	0.01
18	S	Toluene d-8 SS#2	1.065	1.070	-0.5	99	0.00
19	I	Chlorobenzene d-5	1.000	1.000	0.0	95	0.00
20	T	1,3-Dichloropropane	0.524	0.614	-17.2	108	0.00
21	T	1,1,1,2-Tetrachloroethane	0.296	0.353	-19.3	104	0.00
22	T	1,2,3-Trichloropropane	0.092	0.112	-21.7	110	0.00
23	s	4-Bromofluorobenzene SS#3	0.439	0.447	-1.8	97	0.00
24	T	Bromobenzene	0.307	0.365	-18.9	107	0.00
25	t	trans-1,4-dichloro-2-butene	0.317	0.321	-1.3	89	0.00
26	T	n-Propylbenzene	1.222	1.479	-21.0	110	0.00
27	I	1,4-Dichlorobenzene d-4	1.000	1.000	0.0	93	0.00
28	T	2-Chlorotoluene	2.633	3.097	-17.6	107	0.00
29	T	4-Chlorotoluene	2.936	3.635	-23.8	113	0.00
30	T	1,3,5-Trimethylbenzene	2.638	3.211	-21.7	110	0.00
31	T	tert-Butylbenzene	2.096	2.441	-16.5	107	0.00
32	T	1,2,4-Trimethylbenzene	2.767	3.343	-20.8	109	0.00
33	T	sec-Butylbenzene	3.050	3.785	-24.1	114	0.00
34	T	4-Isopropyltoluene	2.432	2.952	-21.4	110	0.00
35	T	n-Butylbenzene	2.092	2.749	-31.4#	117	0.00
36	T	1,2,3-Trichlorobenzene	0.491	0.619	-26.1#	115	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Response Factor Report Instrumen

Method : C:\HPCHEM\1\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:27:21 2004
Response via : Initial Calibration

Calibration Files
C1 =04061506.D C2 =04061513.D C3 =04061514.D
C4 =04061515.D C5 =04061516.D C6 =04061517.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
1)	I	Pentaflourobenzene	----------ISTD----------							
2)	t	acrolein		0.118	0.066	0.105	0.110	0.108	0.103	17.97
3)	t	iodomethane	0.964	0.952	0.492	0.908	0.903	0.924	0.857	21.07
4)	t	acrylonitrile	0.221	0.214	0.115	0.212	0.216	0.221	0.203	19.21
5)	t	tert-butanol		0.064	0.038	0.078	0.083	0.087	0.073	26.84
6)	t	vinyl acetate	3.167	2.794	1.358	2.509	2.523	2.533	2.474	22.36
7)	t	diisopropyl ether	3.040	2.908	1.501	2.676	2.689	2.677	2.577	19.50
8)	t	tert-Butyl ethyl et	2.048	1.892	0.993	1.818	1.753	1.768	1.708	19.70
9)	T	2,2-Dichloropropane	0.855	0.734	0.379	0.681	0.663	0.653	0.657	21.84
10)	T	Bromochloromethane	0.327	0.329	0.176	0.323	0.320	0.329	0.304	18.58
11)	S	Dibromofluoromethan	0.588	0.600	0.591	0.593	0.592	0.593	0.594	0.77
12)	I	1,4-Difluorobenzene	----------ISTD----------							
13)	T	1,1-Dichloropropene	0.490	0.432	0.232	0.444	0.427	0.419	0.409	19.99
14)	t	tert-amyl methyl et	0.877	0.753	0.392	0.763	0.709	0.704	0.702	21.23
15)	T	Dibromomethane	0.208	0.194	0.103	0.197	0.190	0.188	0.182	19.54
16)	t	1,4-dioxane					0.001	0.002	0.002	11.64
17)	T	2-Chloroethylvinyl	0.052	0.049	0.024	0.047	0.046	0.052	0.048	25.58
18)	S	Toluene d-8 SS#2	1.078	1.045	1.068	1.076	1.041	1.072	1.065	1.41
19)	I	Chlorobenzene d-5	----------ISTD----------							
20)	T	1,3-Dichloropropane	0.642	0.567	0.298	0.564	0.540	0.523	0.524	20.47
21)	T	1,1,1,2-Tetrachloro	0.325	0.313	0.162	0.324	0.321	0.310	0.296	20.01
22)	T	1,2,3-Trichloroprop	0.100	0.102	0.049	0.101	0.097	0.097	0.092	20.74
23)	s	4-Bromofluorobenzen	0.435	0.431	0.437	0.443	0.439	0.437	0.439	1.30
24)	T	Bromobenzene	0.335	0.330	0.174	0.334	0.324	0.324	0.307	19.07
25)	t	trans-1,4-dichloro-	0.379	0.332	0.172	0.341	0.343	0.360	0.317	21.89
26)	T	n-Propylbenzene	1.462	1.298	0.677	1.311	1.275	1.276	1.222	20.44
27)	I	1,4-Dichlorobenzene d	----------ISTD----------							
28)	T	2-Chlorotoluene	3.276	2.899	1.507	2.723	2.695	2.698	2.633	20.62
29)	T	4-Chlorotoluene	3.497	3.204	1.729	3.194	3.007	3.052	2.936	19.34
30)	T	1,3,5-Trimethylbenz	3.223	2.789	1.499	2.846	2.715	2.772	2.638	20.36
31)	T	tert-Butylbenzene	2.691	2.252	1.158	2.193	2.131	2.113	2.096	21.96
32)	T	1,2,4-Trimethylbenz	3.277	2.982	1.571	2.957	2.869	2.847	2.767	19.79
33)	T	sec-Butylbenzene	3.918	3.275	1.732	3.218	3.098	3.084	3.050	21.47
34)	T	4-Isopropyltoluene	3.105	2.606	1.328	2.501	2.490	2.484	2.432	22.01
35)	T	n-Butylbenzene	2.546	2.221	1.175	2.224	2.180	2.151	2.092	20.42
36)	T	1,2,3-Trichlorobenz	0.566	0.481	0.291	0.522	0.503	0.519	0.491	18.91

(#) = Out of Range ### Number of calibration levels exceeded format ###

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040707\04070704.D Vial: 4
Acq On : 7 Jul 2004 12:01 pm Operator: DJP
Sample : UNREG-W, CCV 50ppb Inst : Instrumen
Misc : IS/S 1uL #432, CCV 10uL #463 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 7 12:20 2004

Quant Method : C:\HPCHEM\1\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:27:21 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentaflourobenzene	4.01	168	167817	50.00 ug/L	0.00
12) 1,4-Difluorobenzene	4.72	114	323297	50.00 ug/L	0.00
19) Chlorobenzene d-5	8.05	117	265242	50.00 ug/L	0.00
27) 1,4-Dichlorobenzene d-4	11.20	152	83720	50.00 ug/L	0.00
System Monitoring Compounds					
11) Dibromofluoromethane SS#1	3.98	113	100262	50.31 ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.62%					
18) Toluene d-8 SS#2	6.30	98	345850	50.22 ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.44%					
23) 4-Bromofluorobenzene SS#3	9.61	95	118575	50.93 ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 101.86%					
Target Compounds					Qvalue
2) acrolein	2.18	56	22709	65.79 ug/L	92
3) iodomethane	2.39	142	172972	60.12 ug/L	98
4) acrylonitrile	2.76	53	43164	63.51 ug/L	99
5) tert-butanol	2.69	59	18274	61.08 ug/L	100
6) vinyl acetate	3.11	43	513539	61.84 ug/L	100
7) diisopropyl ether	3.14	45	548003	63.36 ug/L	98
8) tert-Butyl ethyl ether	3.45	59	312820	54.58 ug/L	100
9) 2,2-Dichloropropane	3.59	77	132272	59.97 ug/L	99
10) Bromochloromethane	3.78	128	58917	57.73 ug/L	92
13) 1,1-Dichloropropene	4.17	75	154185	58.24 ug/L	99
14) tert-amyl methyl ether	4.47	73	238728	52.57 ug/L	98
15) Dibromomethane	5.33	93	67428	57.43 ug/L	99
16) 1,4-dioxane	5.37	58	360	32.56 ug/L #	56
17) 2-Chloroethylvinyl Ether	5.83	63	10492	26.37 ug/L	98
20) 1,3-Dichloropropane	7.05	76	162846	58.63 ug/L	99
21) 1,1,1,2-Tetrachloroethane	8.19	131	93515	59.51 ug/L	99
22) 1,2,3-Trichloropropane	9.87	110	29759	60.94 ug/L	100
24) Bromobenzene	9.80	156	96797	59.52 ug/L	96
25) trans-1,4-dichloro-2-buten	9.87	75	85134	50.69 ug/L #	100
26) n-Propylbenzene	9.98	91	392329	60.53 ug/L	96
28) 2-Chlorotoluene	10.07	91	259297	58.82 ug/L	97
29) 4-Chlorotoluene	10.22	91	304301	61.89 ug/L	96
30) 1,3,5-Trimethylbenzene	10.23	105	268831	60.87 ug/L	98
31) tert-Butylbenzene	10.68	119	204353	58.23 ug/L	96
32) 1,2,4-Trimethylbenzene	10.74	105	279863	60.41 ug/L	97
33) sec-Butylbenzene	10.98	105	316885	62.06 ug/L	98
34) 4-Isopropyltoluene	11.20	119	247158	60.70 ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040707\04070704.D Vial: 4
Acq On : 7 Jul 2004 12:01 pm Operator: DJP
Sample : UNREG-W, CCV 50ppb Inst : Instrumen
Misc : IS/S 1uL #432, CCV 10uL #463 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 7 12:20 2004

Quant Method : C:\HPCHEM\1\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:27:21 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
35) n-Butylbenzene	11.78	91	230115	65.70 ug/L	96
36) 1,2,3-Trichlorobenzene	14.75	180	51841	63.03 ug/L	99

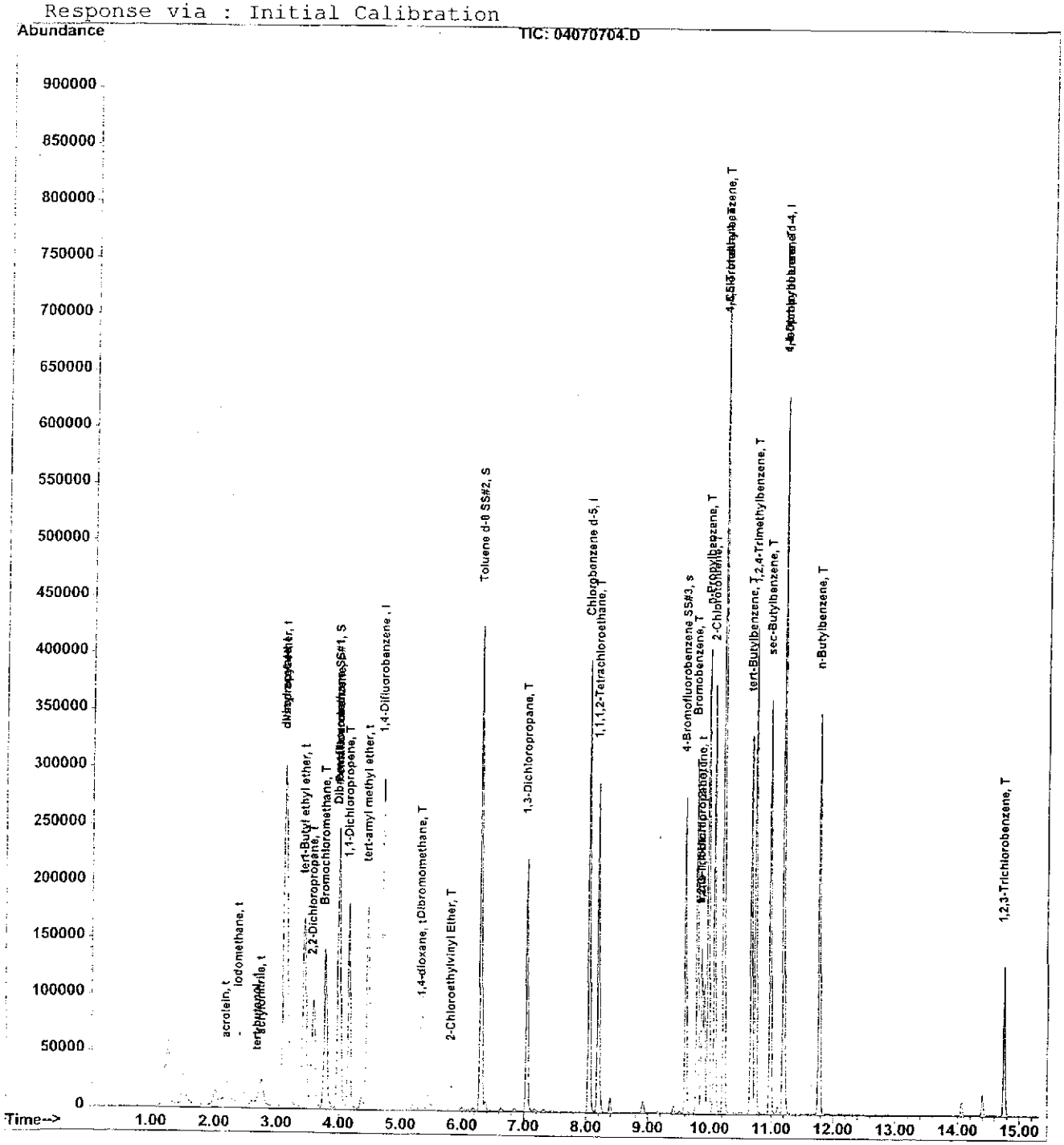
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040707\04070704.D
Acq On : 7 Jul 2004 12:01 pm
Sample : UNREG-W, CCV 50ppb
Misc : IS/S 1uL #432, CCV 10uL #463
MS Integration Params: rteint.p
Quant Time: Jul 7 12:20 2004

Vial: 4
Operator: DJP
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:27:21 2004
Response via : Initial Calibration



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PHASE SEPARATION SCIENCE, INC.

VOLATILE ORGANIC COMPOUNDS INSTRUMENT AND PERFORMANCE CHECK BROMOFLUOROBENZENE (BFB)

ANALYSIS:	**GC/MS Volatiles**	**LAB CODE:**	**BFBW**
METHOD:	**EPA 8260**	**LAB SAMPLE ID:**	**BFB Tune**
LAB FILE ID:	**04070230.D**	**DATE/TIME ANALYZED:**	**07/03/04 03:15**

Target Mass	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	21.0
75	30.0 - 60.0% of mass 95	42.4
95	Base peak, 100% relative mass abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than2.0% of mass 174	0.0
174	Greater than 50.0% of mass 95	75.8
175	5.0 - 9.0% of mass 174	7.0
176	Greater than 95.0%, but less than 101.0% of mass 174	98.3
177	5.0 - 9.0% of mass 176	6.3

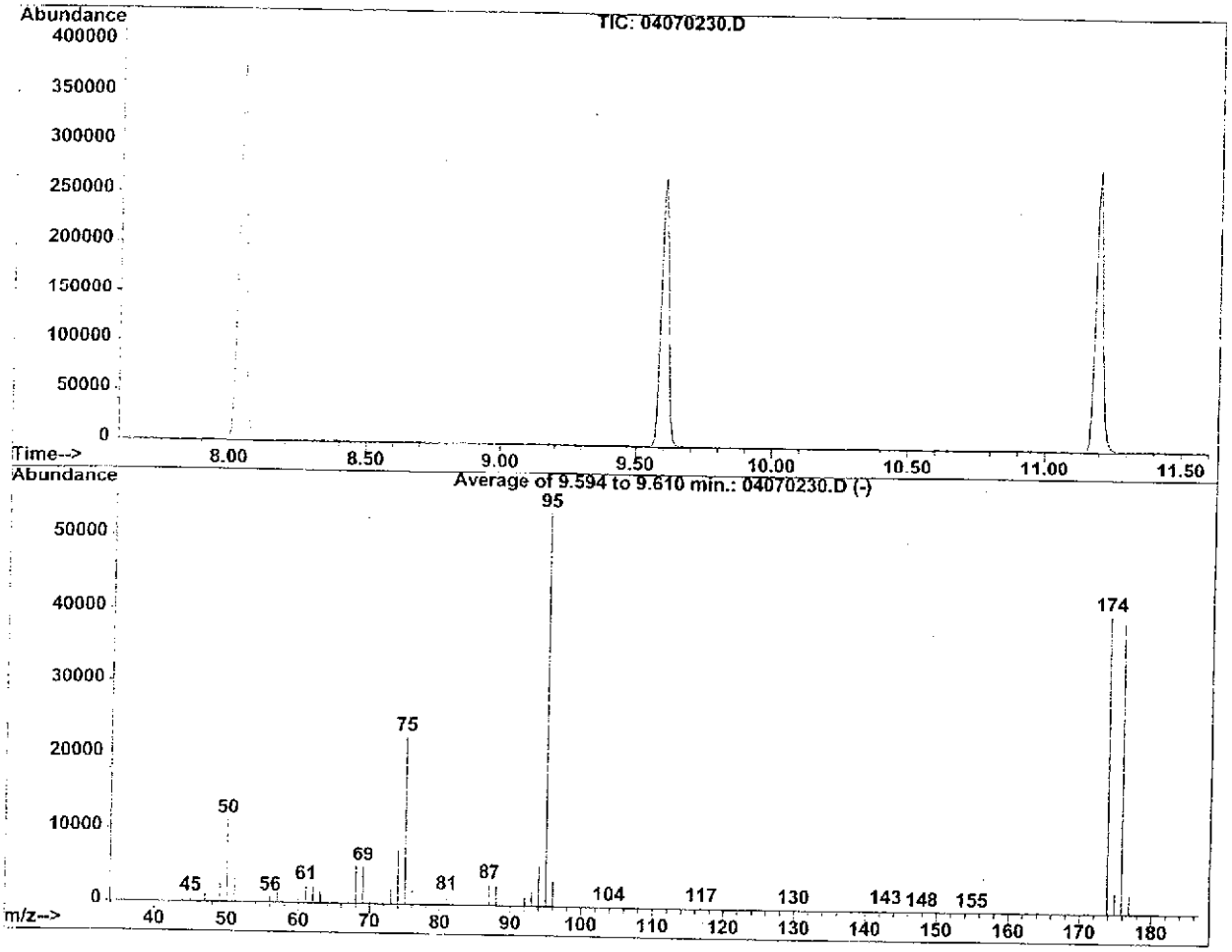
This Tune applies to the following samples:

Sample ID	Lab Sample ID	Lab File ID	Date/Time Analyzed
LCS	LCS 25ppb	04070260.D	07/03/04 03:20:00 PM
TB-062504	04062901-01	04070248.D	07/03/04 10:25:00 AM
DMW-11I-062504	04062901-02	04070249.D	07/03/04 10:49:00 AM
DMW-11S-062504	04062901-04	04070250.D	07/03/04 11:13:00 AM
DMW-10I-062504	04062901-08	04070252.D	07/03/04 12:01:00 PM
DMW-4S-062504	04062901-10	04070253.D	07/03/04 12:25:00 PM
DMW-5I-062504	04062901-12	04070254.D	07/03/04 12:51:00 PM
MW-5-062504	04062901-14	04070256.D	07/03/04 01:45:00 PM

BFB

Data File : C:\HPCHEM\1\DATA\040702\04070230.D
Acq On : 3 Jul 2004 3:15 am
Sample : BFB TUNE Water 5mL
Misc : IS/S 1uL #432
MS Integration Params: rteint.p
Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics

Vial: 30
Operator: MI
Inst : Instrumen
Multiplr: 1.00



AutoFind: Scans 1162, 1163, 1164; Background Corrected with Scan 1155

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.0	11246	PASS
75	95	30	60	42.4	22739	PASS
95	95	100	100	100.0	53592	PASS
96	95	5	9	6.4	3438	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	75.8	40640	PASS
175	174	5	9	7.0	2831	PASS
176	174	95	101	98.3	39965	PASS
177	176	5	9	6.3	2502	PASS

04070230.D TCL-W.M Tue Jul 06 14:41:41 2004

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PHASE SEPARATION SCIENCE, INC.

VOLATILE ORGANIC COMPOUNDS
INSTRUMENT AND PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

ANALYSIS:	**GC/MS Volatiles**	**LAB CODE:**	**BFBW**
METHOD:	**EPA 8260**	**LAB SAMPLE ID:**	**BFB Tune**
LAB FILE ID:	**04070701.D**	**DATE/TIME ANALYZED:**	**07/07/04 10:37**

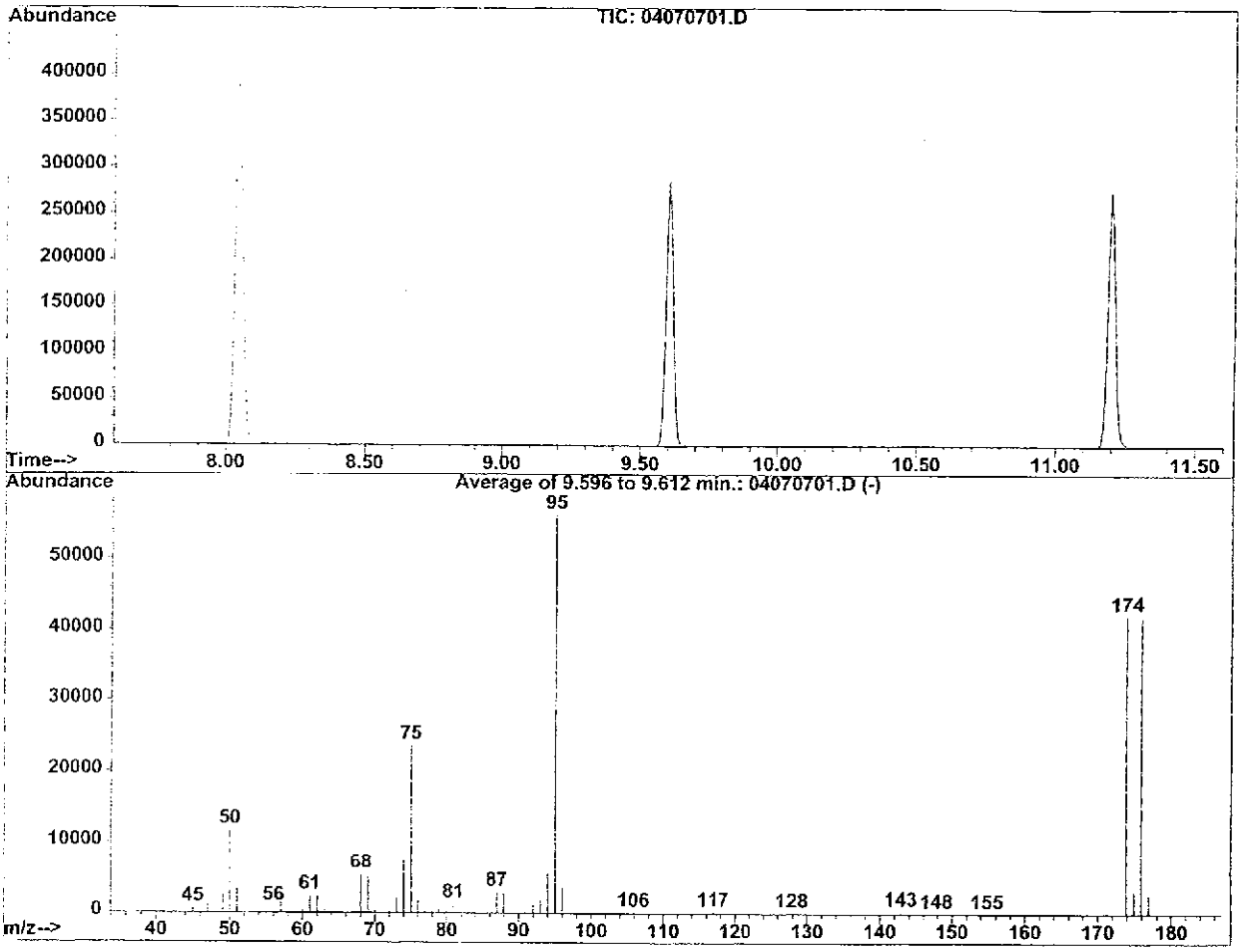
Target Mass	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	20.7
75	30.0 - 60.0% of mass 95	42.0
95	Base peak, 100% relative mass abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than2.0% of mass 174	0.0
174	Greater than 50.0% of mass 95	75.0
175	5.0 - 9.0% of mass 174	7.5
176	Greater than 95.0%, but less than 101.0% of mass 174	99.3
177	5.0 - 9.0% of mass 176	6.5

This Tune applies to the following samples:

Sample ID	Lab Sample ID	Lab File ID	Date/Time Analyzed
LCS	LCS 25ppb	04070746.D	07/08/04 05:01:00 AM
MW-3-062504	04062901-06	04070707.D	07/07/04 01:12:00 PM

BFB

Data File : C:\HPCHEM\1\DATA\040707\04070701.D Vial: 1
Acq On : 7 Jul 2004 10:37 am Operator: DJP
Sample : BFB TUNE Water 5mL Inst : Instrumen
Misc : IS/S 1uL #432 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics



AutoFind: Scans 1163, 1164, 1165; Background Corrected with Scan 1156

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.7	11682	PASS
75	95	30	60	42.0	23635	PASS
95	95	100	100	100.0	56317	PASS
96	95	5	9	6.5	3687	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	75.0	42211	PASS
175	174	5	9	7.5	3152	PASS
176	174	95	101	99.3	41923	PASS
177	176	5	9	6.5	2725	PASS

04070701.D TCL-W.M Wed Jul 07 11:16:14 2004

Injection Log

Directory: c:\hpchem\1\data\040702

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	04070201.d	1.	BFB TUNE Water 5mL	IS/S 1uL #432	2 Jul 04 09:46
2	2	04070202.d	1.	8260-W, 0.5ppb	IS/S 1uL #432, 2uL #343/344/345 (20D)	2 Jul 04 10:52
3	3	04070203.d	1.	8260-W, CCV 25ppb	IS/S 1uL #432, CCV 5uL #343/344/345	2 Jul 04 11:25
4	4	04070204.d	1.	OXYG-W, CCV 20ppb	IS/S 1uL #432, CCV 4uL #347	2 Jul 04 11:59
5	5	04070205.d	1.	OXYG-W, 5ppb	IS/S 1uL #432, 1uL #347	2 Jul 04 12:32
6	6	04070206.d	1.	METHOD BLANK 20mL	IS/S 1uL #432	2 Jul 04 13:05
7	7	04070207.d	1.	04062511-11 20mL	IS/S 1uL #432	2 Jul 04 13:39
8	8	04070208.d	1.	04062511-12 20mL	IS/S 1uL #432	2 Jul 04 14:12
9	9	04070209.d	1.	04062511-13 20mL	IS/S 1uL #432	2 Jul 04 14:45
10	10	04070210.d	1.	04062511-15 20mL	IS/S 1uL #432	2 Jul 04 15:19
11	11	04070211.d	1.	04062511-16 20mL	IS/S 1uL #432	2 Jul 04 15:52
12	12	04070212.d	1.	04070118-01 20mL	IS/S 1uL #432	2 Jul 04 16:25
13	13	04070213.d	1.	04070118-02 20mL	IS/S 1uL #432	2 Jul 04 16:58
14	14	04070214.d	1.	04070118-03 20mL	IS/S 1uL #432	2 Jul 04 17:32
15	15	04070215.d	1.	04062511-09 20mL	IS/S 1uL #432	2 Jul 04 18:05
16	16	04070216.d	1.	LCS 10ppb	IS/S 1uL #432, LCS 2uL #235	2 Jul 04 18:47
17	17	04070217.d	1.	8260-W, CCV 25ppb	IS/S 1uL #432, CCV 5uL #343/344/345	2 Jul 04 19:20
18	18	04070218.d	1.	OXYG-W, CCV 20ppb	IS/S 1uL #432, CCV 4uL #347	2 Jul 04 20:38
19	19	04070219.d	1.	OXYG-W, 5ppb 20mL	IS/S 1uL #432, 1uL #347	2 Jul 04 21:12
20	20	04070220.d	1.	METHOD BLANK 20mL	IS/S 1uL #432	2 Jul 04 21:45
21	21	04070221.d	1.	04070231-01 20mL	IS/S 1uL #432	2 Jul 04 22:18
22	22	04070222.d	1.	04070231-02 20mL	IS/S 1uL #432	2 Jul 04 22:51
23	23	04070223.d	1.	04070231-03 20mL	IS/S 1uL #432	2 Jul 04 23:24
24	24	04070224.d	1.	04070231-04 20mL	IS/S 1uL #432	2 Jul 04 23:57
25	25	04070225.d	1.	04070231-05 20mL	IS/S 1uL #432	3 Jul 04 00:31
26	26	04070226.d	1.	LCS-1 10ppb	IS/S 1uL #432, LCS 2uL #235	3 Jul 04 01:04
27	27	04070227.d	1.	LCS-1, DUP 10ppb	IS/S 1uL #432, LCS 2uL #235	3 Jul 04 01:37
28	28	04070228.d	1.	METHOD BLANK 20mL	IS/S 1uL #432	3 Jul 04 02:10
29	29	04070229.d	1.	METHOD BLANK 20mL	IS/S 1uL #432	3 Jul 04 02:43
30	30	04070230.d	1.	BFB TUNE Water 5mL	IS/S 1uL #432	3 Jul 04 03:15
31	31	04070231.d	1.	TCL-W, CCV 50ppb	IS/S 1uL #432, CCV 10uL #415	3 Jul 04 03:38
32	32	04070232.d	1.	UNREG-W, CCV 50ppb	IS/S 1uL #432, CCV 10uL #463	3 Jul 04 04:02
33	33	04070233.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	3 Jul 04 04:26
34	34	04070234.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	3 Jul 04 04:50
35	35	04070235.d	1.	04070109-01 TCLP 20D	IS/S 1uL #432	3 Jul 04 05:14
36	36	04070236.d	1.	04063001-10 5mL	IS/S 1uL #432	3 Jul 04 05:38
37	37	04070237.d	1.	04063001-11 5mL	IS/S 1uL #432	3 Jul 04 06:02
38	38	04070238.d	1.	04063001-12 5mL	IS/S 1uL #432	3 Jul 04 06:26
39	39	04070239.d	1.	04063014-01 5mL	IS/S 1uL #432	3 Jul 04 06:50
40	40	04070240.d	1.	04063014-02 5mL	IS/S 1uL #432	3 Jul 04 07:14
41	41	04070241.d	1.	04063014-03 5mL	IS/S 1uL #432	3 Jul 04 07:38
42	42	04070242.d	1.	04063014-04 5mL	IS/S 1uL #432	3 Jul 04 08:01
43	43	04070243.d	1.	04070119-01 5mL	IS/S 1uL #432	3 Jul 04 08:25
44	44	04070244.d	1.	04070119-02 5mL	IS/S 1uL #432	3 Jul 04 08:49
45	45	04070245.d	1.	04070119-03 5mL	IS/S 1uL #432	3 Jul 04 09:13
46	46	04070246.d	1.	04062816-02 5mL	IS/S 1uL #432	3 Jul 04 09:37
47	47	04070247.d	1.	04062816-03 5mL	IS/S 1uL #432	3 Jul 04 10:01
48	48	04070248.d	1.	04062901-01 5mL	IS/S 1uL #432	3 Jul 04 10:25
49	49	04070249.d	1.	04062901-02 5mL	IS/S 1uL #432	3 Jul 04 10:49
50	50	04070250.d	1.	04062901-04 5mL	IS/S 1uL #432	3 Jul 04 11:13
51	51	04070251.d	1.	04062901-06 5mL	IS/S 1uL #432	3 Jul 04 11:37
52	52	04070252.d	1.	04062901-08 5mL	IS/S 1uL #432	3 Jul 04 12:01
53	53	04070253.d	1.	04062901-10 5mL	IS/S 1uL #432	3 Jul 04 12:25
54	54	04070254.d	1.	04062901-12 10D	IS/S 1uL #432	3 Jul 04 12:51
55	55	04070255.d	1.	PSS TCLP BLANK 7/1 20D	IS/S 1uL #432	3 Jul 04 13:18
56	56	04070256.d	1.	04062901-14 100D	IS/S 1uL #432	3 Jul 04 13:45
57	57	04070257.d	1.	LCS 25ppb	IS/S 1uL #432, LCS 5uL #350	3 Jul 04 14:09
58	58	04070258.d	1.	04070119-01 MS 25ppb	IS/S 1uL #432, MS 5uL #350	3 Jul 04 14:32
59	59	04070259.d	1.	04070119-01 MSD 25ppb	IS/S 1uL #432, MS 5uL #350	3 Jul 04 14:56

Directory: c:\hpchem\1\data\040702

Injection Log

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
60	60	04070260.d	1.	LCS-1 25ppb	IS/S 1uL #432, LCS 5uL #350	3 Jul 04 15:20
61	61	04070261.d	1.	LCS-1, DUP 25ppb	IS/S 1uL #432, LCS 5uL #350	3 Jul 04 15:44
62	62	04070262.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	3 Jul 04 16:07
63	63	04070263.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	3 Jul 04 16:31

Injection Log

Directory: c:\hpchem\1\data\040707

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	04070701.d	1.	BFB TUNE Water 5mL	IS/S 1uL #432	7 Jul 04 10:37
2	2	04070702.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	7 Jul 04 11:01
3	3	04070703.d	1.	TCL-W, CCV 50ppb	IS/S 1uL #432, CCV 10uL #415	7 Jul 04 11:33
4	4	04070704.d	1.	UNREG-W, CCV 50ppb	IS/S 1uL #432, CCV 10uL #463	7 Jul 04 12:01
5	5	04070705.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	7 Jul 04 12:25
6	6	04070706.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	7 Jul 04 12:49
7	7	04070707.d	1.	04062901-06 5mL	IS/S 1uL #432	7 Jul 04 13:12
8	8	04070708.d	1.	04062901-04 100D	IS/S 1uL #432	7 Jul 04 13:36
9	9	04070709.d	1.	04062901-14 4000D	IS/S 1uL #432	7 Jul 04 14:00
10	10	04070710.d	1.	04062901-08 10D	IS/S 1uL #432	7 Jul 04 14:27
11	11	04070711.d	1.	04062901-10 10D	IS/S 1uL #432	7 Jul 04 14:53
12	12	04070712.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	7 Jul 04 15:18
13	13	04070713.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	7 Jul 04 15:42
14	14	04070714.d	1.	04070211-01 5mL	IS/S 1uL #432	7 Jul 04 16:06
15	15	04070715.d	1.	04070212-01 5mL	IS/S 1uL #432	7 Jul 04 16:30
16	16	04070716.d	1.	04070116-01 5mL	IS/S 1uL #432	7 Jul 04 16:53
17	17	04070717.d	1.	04070116-02 5mL	IS/S 1uL #432	7 Jul 04 17:17
18	18	04070718.d	1.	04070116-03 5mL	IS/S 1uL #432	7 Jul 04 17:41
19	19	04070719.d	1.	04070116-04 5mL	IS/S 1uL #432	7 Jul 04 18:05
20	20	04070720.d	1.	04070116-05 5mL	IS/S 1uL #432	7 Jul 04 18:29
21	21	04070721.d	1.	04070116-07 5mL	IS/S 1uL #432	7 Jul 04 18:53
22	22	04070722.d	1.	04070116-08 5mL	IS/S 1uL #432	7 Jul 04 19:17
23	23	04070723.d	1.	04070116-09 5mL	IS/S 1uL #432	7 Jul 04 19:41
24	24	04070724.d	1.	04070116-10 5mL	IS/S 1uL #432	7 Jul 04 20:05
25	25	04070725.d	1.	04070116-11 5mL	IS/S 1uL #432	7 Jul 04 20:29
26	26	04070726.d	1.	04070116-12 5mL	IS/S 1uL #432	7 Jul 04 20:52
27	27	04070727.d	1.	BFB TUNE Water 5mL	IS/S 1uL #432	7 Jul 04 21:16
28	28	04070728.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	7 Jul 04 21:40
29	29	04070729.d	1.	TCL-W, CCV 50ppb	IS/S 1uL #432	7 Jul 04 22:04
30	30	04070730.d	1.	UNREG-W, CCV 50ppb	IS/S 1uL #432	7 Jul 04 22:28
31	31	04070731.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	7 Jul 04 22:52
32	32	04070732.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	7 Jul 04 23:16
33	33	04070733.d	1.	04070116-13 5mL	IS/S 1uL #432	7 Jul 04 23:40
34	34	04070734.d	1.	04070116-14 5mL	IS/S 1uL #432	8 Jul 04 00:04
35	35	04070735.d	1.	04070116-15 5mL	IS/S 1uL #432	8 Jul 04 00:28
36	36	04070736.d	1.	04070116-16 5mL	IS/S 1uL #432	8 Jul 04 00:52
37	37	04070737.d	1.	04070116-17 5mL	IS/S 1uL #432	8 Jul 04 01:16
38	38	04070738.d	1.	04070116-18 5mL	IS/S 1uL #432	8 Jul 04 01:39
39	39	04070739.d	1.	04070116-21 5mL	IS/S 1uL #432	8 Jul 04 02:03
40	40	04070740.d	1.	04070116-23 5mL	IS/S 1uL #432	8 Jul 04 02:27
41	41	04070741.d	1.	04070116-24 5mL	IS/S 1uL #432	8 Jul 04 02:51
42	42	04070742.d	1.	04070116-22 10D	IS/S 1uL #432	8 Jul 04 03:18
43	43	04070743.d	1.	04070116-06 20D	IS/S 1uL #432	8 Jul 04 03:44
44	44	04070744.d	1.	04070116-19 20D	IS/S 1uL #432	8 Jul 04 04:11
45	45	04070745.d	1.	04070116-20 20D	IS/S 1uL #432	8 Jul 04 04:37
46	46	04070746.d	1.	LCS 5mL	IS/S 1uL #432	8 Jul 04 05:01
47	46	04070747.d	1.	LCSD 5mL	IS/S 1uL #432	8 Jul 04 05:25
48	47	04070748.d	1.	LCS 5mL	IS/S 1uL #432	8 Jul 04 05:49
49	47	04070749.d	1.	LCSD 5mL	IS/S 1uL #432	8 Jul 04 06:13
50	48	04070750.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	8 Jul 04 06:37
51	49	04070751.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	8 Jul 04 07:01
52	50	04070752.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	8 Jul 04 07:25
53	51	04070753.d	1.	METHOD BLANK 5mL	IS/S 1uL #432	8 Jul 04 07:48

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PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

VOLATILE ORGANIC COMPOUNDS
SYSTEM MONITORING COMPOUND RECOVERY
(SURROGATES)

ANALYSIS: GC/MS Volatiles **LAB CODE:** SURR

METHOD: EPA 8260 **MATRIX:** Water

Date/Time Analyzed	Sample ID / Lab ID	SMC-1 (DBF) #	SMC-2 (TOL) #	SMC-3 (BFB) #	Total Out
	Upper Limit	113	110	113	
	Lower Limit	84	83	67	
07/03/04 03:38:00 AM	Calibration Verification	103	104	101	
07/03/04 04:50:00 AM	Method Blank	101	105	100	
07/03/04 03:20:00 PM	LCS / LCS 25ppb	103	105	101	
07/03/04 10:25:00 AM	TB-062504 / 04062901-01	103	103	101	
07/03/04 10:49:00 AM	DMW-11I-062504 / 04062901-02	103	105	102	
07/03/04 11:13:00 AM	DMW-11S-062504 / 04062901-04	106	102	102	
07/03/04 12:01:00 PM	DMW-10I-062504 / 04062901-08	101	105	101	
07/03/04 12:25:00 PM	DMW-4S-062504 / 04062901-10	102	102	101	
07/03/04 12:51:00 PM	DMW-5I-062504 / 04062901-12	101	105	103	
07/03/04 01:45:00 PM	MW-5-062504 / 04062901-14	104	107	102	

	Water Control Limits	Soil Control Limits
SMC-1 (DBF): Dibromofluoromethane	84-113	74-131
SMC-2 (TOL): Toluene d-8	83-110	82-115
SMC-3 (BFB): Bromofluorobenzene	67-113	59-157

Column used to flag recovery values
* = Values outside QC limits
D: Surrogate diluted out

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ANALYSIS: GC/MS Volatiles

LAB CODE: SURR

METHOD: EPA 8260

MATRIX: Water

Date/Time Analyzed	Sample ID / Lab ID	SMC-1 (DBF) #	SMC-2 (TOL) #	SMC-3 (BFB) #	Total Out
	Upper Limit	113	110	113	
	Lower Limit	84	83	67	
07/07/04 11:33:00 AM	Calibration Verification	101	101	100	
07/07/04 12:49:00 PM	Method Blank	100	101	101	
07/08/04 05:01:00 AM	LCS / LCS 25ppb	99	102	96	
07/07/04 01:12:00 PM	MW-3-062504 / 04062901-06	102	101	106	

	Water Control Limits	Soil Control Limits
SMC-1 (DBF): Dibromofluoromethane	84-113	74-131
SMC-2 (TOL): Toluene d-8	83-110	82-115
SMC-3 (BFB): Bromofluorobenzene	67-113	59-157

Column used to flag recovery values
* = Values outside QC limits
D: Surrogate diluted out

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PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

VOLATILE ORGANICS COMPOUNDS
SAMPLE SPIKE AND SAMPLE SPIKE DUPLICATE SUMMARY

DATE ANALYZED: 07/03/04 **BATCH NUMBER:** VOC040702

METHOD: EPA 8260 **LAB FILE IDs:** 04070258.D 04070259.D

MATRIX: Water

Client Sample ID: 04070119-01 MS

SAMPLE SPIKE COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPIKE CONC (ug/L)	SPIKE REC (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	27	106	61-145
Benzene	25	ND	25	98	76-127
Trichloroethene	25	ND	27	109	71-120
Toluene	25	ND	24	97	76-125
Chlorobenzene	25	ND	24	96	75-130

Client Sample ID: 04070119-01 MSD

SAMPLE SPIKE DUP COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPK DUP CONC (ug/L)	SPIKE DUP REC (%)	RPD (%)	QC RPD (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	25	101	5.4	14	61-145
Benzene	25	ND	24	95	3.6	11	76-127
Trichloroethene	25	ND	25	100	8.7	14	71-120
Toluene	25	ND	24	97	0.0	13	76-125
Chlorobenzene	25	ND	23	93	3.0	13	75-130

* - Values outside of QC Limits

Calculation: spike or spike dup %Recovery
*=[(spike conc - original sample conc)/(spike added)]*100*
Calculation: spike/spike dup Relative Percent Difference
*=absolute value [(spike dup conc - spike conc)/((spike dup conc + spike conc)/2))]*100*
Note: QC limits are based on CLP OLM04.2

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070258.D Vial: 58
Acq On : 3 Jul 2004 2:32 pm Operator: MI
Sample : 04070119-01 MS 25ppb Inst : Instrumen
Misc : IS/S 1uL #432, MS 5uL #350 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 6 14:45 2004

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.01	168	159219	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	4.71	114	306612	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.04	117	255618	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.20	152	81882	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	3.98	113	96631	51.09 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 102.18%					
33) Toluene d-8 SS#2	6.29	98	330871	50.87 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 101.74%					
50) 4-Bromofluorobenzene SS#3	9.60	95	116747	49.96 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 99.92%					
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.39	85	37402	21.89 ug/L	100
3) Chloromethane	1.47	50	78637	27.61 ug/L	95
4) VINYL CHLORIDE	1.57	62	60078	24.59 ug/L	98
5) Bromomethane	1.74	94	44873	24.26 ug/L	98
6) Chloroethane	1.79	64	39147	29.74 ug/L	99
7) Trichlorofluoromethane	1.92	101	26347	24.09 ug/L	99
8) Acetone	2.28	43	16151	25.80 ug/L	97
9) 1,1-DICHLOROETHENE	2.27	96	48517	26.55 ug/L	100
10) 1,1,2-Trichlorotrifluoroet	2.28	101	40453	26.66 ug/L	98
11) Carbon Disulfide	2.44	76	176440m	27.52 ug/L	
12) Methyl Acetate	2.49	74	4549	18.11 ug/L	92
13) Methylene chloride	2.59	84	55218	25.88 ug/L	98
14) trans-1,2-Dichloroethene	2.79	96	56023	27.05 ug/L	98
15) Methyl-t-Butyl Ether	2.79	73	99487	25.61 ug/L	100
16) 1,1-Dichloroethane	3.10	63	105004	26.69 ug/L	100
17) cis-1,2-Dichloroethene	3.58	96	61444	27.35 ug/L	98
18) 2-Butanone (MEK)	3.56	43	28507	31.18 ug/L	98
19) CHLOROFORM	3.84	83	87552	24.81 ug/L	99
21) 1,1,1-Trichloroethane	4.03	97	63332	24.40 ug/L #	6
22) Cyclohexane	4.09	56	77943	25.33 ug/L	86
24) Carbon tetrachloride	4.18	117	53400	23.42 ug/L	100
25) Benzene	4.35	78	212380	24.62 ug/L	100
26) 1,2-Dichloroethane	4.36	62	65067	24.71 ug/L	99
27) Trichloroethene	4.98	95	57705	27.20 ug/L	94
28) 1,2-DICHLOROPROPANE	5.21	63	58869	24.33 ug/L	98
29) Methylcyclohexane	5.19	83	42153	22.00 ug/L	97
30) Bromodichloromethane	5.50	83	62443	24.26 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070258.D
Acq On : 3 Jul 2004 2:32 pm
Sample : 04070119-01 MS 25ppb
Misc : IS/S 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jul 6 14:45 2004

Vial: 58
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

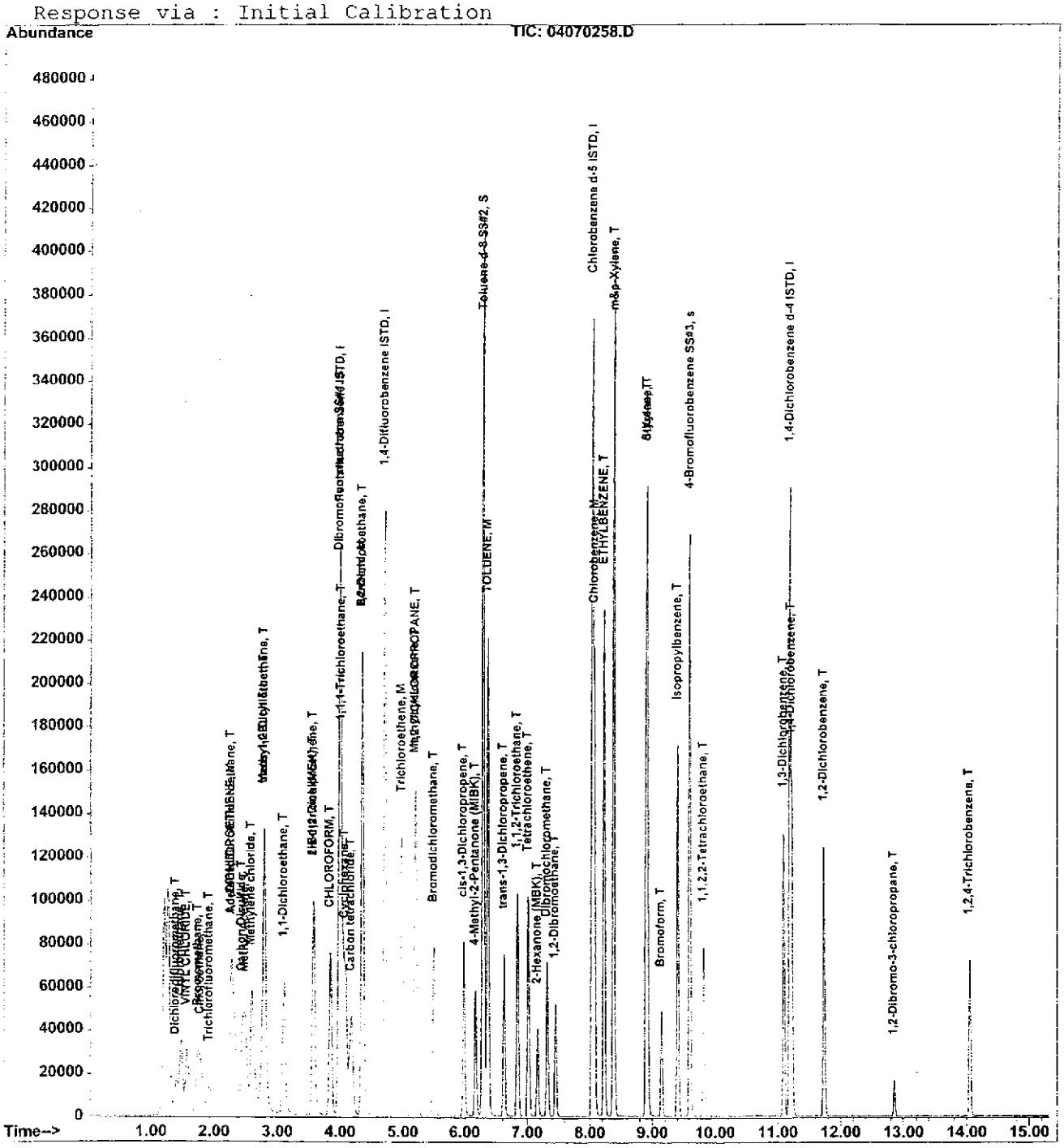
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) cis-1,3-Dichloropropene	5.99	75	73350	22.13 ug/L	98
32) 4-Methyl-2-Pentanone (MIBK	6.17	43	60517	28.13 ug/L	98
34) TOLUENE	6.37	92	120755	24.14 ug/L	99
35) trans-1,3-Dichloropropene	6.63	75	61566	22.53 ug/L	99
36) 1,1,2-Trichloroethane	6.84	83	35050	25.07 ug/L	99
37) Tetrachloroethene	7.02	166	35901	22.69 ug/L	98
38) 2-Hexanone (MBK)	7.17	43	40288	29.03 ug/L	95
40) Dibromochloromethane	7.32	129	42997	23.98 ug/L	99
41) 1,2-Dibromoethane	7.45	107	42359	25.21 ug/L	100
42) Chlorobenzene	8.07	112	131500	24.04 ug/L	96
43) ETHYLBENZENE	8.23	91	195351	24.90 ug/L	99
44) m&p-Xylene	8.39	106	145479	47.59 ug/L	96
45) o-Xylene	8.90	106	73879	24.69 ug/L	98
46) Styrene	8.92	104	114160	21.00 ug/L	96
47) Bromoform	9.15	173	25234	25.27 ug/L	99
49) Isopropylbenzene	9.41	105	137368	23.38 ug/L	98
51) 1,1,2,2-Tetrachloroethane	9.83	83	49174	24.98 ug/L	99
52) 1,3-Dichlorobenzene	11.10	146	60258	22.17 ug/L	99
53) 1,4-Dichlorobenzene	11.23	146	63289	22.49 ug/L	97
54) 1,2-Dichlorobenzene	11.74	146	57974	22.20 ug/L	99
55) 1,2-Dibromo-3-chloropropan	12.86	75	6076	28.10 ug/L	84
56) 1,2,4-Trichlorobenzene	14.06	180	28137	23.27 ug/L	99
57) Naphthalene	14.39	128	105	Not Detected	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040702\04070258.D Vial: 58
Acq On : 3 Jul 2004 2:32 pm Operator: MI
Sample : 04070119-01 MS 25ppb Inst : Instrumen
Misc : IS/S 1uL #432, MS 5uL #350 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 6 14:45 2004

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070259.D
Acq On : 3 Jul 2004 2:56 pm
Sample : 04070119-01 MSD 25ppb
Misc : IS/S 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jul 6 14:33 2004

Vial: 59
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.01	168	161797	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	4.71	114	306135	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.04	117	252127	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d 4 IS	11.19	152	78699	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	3.98	113	98278	51.13 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 102.26%					
33) Toluene d-8 SS#2	6.29	98	330769	50.93 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 101.86%					
50) 4-Bromofluorobenzene SS#3	9.60	95	115249	51.31 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 102.62%					
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.39	85	35606	20.51 ug/L	100
3) Chloromethane	1.47	50	73929	25.54 ug/L	97
4) VINYL CHLORIDE	1.56	62	57410	23.12 ug/L	97
5) Bromomethane	1.73	94	43610	23.21 ug/L	98
6) Chloroethane	1.80	64	36608	27.37 ug/L	98
7) Trichlorofluoromethane	1.92	101	25245	22.72 ug/L	99
8) Acetone	2.29	43	15858	24.92 ug/L	96
9) 1,1-DICHLOROETHENE	2.27	96	46733	25.16 ug/L	100
10) 1,1,2-Trichlorotrifluoroet	2.28	101	38809	25.17 ug/L	98
11) Carbon Disulfide	2.44	76	167318	25.68 ug/L	99
12) Methyl Acetate	2.49	74	4176	16.36 ug/L	96
13) Methylene chloride	2.59	84	53319	24.59 ug/L	97
14) trans-1,2-Dichloroethene	2.79	96	52258	24.83 ug/L	100
15) Methyl-t-Butyl Ether	2.79	73	94791	24.01 ug/L	100
16) 1,1-Dichloroethane	3.10	63	98099	24.53 ug/L	100
17) cis-1,2-Dichloroethene	3.58	96	59963	26.27 ug/L	97
18) 2-Butanone (MEK)	3.56	43	28013	30.15 ug/L	97
19) CHLOROFORM	3.84	83	84726	23.63 ug/L	99
21) 1,1,1-Trichloroethane	4.02	97	62110	23.55 ug/L #	3
22) Cyclohexane	4.08	56	75694	24.20 ug/L	91
24) Carbon tetrachloride	4.17	117	51002	22.41 ug/L	100
25) Benzene	4.35	78	204467	23.74 ug/L	99
26) 1,2-Dichloroethane	4.36	62	64257	24.44 ug/L	99
27) Trichloroethene	4.98	95	52775	24.92 ug/L	95
28) 1,2-DICHLOROPROPANE	5.21	63	58663	24.29 ug/L	99
29) Methylcyclohexane	5.19	83	40680	21.26 ug/L	95
30) Bromodichloromethane	5.49	83	61544	23.94 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070259.D Vial: 59
Acq On : 3 Jul 2004 2:56 pm Operator: MI
Sample : 04070119-01 MSD 25ppb Inst : Instrumen
Misc : IS/S 1uL #432, MS 5uL #350 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 6 14:33 2004

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

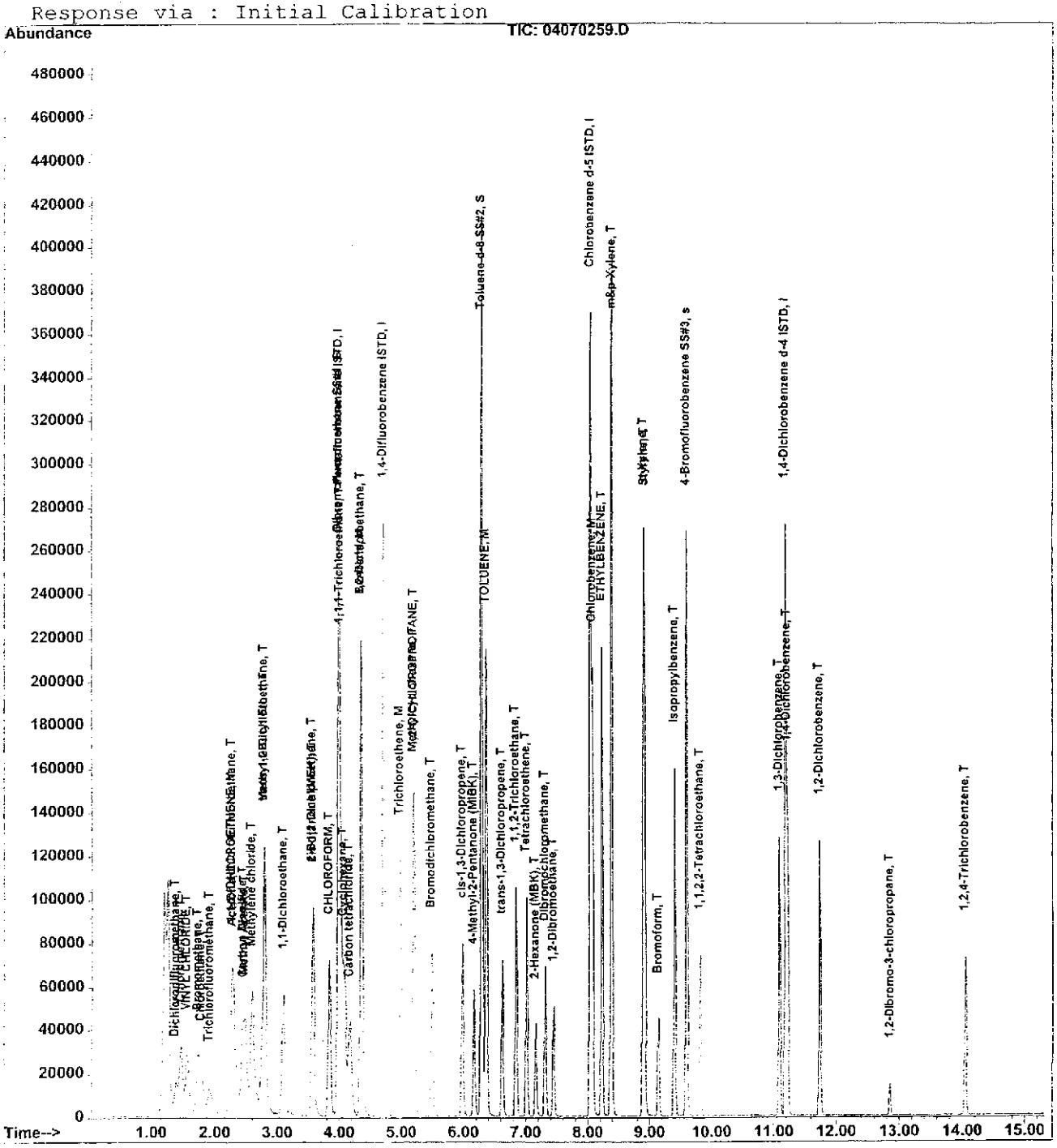
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31)	cis-1,3-Dichloropropene	5.99	75	73366	22.17 ug/L	97
32)	4-Methyl-2-Pentanone (MIBK	6.17	43	59400	27.66 ug/L	96
34)	TOLUENE	6.37	92	120528	24.14 ug/L	99
35)	trans-1,3-Dichloropropene	6.63	75	59472	21.80 ug/L	97
36)	1,1,2-Trichloroethane	6.84	83	34177	24.49 ug/L	98
37)	Tetrachloroethene	7.02	166	34618	21.91 ug/L	99
38)	2-Hexanone (MBK)	7.16	43	39076	28.20 ug/L	97
40)	Dibromochloromethane	7.32	129	42650	24.12 ug/L	99
41)	1,2-Dibromoethane	7.45	107	41505	25.05 ug/L	100
42)	Chlorobenzene	8.08	112	125893	23.33 ug/L	96
43)	ETHYLBENZENE	8.23	91	185791	24.01 ug/L	98
44)	m&p-Xylene	8.39	106	144460	47.91 ug/L	95
45)	o-Xylene	8.90	106	71430	24.20 ug/L	97
46)	Styrene	8.92	104	108876	20.31 ug/L	96
47)	Bromoform	9.14	173	24755	25.13 ug/L	99
49)	Isopropylbenzene	9.41	105	128389	22.73 ug/L	100
51)	1,1,2,2-Tetrachloroethane	9.82	83	47452	25.08 ug/L	100
52)	1,3-Dichlorobenzene	11.10	146	58642	22.45 ug/L	98
53)	1,4-Dichlorobenzene	11.22	146	60366	22.32 ug/L	97
54)	1,2-Dichlorobenzene	11.74	146	56512	22.52 ug/L	99
55)	1,2-Dibromo-3-chloropropan	12.86	75	5534	26.63 ug/L	92
56)	1,2,4-Trichlorobenzene	14.05	180	28334	24.38 ug/L	97
57)	Naphthalene	0.00	128	0	Not Detected	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040702\04070259.D Vial: 59
Acq On : 3 Jul 2004 2:56 pm Operator: MI
Sample : 04070119-01 MSD 25ppb Inst : Instrumen
Misc : IS/S 1uL #432, MS 5uL #350 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 6 14:33 2004

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration



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PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

VOLATILE ORGANICS COMPOUNDS
LCS AND LCS DUPLICATE SUMMARY

DATE ANALYZED: 07/03/04 **BATCH NUMBER:** VOC040702

METHOD: EPA 8260 **LAB FILE IDs:** 04070260.D 04070261.D

MATRIX: Water

Client Sample ID: LCS 25ppb

SAMPLE SPIKE COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPIKE CONC (ug/L)	SPIKE REC (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	26	105	61-145
Benzene	25	ND	25	101	76-127
Trichloroethene	25	ND	26	103	71-120
Toluene	25	ND	25	100	76-125
Chlorobenzene	25	ND	24	95	75-130

Client Sample ID: LCS-DUP 25ppb

SAMPLE SPIKE DUP COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPK DUP CONC (ug/L)	SPIKE DUP REC (%)	RPD (%)	QC RPD (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	26	105	0.4	14	61-145
Benzene	25	ND	24	97	3.6	11	76-127
Trichloroethene	25	ND	25	100	3.5	14	71-120
Toluene	25	ND	24	96	4.5	13	76-125
Chlorobenzene	25	ND	23	92	3.2	13	75-130

* - Values outside of QC Limits

Calculation: spike or spike dup %Recovery
*=[(spike conc - original sample conc)/(spike added)]*100*
Calculation: spike/spike dup Relative Percent Difference
*=absolute value [(spike dup conc - spike conc)/((spike dup conc + spike conc)/2))]*100*
Note: QC limits are based on CLP OLM04.2

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070260.D
Acq On : 3 Jul 2004 3:20 pm
Sample : LCS-1 25ppb
Misc : IS/S 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jul 6 14:33 2004

Vial: 60
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.00	168	159869	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	4.71	114	302759	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.04	117	254932	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.19	152	80246	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	3.98	113	97419	51.30 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.60%		
33) Toluene d-8 SS#2	6.29	98	336394	52.37 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 104.74%		
50) 4-Bromofluorobenzene SS#3	9.60	95	115499	50.43 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 100.86%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.39	85	38132	22.23 ug/L	100
3) Chloromethane	1.48	50	77178	26.99 ug/L	98
4) VINYL CHLORIDE	1.57	62	62757	25.58 ug/L	99
5) Bromomethane	1.73	94	46028	24.79 ug/L	99
6) Chloroethane	1.79	64	39541	29.92 ug/L	98
7) Trichlorofluoromethane	1.92	101	27503	25.05 ug/L	99
8) Acetone	2.28	43	15562	24.75 ug/L	97
9) 1,1-DICHLOROETHENE	2.26	96	48084	26.20 ug/L	98
10) 1,1,2-Trichlorotrifluoroet	2.27	101	39714	26.06 ug/L	97
11) Carbon Disulfide	2.45	76	179123	27.82 ug/L	100
12) Methyl Acetate	2.49	74	7038	27.91 ug/L	96
13) Methylene chloride	2.59	84	57064	26.63 ug/L	97
14) trans-1,2-Dichloroethene	2.79	96	55245	26.56 ug/L	99
15) Methyl-t-Butyl Ether	2.78	73	97965	25.11 ug/L	100
16) 1,1-Dichloroethane	3.10	63	103433	26.18 ug/L	99
17) cis-1,2-Dichloroethene	3.57	96	58832	26.08 ug/L	99
18) 2-Butanone (MEK)	3.56	43	29029	31.62 ug/L	98
19) CHLOROFORM	3.84	83	88234	24.90 ug/L	100
21) 1,1,1-Trichloroethane	4.02	97	64923	24.91 ug/L #	9
22) Cyclohexane	4.08	56	79062	25.58 ug/L #	81
24) Carbon tetrachloride	4.17	117	53873	23.93 ug/L	99
25) Benzene	4.35	78	214245	25.15 ug/L	100
26) 1,2-Dichloroethane	4.36	62	65116	25.04 ug/L	98
27) Trichloroethene	4.98	95	53975	25.77 ug/L	95
28) 1,2-DICHLOROPROPANE	5.21	63	60744	25.43 ug/L	99
29) Methylcyclohexane	5.19	83	44810	23.68 ug/L	98
30) Bromodichloromethane	5.50	83	62976	24.77 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070260.D
Acq On : 3 Jul 2004 3:20 pm
Sample : LCS-1 25ppb
Misc : IS/S 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jul 6 14:33 2004

Vial: 60
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) cis-1,3-Dichloropropene	5.99	75	73377	22.42 ug/L	98
32) 4-Methyl-2-Pentanone (MIBK	6.17	43	59848	28.18 ug/L	98
34) TOLUENE	6.37	92	123389	24.98 ug/L	98
35) trans-1,3-Dichloropropene	6.63	75	59849	22.18 ug/L	98
36) 1,1,2-Trichloroethane	6.84	83	34379	24.91 ug/L	98
37) Tetrachloroethene	7.02	166	36357	23.27 ug/L	98
38) 2-Hexanone (MBK)	7.16	43	39307	28.68 ug/L	97
40) Dibromochloromethane	7.32	129	42281	23.64 ug/L	100
41) 1,2-Dibromoethane	7.45	107	42106	25.13 ug/L	99
42) Chlorobenzene	8.08	112	129657	23.76 ug/L	96
43) ETHYLBENZENE	8.22	91	195084	24.93 ug/L	98
44) m&p-Xylene	8.39	106	148866	48.83 ug/L	96
45) o-Xylene	8.90	106	74861	25.08 ug/L	95
46) Styrene	8.92	104	137853	25.43 ug/L	99
47) Bromoform	9.15	173	25523	25.63 ug/L	99
49) Isopropylbenzene	9.41	105	139437	24.21 ug/L	99
51) 1,1,2,2-Tetrachloroethane	9.82	83	46701	24.21 ug/L	99
52) 1,3-Dichlorobenzene	11.10	146	61223	22.98 ug/L	99
53) 1,4-Dichlorobenzene	11.23	146	65361	23.70 ug/L	98
54) 1,2-Dichlorobenzene	11.74	146	58641	22.92 ug/L	99
55) 1,2-Dibromo-3-chloropropan	12.85	75	5850	27.61 ug/L	90
56) 1,2,4-Trichlorobenzene	14.05	180	29139	24.59 ug/L	99
57) Naphthalene	0.00	128	0	Not Detected	

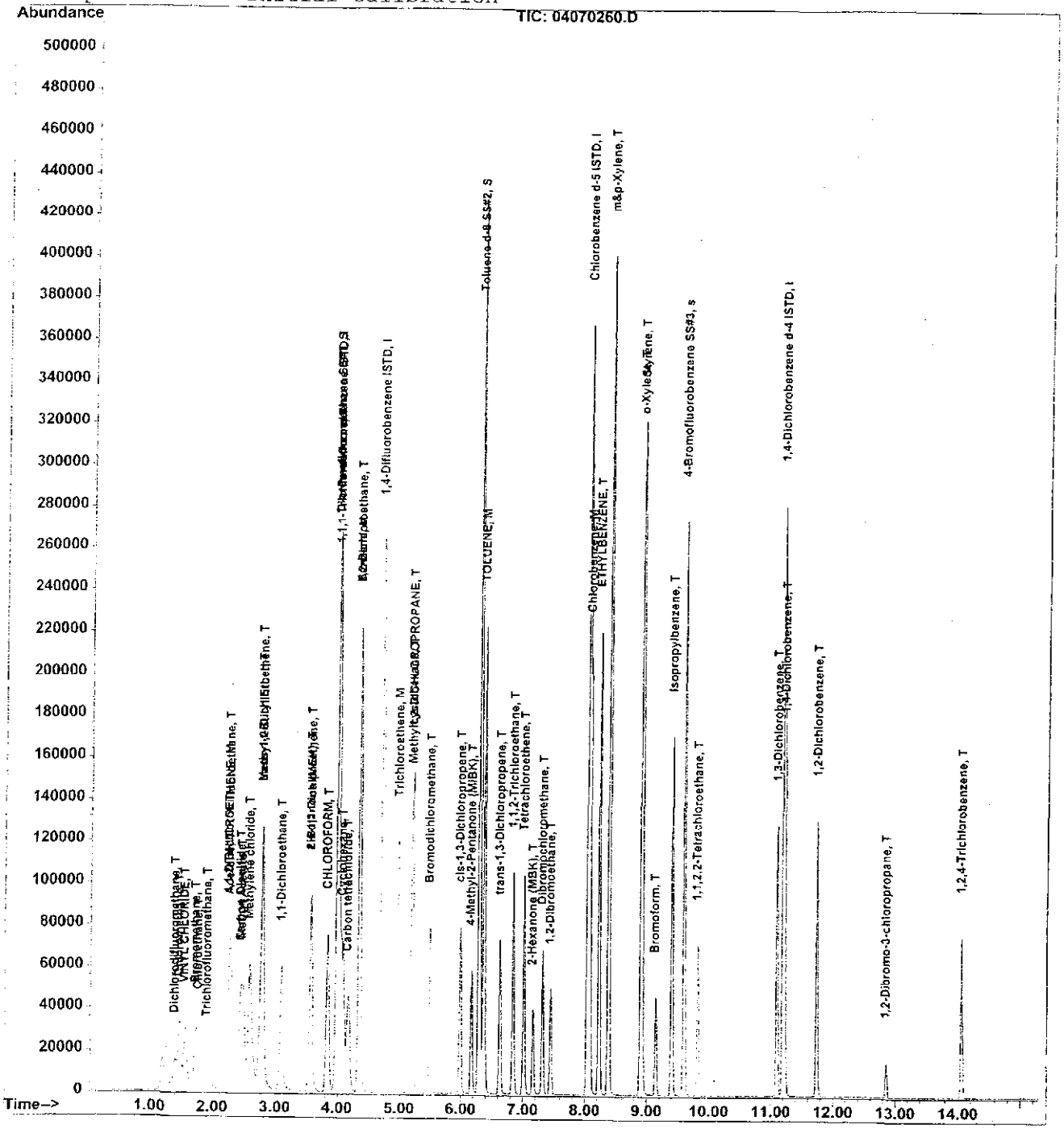
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040702\04070260.D
Acq On : 3 Jul 2004 3:20 pm
Sample : LCS-1 25ppb
Misc : IS/S 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jul 6 14:33 2004

Vial: 60
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070261.D Vial: 61
Acq On : 3 Jul 2004 3:44 pm Operator: MI
Sample : LCS-1, DUP 25ppb Inst : Instrumen
Misc : IS/S 1uL #432, LCS 5uL #350 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 6 14:45 2004

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.01	168	158021	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	4.71	114	305573	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.04	117	259182	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.20	152	80308	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	3.98	113	96288	51.29 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 102.58%					
33) Toluene d-8 SS#2	6.30	98	334404	51.59 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 103.18%					
50) 4-Bromofluorobenzene SS#3	9.60	95	114878	50.12 ug/L	0.00
Spiked Amount 50.000 Range 70 - 130 Recovery = 100.24%					
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.40	85	36302	21.41 ug/L	100
3) Chloromethane	1.48	50	74666	26.41 ug/L	96
4) VINYL CHLORIDE	1.57	62	59381	24.48 ug/L	99
5) Bromomethane	1.75	94	45214	24.63 ug/L	97
6) Chloroethane	1.79	64	38553	29.51 ug/L	99
7) Trichlorofluoromethane	1.92	101	27211	25.07 ug/L	99
8) Acetone	2.28	43	15563	25.04 ug/L	95
9) 1,1-DICHLOROETHENE	2.27	96	47727	26.31 ug/L	99
10) 1,1,2-Trichlorotrifluoroet	2.29	101	40491	26.88 ug/L	98
11) Carbon Disulfide	2.49	76	171319m	26.92 ug/L	
12) Methyl Acetate	2.50	74	6782	27.21 ug/L	91
13) Methylene chloride	2.59	84	56111	26.50 ug/L	98
14) trans-1,2-Dichloroethene	2.80	96	53116	25.84 ug/L	100
15) Methyl-t-Butyl Ether	2.78	73	92364	23.96 ug/L	100
16) 1,1-Dichloroethane	3.10	63	102601	26.27 ug/L	99
17) cis-1,2-Dichloroethene	3.58	96	57600	25.84 ug/L	98
18) 2-Butanone (MEK)	3.56	43	28340	31.23 ug/L	95
19) CHLOROFORM	3.84	83	83869	23.95 ug/L	100
21) 1,1,1-Trichloroethane	4.03	97	61985	24.06 ug/L #	5
22) Cyclohexane	4.09	56	78468	25.69 ug/L	94
24) Carbon tetrachloride	4.18	117	50927	22.42 ug/L	98
25) Benzene	4.35	78	208523	24.25 ug/L	99
26) 1,2-Dichloroethane	4.36	62	63787	24.30 ug/L	99
27) Trichloroethene	4.98	95	52616	24.89 ug/L	94
28) 1,2-DICHLOROPROPANE	5.21	63	57455	23.83 ug/L	99
29) Methylcyclohexane	5.19	83	42727	22.37 ug/L	98
30) Bromodichloromethane	5.50	83	62001	24.17 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040702\04070261.D
Acq On : 3 Jul 2004 3:44 pm
Sample : LCS-1, DUP 25ppb
Misc : IS/S 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jul 6 14:45 2004

Vial: 61
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) cis-1,3-Dichloropropene	5.99	75	70994	21.49 ug/L	98
32) 4-Methyl-2-Pentanone (MIBK	6.18	43	56730	26.46 ug/L	97
34) TOLUENE	6.37	92	119098	23.89 ug/L	99
35) trans-1,3 Dichloropropene	6.63	75	59447	21.83 ug/L	97
36) 1,1,2-Trichloroethane	6.84	83	33626	24.14 ug/L	98
37) Tetrachloroethene	7.01	166	35272	22.36 ug/L	97
38) 2-Hexanone (MBK)	7.17	43	36517	26.40 ug/L	97
40) Dibromochloromethane	7.32	129	41282	22.71 ug/L	99
41) 1,2-Dibromoethane	7.45	107	40938	24.03 ug/L	100
42) Chlorobenzene	8.08	112	127671	23.02 ug/L	96
43) ETHYLBENZENE	8.23	91	193533	24.33 ug/L	97
44) m&p-Xylene	8.39	106	144222	46.53 ug/L	94
45) o-Xylene	8.91	106	72867	24.01 ug/L	97
46) Styrene	8.92	104	132565	24.05 ug/L	99
47) Bromoform	9.15	173	24822	24.52 ug/L	98
49) Isopropylbenzene	9.41	105	132864	23.05 ug/L	98
51) 1,1,2,2-Tetrachloroethane	9.83	83	45351	23.49 ug/L	100
52) 1,3-Dichlorobenzene	11.10	146	58922	22.10 ug/L	99
53) 1,4-Dichlorobenzene	11.23	146	62820	22.76 ug/L	96
54) 1,2-Dichlorobenzene	11.74	146	57923	22.62 ug/L	99
55) 1,2-Dibromo-3-chloropropan	12.86	75	5584	26.33 ug/L	90
56) 1,2,4-Trichlorobenzene	14.05	180	28603	24.12 ug/L	99
57) Naphthalene	0.00	128	0	Not Detected	

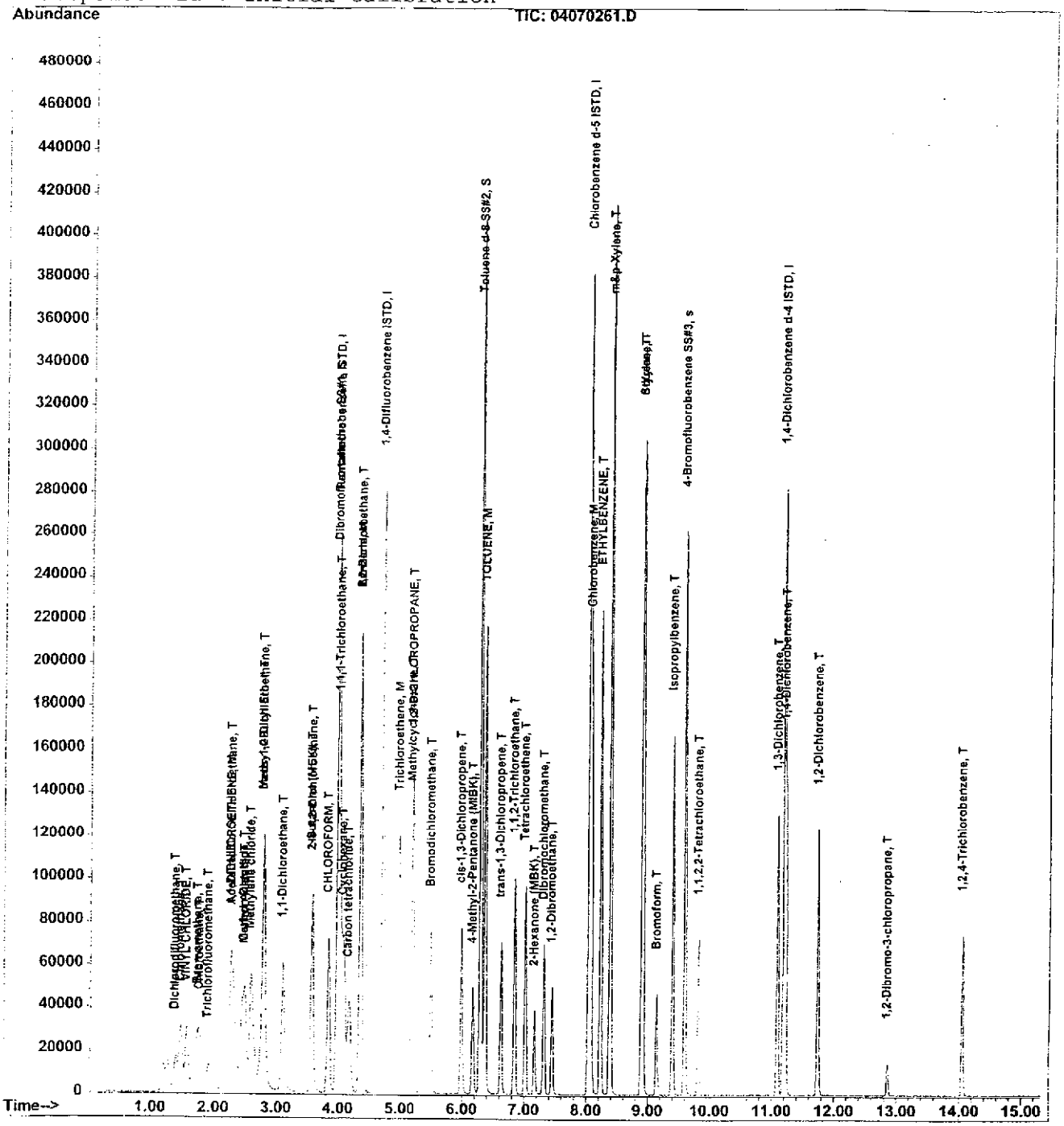
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040702\04070261.D
Acq On : 3 Jul 2004 3:44 pm
Sample : LCS-1, DUP 25ppb
Misc : IS/S 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jul 6 14:45 2004

Vial: 61
Operator: MI
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration



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PHASE SEPARATION SCIENCE, INC.

VOLATILE ORGANICS COMPOUNDS
LCS AND LCS DUPLICATE SUMMARY

DATE ANALYZED: 07/08/04 **BATCH NUMBER:** VOC040702

METHOD: EPA 8260 **LAB FILE IDs:** 04070746.D 04070247.D

MATRIX: Water

Client Sample ID: LCS 25ppb

SAMPLE SPIKE COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPIKE CONC (ug/L)	SPIKE REC (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	25	100	61-145
Benzene	25	ND	24	97	76-127
Trichloroethene	25	ND	24	94	71-120
Toluene	25	ND	24	96	76-125
Chlorobenzene	25	ND	23	92	75-130

Client Sample ID: LCS-DUP 25ppb

SAMPLE SPIKE DUP COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPK DUP CONC (ug/L)	SPIKE DUP REC (%)	RPD (%)	QC RPD (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	24	98	2.3	14	61-145
Benzene	25	ND	24	96	1.0	11	76-127
Trichloroethene	25	ND	23	92	2.0	14	71-120
Toluene	25	ND	24	95	0.8	13	76-125
Chlorobenzene	25	ND	23	92	0.0	13	75-130

* - Values outside of QC Limits

Calculation: spike or spike dup %Recovery
*=[(spike conc - original sample conc)/(spike added)]*100*
Calculation: spike/spike dup Relative Percent Difference
*=absolute value [(spike dup conc - spike conc)/((spike dup conc + spike conc)/2))]*100*
Note: QC limits are based on CLP OLM04.2

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040707\04070746.D
Acq On : 8 Jul 2004 5:01 am
Sample : LCS 5mL
Misc : IS/S 1uL #432
MS Integration Params: rteint.p
Quant Time: Jul 8 10:32 2004

Vial: 46
Operator: DJP
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.01	168	162360	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	4.72	114	307794	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.05	117	262275	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.21	152	84108	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	3.99	113	95631	49.58 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 99.16%		
33) Toluene d-8 SS#2	6.31	98	333334	51.05 ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.10%		
50) 4-Bromofluorobenzene SS#3	9.61	95	115558	48.14 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 96.28%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.40	85	32854	18.86 ug/L	100
3) Chloromethane	1.46	50	64305m	22.14 ug/L	
4) VINYL CHLORIDE	1.55	62	56778	22.79 ug/L	98
5) Bromomethane	1.73	94	41957	22.25 ug/L	100
6) Chloroethane	1.79	64	33960	25.30 ug/L	99
7) Trichlorofluoromethane	1.92	101	19606	17.58 ug/L	99
8) Acetone	2.28	43	14621	22.90 ug/L	97
9) 1,1-DICHLOROETHENE	2.27	96	46682	25.05 ug/L	97
10) 1,1,2-Trichlorotrifluoroet	2.29	101	38160	24.66 ug/L	99
11) Carbon Disulfide	2.45	76	164747	25.20 ug/L	98
12) Methyl Acetate	2.50	74	6364	24.85 ug/L	97
13) Methylene chloride	2.60	84	53940	24.79 ug/L	98
14) trans-1,2-Dichloroethene	2.80	96	51311	24.29 ug/L	98
15) Methyl-t-Butyl Ether	2.80	73	89937	22.70 ug/L	100
16) 1,1-Dichloroethane	3.11	63	95402	23.78 ug/L	100
17) cis-1,2-Dichloroethene	3.58	96	55016	24.02 ug/L	99
18) 2-Butanone (MEK)	3.57	43	26425	28.34 ug/L	98
19) CHLOROFORM	3.85	83	84159	23.39 ug/L	98
21) 1,1,1-Trichloroethane	4.03	97	61206	23.12 ug/L #	5
22) Cyclohexane	4.09	56	75454	24.04 ug/L	89
24) Carbon tetrachloride	4.18	117	52410	22.90 ug/L	99
25) Benzene	4.36	78	210503	24.31 ug/L	100
26) 1,2-Dichloroethane	4.37	62	61960	23.44 ug/L	100
27) Trichloroethene	4.99	95	50230	23.59 ug/L	95
28) 1,2-DICHLOROPROPANE	5.21	63	56578	23.30 ug/L	99
29) Methylcyclohexane	5.20	83	42985	22.34 ug/L	99
30) Bromodichloromethane	5.51	83	60505	23.41 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040707\04070746.D
Acq On : 8 Jul 2004 5:01 am
Sample : LCS 5mL
Misc : IS/S 1uL #432
MS Integration Params: rteint.p
Quant Time: Jul 8 10:32 2004

Vial: 46
Operator: DJP
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) cis-1,3-Dichloropropene	5.99	75	74255	22.32 ug/L	100
32) 4-Methyl-2-Pentanone (MIBK	6.18	43	54467	25.22 ug/L	98
34) TOLUENE	6.38	92	120732	24.05 ug/L	100
35) trans-1,3-Dichloropropene	6.63	75	62017	22.61 ug/L	100
36) 1,1,2-Trichloroethane	6.85	83	33945	24.19 ug/L	97
37) Tetrachloroethene	7.03	166	35696	22.47 ug/L	98
38) 2-Hexanone (MBK)	7.18	43	34870	25.03 ug/L	98
40) Dibromochloromethane	7.32	129	40576	22.05 ug/L	100
41) 1,2-Dibromoethane	7.46	107	40476	23.48 ug/L	99
42) Chlorobenzene	8.08	112	129218	23.02 ug/L	97
43) ETHYLBENZENE	8.24	91	194217	24.13 ug/L	99
44) m&p-Xylene	8.39	106	147626	47.07 ug/L	98
45) o-Xylene	8.91	106	73058	23.79 ug/L	98
46) Styrene	8.93	104	133344	23.91 ug/L	100
47) Bromoform	9.16	173	24823	24.23 ug/L	98
49) Isopropylbenzene	9.41	105	134717	22.32 ug/L	99
51) 1,1,2,2-Tetrachloroethane	9.83	83	44468	21.99 ug/L	99
52) 1,3-Dichlorobenzene	11.11	146	60106	21.53 ug/L	99
53) 1,4-Dichlorobenzene	11.24	146	63835	22.09 ug/L	99
54) 1,2-Dichlorobenzene	11.76	146	59571	22.21 ug/L	99
55) 1,2-Dibromo-3-chloropropan	12.87	75	5042	22.70 ug/L	96
56) 1,2,4-Trichlorobenzene	14.07	180	26422	21.27 ug/L	99
57) Naphthalene	14.40	128	8715	3.20 ug/L	100

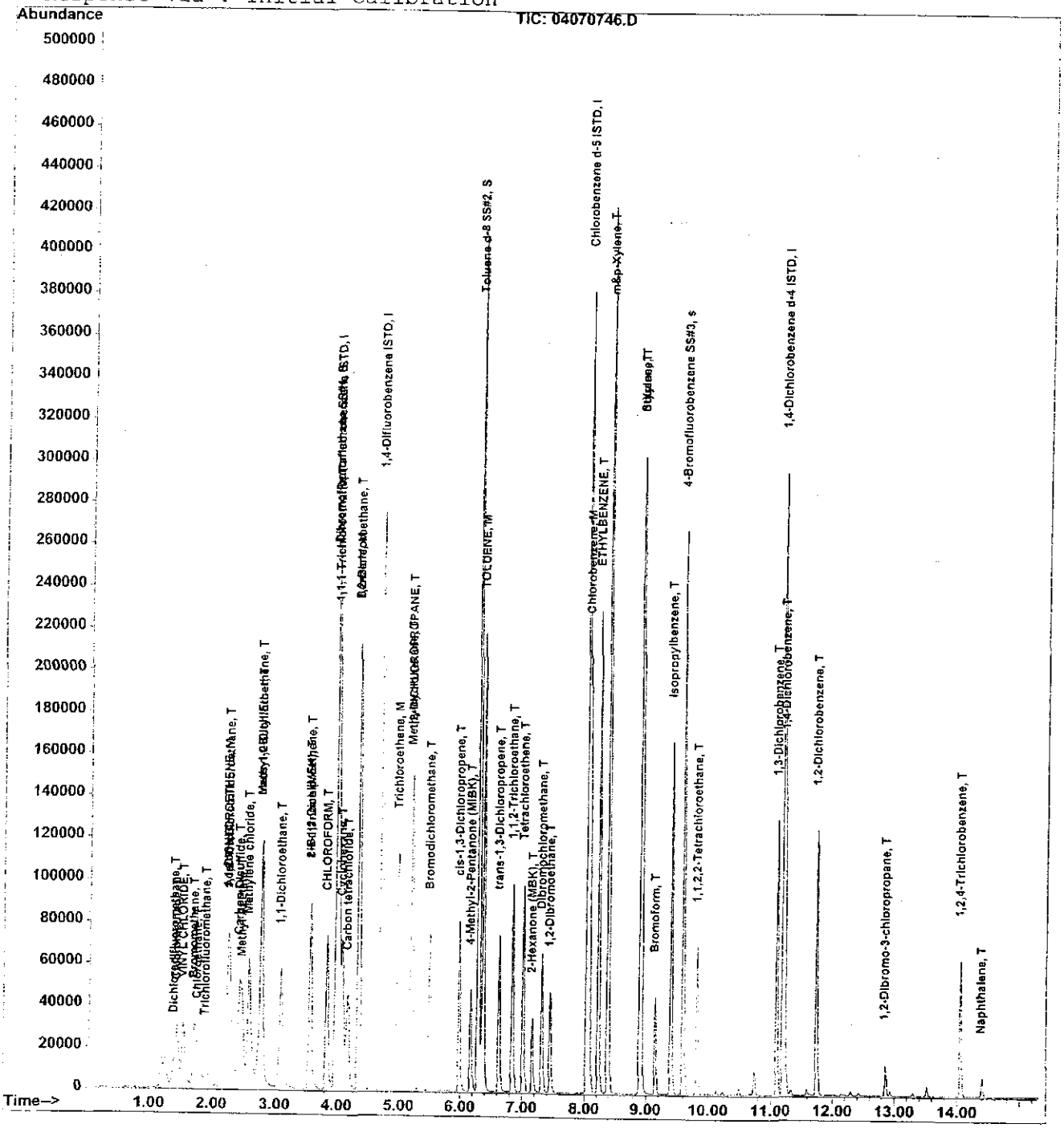
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040707\04070746.D
Acq On : 8 Jul 2004 5:01 am
Sample : LCS 5mL
Misc : IS/S 1uL #432
MS Integration Params: rteint.p
Quant Time: Jul 8 10:32 2004

Vial: 46
Operator: DJP
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040707\04070747.D
Acq On : 8 Jul 2004 5:25 am
Sample : LCSD 5mL
Misc : IS/S 1uL #432
MS Integration Params: rteint.p
Quant Time: Jul 8 10:32 2004

Vial: 46
Operator: DJP
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.01	168	162217	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	4.72	114	306000	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.05	117	259972	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.21	152	85201	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	3.98	113	96038	49.84 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 99.68%		
33) Toluene d-8 SS#2	6.30	98	329233	50.72 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.44%		
50) 4-Bromofluorobenzene SS#3	9.60	95	116954	48.10 ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 96.20%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.39	85	32233	18.52 ug/L	100
3) Chloromethane	1.45	50	63567m	21.90 ug/L	
4) VINYL CHLORIDE	1.55	62	55981	22.49 ug/L	99
5) Bromomethane	1.72	94	41955	22.27 ug/L	98
6) Chloroethane	1.79	64	33970	25.33 ug/L	100
7) Trichlorofluoromethane	1.92	101	20165	18.10 ug/L	99
8) Acetone	2.28	43	14316	22.44 ug/L	96
9) 1,1-DICHLOROETHENE	2.26	96	45604	24.49 ug/L	97
10) 1,1,2-Trichlorotrifluoroet	2.28	101	37954	24.55 ug/L	99
11) Carbon Disulfide	2.44	76	161010	24.65 ug/L	100
12) Methyl Acetate	2.49	74	6502	25.41 ug/L	89
13) Methylene chloride	2.59	84	53116	24.43 ug/L	99
14) trans-1,2-Dichloroethene	2.80	96	50199	23.79 ug/L	98
15) Methyl-t-Butyl Ether	2.79	73	94940	23.99 ug/L	100
16) 1,1-Dichloroethane	3.10	63	98205	24.50 ug/L	99
17) cis-1,2-Dichloroethene	3.58	96	55908	24.43 ug/L	98
18) 2-Butanone (MEK)	3.57	43	26676	28.64 ug/L	99
19) CHLOROFORM	3.84	83	83970	23.36 ug/L	100
21) 1,1,1-Trichloroethane	4.03	97	62435	23.61 ug/L #	8
22) Cyclohexane	4.09	56	75512	24.08 ug/L	91
24) Carbon tetrachloride	4.18	117	52388	23.03 ug/L	98
25) Benzene	4.36	78	207248	24.07 ug/L	99
26) 1,2-Dichloroethane	4.37	62	61157	23.27 ug/L	100
27) Trichloroethene	4.98	95	48953	23.12 ug/L	98
28) 1,2-DICHLOROPROPANE	5.21	63	57390	23.77 ug/L	99
29) Methylcyclohexane	5.20	83	42444	22.19 ug/L	97
30) Bromodichloromethane	5.50	83	60442	23.53 ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040707\04070747.D
Acq On : 8 Jul 2004 5:25 am
Sample : LCSD 5mL
Misc : IS/S 1uL #432
MS Integration Params: rteint.p
Quant Time: Jul 8 10:32 2004

Vial: 46
Operator: DJP
Inst : Instrumen
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration
DataAcq Meth : RTX2VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) cis-1,3-Dichloropropene	6.00	75	73344	22.17 ug/L	99
32) 4-Methyl-2-Pentanone (MIBK	6.18	43	55004	25.62 ug/L	98
34) TOLUENE	6.37	92	119107	23.86 ug/L	98
35) trans-1,3-Dichloropropene	6.64	75	60842	22.31 ug/L	100
36) 1,1,2-Trichloroethane	6.85	83	33526	24.03 ug/L	98
37) Tetrachloroethene	7.02	166	35511	22.48 ug/L	97
38) 2-Hexanone (MBK)	7.17	43	35624	25.72 ug/L	100
40) Dibromochloromethane	7.33	129	41765	22.90 ug/L	99
41) 1,2-Dibromoethane	7.46	107	41464	24.27 ug/L	99
42) Chlorobenzene	8.08	112	128153	23.03 ug/L	97
43) ETHYLBENZENE	8.24	91	195278	24.48 ug/L	99
44) m&p-Xylene	8.40	106	145813	46.90 ug/L	96
45) o-Xylene	8.91	106	72114	23.69 ug/L	97
46) Styrene	8.93	104	132397	23.95 ug/L	100
47) Bromoform	9.16	173	24332	23.96 ug/L	100
49) Isopropylbenzene	9.42	105	136831	22.38 ug/L	98
51) 1,1,2,2-Tetrachloroethane	9.83	83	44566	21.76 ug/L	100
52) 1,3-Dichlorobenzene	11.11	146	62227	22.00 ug/L	100
53) 1,4-Dichlorobenzene	11.23	146	65454	22.36 ug/L	100
54) 1,2-Dichlorobenzene	11.75	146	59958	22.07 ug/L	99
55) 1,2-Dibromo-3-chloropropan	12.86	75	5483	24.37 ug/L	93
56) 1,2,4-Trichlorobenzene	14.06	180	28486	22.64 ug/L	100
57) Naphthalene	14.40	128	1820	Not Detected	

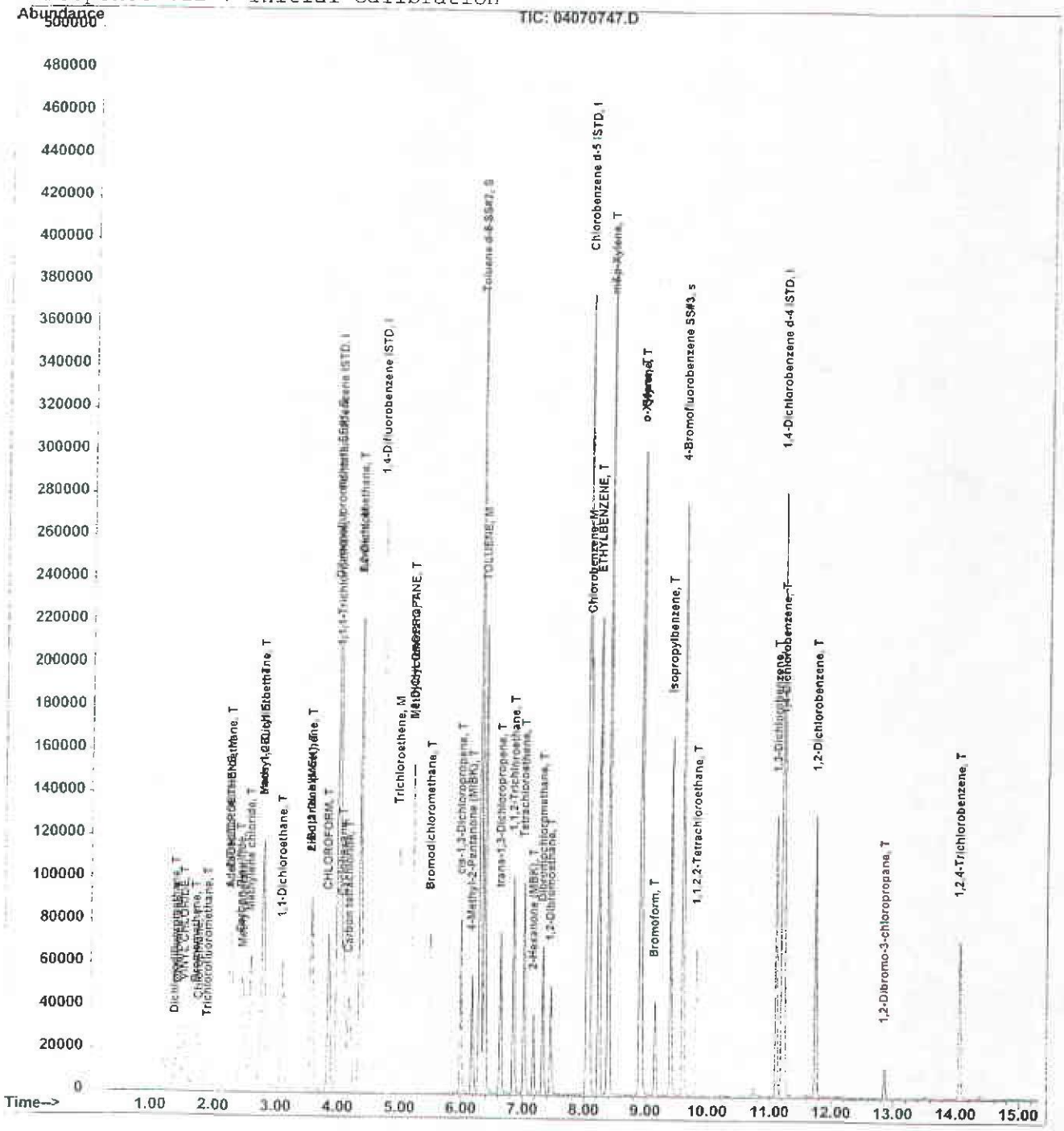
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040707\04070747.D
Acq On : 8 Jul 2004 5:25 am
Sample : LCSD 5mL
Misc : IS/S 1uL #432
MS Integration Params: rteint.p
Quant Time: Jul 8 10:32 2004

Vial: 46
Operator: DJP
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Wed Jun 16 11:06:48 2004
Response via : Initial Calibration



PHASE SEPARATION SCIENCE, INC.

Analytical Chemistry Environmental Science

QA/QC SUMMARY DATA

Metals

- *Initial Calibration Verification Summary*
- *Continuing Calibration Verification Summary*
- *Duplicate Summary*
- *Matrix Spike Summary (LFM)*
- *Method Blank Summary (PB)*
- *LCS Summary*

6630 Baltimore National Pike Baltimore, MD 21228 (800) 932-9047 (410) 747-8770 FAX (410) 788-8723

Directory : C:\ICPCHEM\1\DATA\040708A.B

Data File List

Line	File Name	Sample Name	Misc Info	Acquired Date
1	001CALB.D	Blank		2004/07/08 09:13
2	002CALB.D	Blank		2004/07/08 09:18
3	003CALS.D	5 ppb / 500 PPB/0.2 HG	0.025 ML #446; 0.010ML A097-	2004/07/08 09:23
4	004CALS.D	40 ppb / 5000 ppb/1 HG	0.2 ML #446; 0.05 ML A097-50	2004/07/08 09:28
5	005CALS.D	100 ppb / 10000 PPB/ 4 HG	0.5 ML #97; O.2 ML # A097-50	2004/07/08 09:33
6	006ICV1.D	ICV-50 PPB ; 2 PPB HG	0.25 ML #444; 0.1 ML #A098-5	2004/07/08 09:38
7	007ICV1.D	ICV-50 PPB ; 2 PPB HG	0.25 ML #444; 0.1 ML #A098-5	2004/07/08 09:43
8	008_ICB.D	icb		2004/07/08 09:48
9	009SMPL.D	1 PPB CHECK		2004/07/08 09:53
10	010ICSA.D	ICSA STD	2.5 ML #448 - 25 ML	2004/07/08 09:58
11	011SMPL.D	rinse		2004/07/08 10:03
12	012ICSB.D	ICSB STD	2.5 ML #448, 0.05 ML #449 -	2004/07/08 10:08
13	013SMPL.D	RINSE		2004/07/08 10:14
14	014SMPL.D	04062135-01	BATCH 1120	2004/07/08 10:19
15	015__PB.D	PB	BATCH 1190	2004/07/08 10:24
16	016_LCS.D	LCS	BATCH 1190	2004/07/08 10:29
17	017AREF.D	04062901-02	BATCH 1190	2004/07/08 10:34
18	018DUP1.D	04062901-02	BATCH 1190	2004/07/08 10:39
19	019LFM1.D	04062901-02	BATCH 1190	2004/07/08 10:44
20	020PDS1.D	04062901-02	BATCH 1190	2004/07/08 10:49
21	021SMPL.D	RINSE		2004/07/08 10:55
22	022CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/08 11:00
23	023_CCB.D	CCB		2004/07/08 11:05
24	024DIL1.D.	04062901-02	BATCH 1190	2004/07/08 11:10
25	025SMPL.D	04062901-04	BATCH 1190	2004/07/08 11:15
26	026SMPL.D	04062901-06	BATCH 1190	2004/07/08 11:20
27	027SMPL.D	04062901-08	BATCH 1190	2004/07/08 11:25
28	028SMPL.D	04062901-10	BATCH 1190	2004/07/08 11:31
29	029SMPL.D	04062901-12	BATCH 1190	2004/07/08 11:36
30	030SMPL.D	04062901-14	BATCH 1190	2004/07/08 11:42
31	031SMPL.D	04070117-20 1.081 500D	BATCH 1192	2004/07/08 11:47
32	032SMPL.D	04070117-10 1.033 2500D	BATCH 1192	2004/07/08 11:52
33	033SMPL.D	04063013-07 1.150 500D	BATCH 1188	2004/07/08 11:57
34	034SMPL.D	RINSE		2004/07/08 12:02
35	035CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/08 12:07
36	036CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/08 12:12
37	037_CCB.D	CCB		2004/07/08 12:17
8	038_CCB.D	CCB		2004/07/08 12:22
9	039SMPL.D	04063013-16 1.046 5000D	BATCH 1188	2004/07/08 12:27
40	040__PB.D	PB	BATCH 1215	2004/07/08 12:32
1	041_LCS.D	LCS	BATCH 1215	2004/07/08 12:37
2	042SMPL.D	04070718-01	BATCH 1215	2004/07/08 12:42
43	043SMPL.D	04070718-02	BATCH 1215	2004/07/08 12:47
44	044SMPL.D	04070117-10 10000D		2004/07/08 12:53
5	045SMPL.D	04070201-01	BATCH 1190	2004/07/08 12:58
6	046SMPL.D	04070104-01	BATCH 1190	2004/07/08 13:03
47	047SMPL.D	04070104-02	BATCH 1190	2004/07/08 13:08
48	048SMPL.D	04070104-03	BATCH 1190	2004/07/08 13:13
9	049SMPL.D	RINSE		2004/07/08 13:18
50	050CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/08 13:23
51	051_CCB.D	CCB		2004/07/08 13:28
52	052SMPL.D	04070104-04	BATCH 1190	2004/07/08 13:34
53	053SMPL.D	04070117-12	BATCH 1190	2004/07/08 13:39
54	054AREF.D	04070117-14	BATCH 1190	2004/07/08 13:44
55	055DUP1.D	04070117-14	BATCH 1190	2004/07/08 13:49
56	056LFM1.D	04070117-15	BATCH 1190	2004/07/08 13:54
57	057LFM1.D	04070117-16	BATCH 1190	2004/07/08 14:00
58	058SMPL.D	04070117-21	BATCH 1190	2004/07/08 14:05
59	059SMPL.D	04070206-01	BATCH 1190	2004/07/08 14:10
60	060SMPL.D	04070230-02	BATCH 1191	2004/07/08 14:15
61	061__PB.D	PB 500D	BATCH 1192	2004/07/08 14:20

Data File List

Directory : C:\ICPCHEM\1\DATA\040708A.B

Line	File Name	Sample Name	Misc Info	Acquired Date
62	062SMPL.D	RINSE		2004/07/08 14:25
63	063CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/08 14:30
64	064_CCB.D	CCB		2004/07/08 14:35
65	065_LCS.D	LCS 500D	BATCH 1192	2004/07/08 14:41
66	066CCV1.D	CCV-RR		2004/07/08 14:46
67	067AREF.D	04070117-01 1.093 500D	BATCH 1192	2004/07/08 14:51
68	068DUP1.D	04070117-01 1.102 500D	BATCH 1192	2004/07/08 14:56
69	069LFM1.D	04070117-01 1.090 500D	BATCH 1192	2004/07/08 15:01
70	070PDS1.D	04070117-01 500D	BATCH 1192	2004/07/08 15:06
71	071DIL1.D	04070117-01 2500D	BATCH 1192	2004/07/08 15:11
72	072__PB.D	PB	BATCH 1215	2004/07/08 15:16
73	073_LCS.D	LCS	BATCH 1215	2004/07/08 15:21
74	074AREF.D	04070619-10	BATCH 1215	2004/07/08 15:26
75	075DUP1.D	04070619-10	BATCH 1215	2004/07/08 15:31
76	076SMPL.D	RINSE		2004/07/08 15:36
77	077CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/08 15:41
78	078_CCB.D	CCB		2004/07/08 15:46
79	079LFM1.D	04070619-10	BATCH 1215	2004/07/08 15:51
80	080PDS1.D	04070619-10	BATCH 1215	2004/07/08 15:56
81	081DIL1.D	04070619-10	BATCH 1215	2004/07/08 16:02
82	082SMPL.D	04070619-11	BATCH 1215	2004/07/08 16:07
83	083SMPL.D	04070619-12	BATCH 1215	2004/07/08 16:12
84	084SMPL.D	04070619-13	BATCH 1215	2004/07/08 16:17
85	085SMPL.D	04070619-14	BATCH 1215	2004/07/08 16:22
86	086SMPL.D	04070117-02	BATCH 1215	2004/07/08 16:27
87	087SMPL.D	04070220-10	BATCH 1215	2004/07/08 16:33
88	088SMPL.D	04070220-12	BATCH 1215	2004/07/08 16:38
89	089SMPL.D	RINSE		2004/07/08 16:43
90	090CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/08 16:48
91	091_CCB.D	CCB		2004/07/08 16:53
92	092SMPL.D	04070220-14	BATCH 1215	2004/07/08 16:58
93	093SMPL.D	04070220-16	BATCH 1215	2004/07/08 17:04
94	094SMPL.D	04070220-18	BATCH 1215	2004/07/08 17:09
95	095SMPL.D	04070220-24	BATCH 1215	2004/07/08 17:14
96	096SMPL.D	04070220-29	BATCH 1215	2004/07/08 17:20
97	097SMPL.D	04070220-31	BATCH 1215	2004/07/08 17:25
98	098SMPL.D	04070616-02	BATCH 1215	2004/07/08 17:30
99	099SMPL.D	RINSE		2004/07/08 17:36
100	100CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/08 17:41
101	101_CCB.D	CCB		2004/07/08 17:46
102	102SMPL.D	LRC 5 PPM		2004/07/08 17:51
103	103SMPL.D	RINSE		2004/07/08 17:56
104	104SMPL.D	RINSE		2004/07/08 18:01
105	105SMPL.D	RINSE		2004/07/08 18:06
106	106SMPL.D	RINSE		2004/07/08 18:11
107	107SMPL.D	RINSE		2004/07/08 18:16
108	108SMPL.D	RINSE		2004/07/08 18:21

ICV QC Report

Data File: C:\ICPCHEM\1\DATA\040708A.B\007ICV1.D\007ICV1.D#
Date Acquired: Jul 8 2004 09:43 am
Acq. Method: 6020B.M
Operator:
Sample Name: ICV-50 PPB ; 2 PPB HG
Misc Info: 0.25 ML #444; 0.1 ML #A098-50 ML
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040708A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040708A.B\6020B.C
Last Cal. Update: Jul 16 2004 11:33 am
Sample Type: ICV1
Dilution Factor: 1.00

QC Elements

Element	Raw Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	46.29	ppb	5.26	50.00	90 - 110	
52 Cr	48.59	ppb	1.67	50.00	90 - 110	
60 Ni	49.59	ppb	4.16	50.00	90 - 110	
63 Cu	45.00	ppb	2.62	50.00	90 - 110	
66 Zn	50.31	ppb	1.56	50.00	90 - 110	
75 As	47.92	ppb	1.48	50.00	90 - 110	
82 Se	49.49	ppb	2.01	50.00	90 - 110	
107 Ag	58.33	ppb	5.97	50.00	90 - 110	Fail
111 Cd	48.49	ppb	0.60	50.00	90 - 110	
121 Sb	47.15	ppb	0.43	50.00	90 - 110	
138 Ba	48.16	ppb	3.47	50.00	90 - 110	
202 Hg	1.80	ppb	6.87	2.00	90 - 110	
205 Tl	46.17	ppb	3.90	50.00	90 - 110	
208 Pb	46.32	ppb	4.38	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3272061	5.64	3455950	94.7	30 - 140	
45 Sc	5291592	0.59	5122447	103.3	30 - 140	
72 Ge	1272367	1.44	1227040	103.7	30 - 140	
115 In	6946478	3.10	7074815	98.2	30 - 140	
159 Tb	5980987	2.52	5892083	101.5	30 - 140	
209 Bi	1621132	5.97	1549389	104.6	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040708A.B\002CALB.D\002CALB.D#

PB QC Report

Data File:	C:\ICPCHEM\1\DATA\040708A.B\015__PB.D\015__PB.D#
Date Acquired:	Jul 8 2004 10:24 am
Operator:	
Sample Name:	PB
Misc Info:	BATCH 1190
Vial Number:	2307
Current Method:	C:\ICPCHEM\1\DATA\040708A.B\6020B.M
Calibration File:	C:\ICPCHEM\1\DATA\040708A.B\6020B.C
Last Cal Update:	Jul 16 2004 11:33 am
Sample Type:	PB
Total Dil Factor:	1.00

QC Elements

Element	Conc	Units	RSD(%)	High Limit	Flag
9 Be	-0.04	ppb	15.21	2.50	
52 Cr	-0.33	ppb	0.44	2.50	
60 Ni	0.35	ppb	21.95	2.50	
63 Cu	-8.03	ppb	2.10	2.50	
66 Zn	-3.63	ppb	1.86	2.50	
75 As	-0.08	ppb	47.47	2.50	
82 Se	-0.02	ppb	113.95	2.50	
107 Ag	-0.05	ppb	19.85	2.50	
111 Cd	-0.06	ppb	15.99	2.50	
121 Sb	-0.15	ppb	2.33	2.50	
138 Ba	2.16	ppb	4.02	2.50	
202 Hg	-0.05	ppb	1.76	1.00	
205 Tl	-0.07	ppb	4.25	2.50	
208 Pb	-0.72	ppb	0.30	2.50	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3408333	2.86	3455950	98.6	30 - 140	
45 Sc	5729975	2.38	5122447	111.9	30 - 140	
72 Ge	1346856	3.11	1227040	109.8	30 - 140	
115 In	7457249	0.57	7074815	105.4	30 - 140	
159 Tb	6630948	2.16	5892083	112.5	30 - 140	
209 Bi	1766749	4.66	1549389	114.0	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040708A.B\002CALB.D\002CALB.D#

Traceability:

HNO3 #82; HCL #X13037; Au #174; IS #168

LCS QC Report

Data File:	C:\ICPCHEM\1\DATA\040708A.B\016_LCS.D\016_LCS.D#
Date Acquired:	Jul 8 2004 10:29 am
Acq. Method:	6020B.M
Operator:	
Sample Name:	LCS
Misc Info:	BATCH 1190
Vial Number:	2308
Current Method:	C:\ICPCHEM\1\DATA\040708A.B\6020B.M
Calibration File:	C:\ICPCHEM\1\DATA\040708A.B\6020B.C
Last Cal. Update:	Jul 16 2004 11:33 am
Sample Type:	LCS
Prep Dil. Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Analyte Elements

Element	Raw Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	51.01	ppb	0.52	50.00	75 - 125	
52 Cr	53.59	ppb	1.43	50.00	75 - 125	
60 Ni	53.96	ppb	1.12	50.00	75 - 125	
63 Cu	50.04	ppb	0.95	50.00	75 - 125	
66 Zn	52.28	ppb	1.12	50.00	75 - 125	
75 As	51.26	ppb	0.50	50.00	75 - 125	
82 Se	49.87	ppb	0.99	50.00	75 - 125	
107 Ag	65.62	ppb	1.85	50.00	75 - 125	Fail
111 Cd	52.84	ppb	0.56	50.00	75 - 125	
121 Sb	51.54	ppb	0.75	50.00	75 - 125	
138 Ba	53.05	ppb	2.68	50.00	75 - 125	
202 Hg	1.94	ppb	8.61	2.00	75 - 125	
205 Tl	53.35	ppb	5.57	50.00	75 - 125	
208 Pb	53.65	ppb	3.81	50.00	75 - 125	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3402862	3.76	3455950	0.0	30 - 140	
45 Sc	5642030	2.11	5122447	0.0	30 - 140	
72 Ge	1355303	1.70	1227040	0.0	30 - 140	
115 In	7653764	1.92	7074815	0.0	30 - 140	
159 Tb	6910611	2.81	5892083	0.0	30 - 140	
209 Bi	1914809	8.97	1549389	0.0	30 - 140	

ISTD Ref File :

All Reference Sample QC Report

Data File:	C:\ICPCHEM\1\DATA\040708A.B\017AREF.D\017AREF.D#
Date Acquired:	Jul 8 2004 10:34 am
Acq. Method:	6020B.M
Operator:	Lisa Miller
Sample Name:	04062901-02
Misc Info:	BATCH 1190
Vial Number:	2309
Current Method:	C:\ICPCHEM\1\DATA\040708A.B\6020B.M
Calibration File:	C:\ICPCHEM\1\DATA\040708A.B\6020B.C
Last Cal. Update:	Jul 12 2004 08:04 am
Sample Type:	AllRef
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	0.05	0.05	ppb	24.04	8000.00	
27 Al	315.40	315.40	ppb	2.31	8000.00	
52 Cr	1.10	1.10	ppb	7.39	40000.00	
60 Ni	-0.68	-0.68	ppb	3.84	8000.00	
63 Cu	-5.75	-5.75	ppb	3.52	8000.00	
66 Zn	5.09	5.09	ppb	6.62	8000.00	
75 As	1.79	1.79	ppb	0.37	8000.00	
82 Se	0.12	0.12	ppb	30.15	8000.00	
107 Ag	0.06	0.06	ppb	37.70	8000.00	
111 Cd	0.00	0.00	ppb	1734.90	8000.00	
121 Sb	0.10	0.10	ppb	1.28	8000.00	
138 Ba	-0.55	-0.55	ppb	48.44	8000.00	
202 Hg	2.48	2.48	ppb	2.16	8.00	
205 Tl	0.06	0.06	ppb	10.89	8000.00	
208 Pb	2.11	2.11	ppb	2.04	40000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3433065	2.50	3455950	99.3	30 - 140	
45 Sc	5614871	3.85	5122447	109.6	30 - 140	
72 Ge	1321509	2.32	1227040	107.7	30 - 140	
115 In	7558273	2.69	7074815	106.8	30 - 140	
159 Tb	6909213	2.05	5892083	117.3	30 - 140	
209 Bi	1873249	2.73	1549389	120.9	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040708A.B\002CALB.D\002CALB.D#

Duplicate QC Report

Data File: C:\ICPCHEM\1\DATA\040708A.B\018DUP1.D\018DUP1.D#
Date Acquired: Jul 8 2004 10:39 am
Acq. Method: 6020B.M
Operator:
Sample Name: 04062901-02
Misc Info: BATCH 1190
Vial Number: 2310
Current Method: C:\ICPCHEM\1\DATA\040708A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040708A.B\6020B.C
Last Cal. Update: Jul 16 2004 11:33 am
Sample Type: Dup1
Dilution Factor: 1.00

Duplicate Ref File: C:\ICPCHEM\1\DATA\040708A.B\017AREF.D\017AREF.D#

QC Elements

Element	Raw Conc	Units	RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	0.01	ppb	65.32	0.05	125.60	20	<PQL
52 Cr	1.09	ppb	2.69	1.10	1.00	20	<PQL
60 Ni	-0.20	ppb	16.47	-0.68	-109.38	20	<PQL
63 Cu	-5.80	ppb	0.69	-5.75	-0.81	20	<PQL
66 Zn	6.40	ppb	2.52	5.09	22.84	20	Fail
75 As	1.88	ppb	3.31	1.79	5.08	20	<PQL
82 Se	0.09	ppb	32.88	0.12	29.48	20	<PQL
107 Ag	-0.03	ppb	10.37	0.06	863.55	20	<PQL
111 Cd	-0.04	ppb	15.45	0.00	-210.33	20	<PQL
121 Sb	-0.07	ppb	18.55	0.10	957.93	20	<PQL
138 Ba	-0.89	ppb	20.73	-0.55	-47.64	20	<PQL
202 Hg	2.61	ppb	2.80	2.48	5.27	20	<PQL
205 Tl	-0.02	ppb	15.12	0.06	479.71	20	<PQL
208 Pb	2.25	ppb	3.72	2.11	6.33	20	<PQL

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3427469	4.44	3455950	99.2	30 - 140	
45 Sc	5582049	1.70	5122447	109.0	30 - 140	
72 Ge	1295633	2.45	1227040	105.6	30 - 140	
115 In	7440999	2.40	7074815	105.2	30 - 140	
159 Tb	6618691	5.80	5892083	112.3	30 - 140	
209 Bi	1875695	3.99	1549389	121.1	30 - 140	

ISTD Ref. File : C:\ICPCHEM\1\DATA\040708A.B\002CALB.D\002CALB.D#

LFM Sample QC Report

Data File: C:\ICPCHEM\1\DATA\040708A.B\019LFM1.D\019LFM1.D#
Date Acquired: Jul 8 2004 10:44 am
Acq. Method: 6020B.M
Operator:
Sample Name: 04062901-02
Misc Info: BATCH 1190
Vial Number: 2311
Current Method: C:\ICPCHEM\1\DATA\040708A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040708A.B\6020B.C
Last Cal. Update: Jul 16 2004 11:33 am
Sample Type: LFM1
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: C:\ICPCHEM\1\DATA\040708A.B\017AREF.D\017AREF.D#

QC Elements

Element	Raw Conc	Units	Ref Conc	RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	49.43	ppb	0.05	2.64	50.00	98.8	75 - 125	
52 Cr	52.79	ppb	1.10	1.27	50.00	103.4	75 - 125	
60 Ni	52.33	ppb	-0.68	2.76	50.00	106.0	75 - 125	
63 Cu	50.63	ppb	-5.75	2.42	50.00	112.8	75 - 125	
66 Zn	59.76	ppb	5.09	1.68	50.00	109.3	75 - 125	
75 As	50.22	ppb	1.79	1.34	50.00	96.9	75 - 125	
82 Se	45.78	ppb	0.12	1.67	50.00	91.3	75 - 125	
107 Ag	64.14	ppb	0.06	1.01	50.00	128.2	75 - 125	Fail
111 Cd	50.87	ppb	0.00	1.71	50.00	101.7	75 - 125	
121 Sb	48.37	ppb	0.10	1.90	50.00	96.5	75 - 125	
138 Ba	49.18	ppb	-0.55	1.46	50.00	99.5	75 - 125	
202 Hg	4.33	ppb	2.48	4.01	2.00	92.8	75 - 125	
205 Tl	48.09	ppb	0.06	2.47	50.00	96.1	75 - 125	
208 Pb	51.75	ppb	2.11	2.68	50.00	99.3	75 - 125	

ISTD Elements

Element	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	3434875	2.89	3455950	99.4	30 - 140	
45 Sc	5565999	3.45	5122447	108.7	30 - 140	
72 Ge	1310112	4.05	1227040	106.8	30 - 140	
115 In	7529261	4.11	7074815	106.4	30 - 140	
159 Tb	6720213	2.75	5892083	114.1	30 - 140	
209 Bi	1911247	2.14	1549389	123.4	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040708A.B\002CALB.D\002CALB.D#

PDS Sample QC Report

Data File: C:\ICPCHEM\1\DATA\040708A.B\020PDS1.D\020PDS1.D#
Date Acquired: Jul 8 2004 10:49 am
Acq. Method: 6020B.M
Operator:
Sample Name: 04062901-02
Misc Info: BATCH 1190
Vial Number: 2312
Current Method: C:\ICPCHEM\1\DATA\040708A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040708A.B\6020B.C
Last Cal. Update: Jul 16 2004 11:33 am
Sample Type: PDS1
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: C:\ICPCHEM\1\DATA\040708A.B\017AREF.D\017AREF.D#

QC Elements

Element	Raw Conc	Units	Ref Conc	RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	46.48	ppb	0.05	0.64	50.00	92.9	75 - 125	
52 Cr	48.80	ppb	1.10	1.22	50.00	95.4	75 - 125	
60 Ni	46.88	ppb	-0.68	0.89	50.00	95.1	75 - 125	
63 Cu	45.12	ppb	-5.75	1.30	50.00	101.7	75 - 125	
66 Zn	53.54	ppb	5.09	0.77	50.00	96.9	75 - 125	
75 As	47.69	ppb	1.79	0.23	50.00	91.8	75 - 125	
82 Se	44.27	ppb	0.12	1.59	50.00	88.3	75 - 125	
107 Ag	46.87	ppb	0.06	0.89	50.00	93.6	75 - 125	
111 Cd	46.39	ppb	0.00	0.27	50.00	92.8	75 - 125	
121 Sb	46.28	ppb	0.10	0.35	50.00	92.4	75 - 125	
138 Ba	46.81	ppb	-0.55	1.55	50.00	94.7	75 - 125	
202 Hg	4.38	ppb	2.48	1.90	2.00	95.2	75 - 125	
205 Tl	45.80	ppb	0.06	2.20	50.00	91.5	75 - 125	
208 Pb	49.26	ppb	2.11	1.96	50.00	94.3	75 - 125	

ISTD Elements

Element	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	3344585	2.26	3455950	96.8	30 - 140	
45 Sc	5585282	2.27	5122447	109.0	30 - 140	
72 Ge	1329305	2.03	1227040	108.3	30 - 140	
115 In	7424338	1.57	7074815	104.9	30 - 140	
159 Tb	6520279	1.05	5892083	110.7	30 - 140	
209 Bi	1728468	1.45	1549389	111.6	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040708A.B\002CALB.D\002CALB.D#

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040708A.B\022CCV1.D\022CCV1.D#
Date Acquired: Jul 8 2004 11:00 am
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1103
Current Method: C:\ICPCHEM\1\DATA\040708A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040708A.B\6020B.C
Last Cal Update: Jul 16 2004 11:33 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	39.60	ppb	1.78	40.00	90 - 110	
52 Cr	40.48	ppb	2.79	40.00	90 - 110	
60 Ni	40.80	ppb	1.26	40.00	90 - 110	
63 Cu	39.96	ppb	1.04	40.00	90 - 110	
66 Zn	39.93	ppb	2.90	40.00	90 - 110	
75 As	40.62	ppb	0.38	40.00	90 - 110	
82 Se	41.06	ppb	1.53	40.00	90 - 110	
107 Ag	40.16	ppb	1.39	40.00	90 - 110	
111 Cd	40.71	ppb	0.52	40.00	90 - 110	
121 Sb	40.42	ppb	0.84	40.00	90 - 110	
138 Ba	38.66	ppb	0.09	40.00	90 - 110	
202 Hg	1.01	ppb	1.90	1.00	90 - 110	
205 Tl	39.74	ppb	1.20	40.00	90 - 110	
208 Pb	39.22	ppb	3.18	40.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3352432	5.57	3455950	97.0	30 - 140	
45 Sc	5535237	3.66	5122447	108.1	30 - 140	
72 Ge	1312111	1.53	1227040	106.9	30 - 140	
115 In	7357748	2.50	7074815	104.0	30 - 140	
159 Tb	6750343	3.32	5892083	114.6	30 - 140	
209 Bi	1840651	4.39	1549389	118.8	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040708A.B\002CALB.D\002CALB.D#

Dilution QC Report

Data File: C:\ICPCHEM\1\DATA\040708A.B\024DIL1.D\024DIL1.D#
Date Acquired: Jul 8 2004 11:10 am
Acq. Method: 6020B.M
Operator:
Sample Name: 04062901-02
Misc Info: BATCH 1190
Vial Number: 2401
Current Method: C:\ICPCHEM\1\DATA\040708A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040708A.B\6020B.C
Last Cal. Update: Jul 16 2004 11:33 am
Sample Type: Dil1
Dilution Factor: 5.00

Dilution Ref File: C:\ICPCHEM\1\DATA\040708A.B\017AREF.D\017AREF.D#

QC elements

Element	Raw Conc	Units	RSD(%)	*Ref conc*	Actual(%)	QC Range(%)	Flag
9 Be	0.02	ppb	31.28	0.05	233.85	90 - 110	<100 PB
52 Cr	0.04	ppb	29.10	1.10	17.88	90 - 110	<100 PB
60 Ni	-0.41	ppb	20.26	-0.68	303.42	90 - 110	<100 PB
63 Cu	-8.06	ppb	1.92	-5.75	700.90	90 - 110	<100 PB
66 Zn	-2.17	ppb	2.71	5.09	-212.85	90 - 110	<100 PB
75 As	0.41	ppb	12.82	1.79	115.65	90 - 110	<100 PB
82 Se	0.07	ppb	25.02	0.12	311.36	90 - 110	<100 PB
107 Ag	0.06	ppb	47.23	0.06	539.33	90 - 110	<100 PB
111 Cd	-0.03	ppb	14.64	0.00	-13270.89	90 - 110	<100 PB
121 Sb	-0.10	ppb	11.89	0.10	-485.85	90 - 110	<100 PB
138 Ba	1.31	ppb	18.95	-0.55	-1190.48	90 - 110	<100 PB
202 Hg	0.44	ppb	2.06	2.48	87.84	90 - 110	<100 PB
205 Tl	0.17	ppb	6.74	0.06	1472.09	90 - 110	<100 PB
208 Pb	0.38	ppb	9.27	2.11	90.84	90 - 110	<100 PB

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040708A.B\035CCV1.D\035CCV1.D#
Date Acquired: Jul 8 2004 12:07 pm
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1103
Current Method: C:\ICPCHEM\1\DATA\040708A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040708A.B\6020B.C
Last Cal Update: Jul 16 2004 11:33 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	39.47	ppb	1.54	40.00	90 - 110	
52 Cr	39.96	ppb	1.77	40.00	90 - 110	
60 Ni	41.20	ppb	1.94	40.00	90 - 110	
63 Cu	40.51	ppb	2.32	40.00	90 - 110	
66 Zn	39.36	ppb	1.34	40.00	90 - 110	
75 As	40.93	ppb	1.51	40.00	90 - 110	
82 Se	40.92	ppb	0.70	40.00	90 - 110	
107 Ag	39.40	ppb	1.65	40.00	90 - 110	
111 Cd	39.63	ppb	1.04	40.00	90 - 110	
121 Sb	39.80	ppb	1.29	40.00	90 - 110	
138 Ba	39.73	ppb	3.21	40.00	90 - 110	
202 Hg	1.08	ppb	3.54	1.00	90 - 110	
205 Tl	42.01	ppb	4.34	40.00	90 - 110	
208 Pb	42.61	ppb	1.93	40.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3021372	4.20	3455950	87.4	30 - 140	
45 Sc	5440961	3.68	5122447	106.2	30 - 140	
72 Ge	1286703	3.55	1227040	104.9	30 - 140	
115 In	7187408	2.70	7074815	101.6	30 - 140	
159 Tb	6498623	3.25	5892083	110.3	30 - 140	
209 Bi	1690609	2.89	1549389	109.1	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040708A.B\002CALB.D\002CALB.D#

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040708A.B\036CCV1.D\036CCV1.D#
Date Acquired: Jul 8 2004 12:12 pm
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1103
Current Method: C:\ICPCHEM\1\DATA\040708A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040708A.B\6020B.C
Last Cal Update: Jul 16 2004 11:33 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	40.09	ppb	2.40	40.00	90 - 110	
52 Cr	39.79	ppb	1.78	40.00	90 - 110	
60 Ni	41.19	ppb	2.79	40.00	90 - 110	
63 Cu	40.81	ppb	2.63	40.00	90 - 110	
66 Zn	39.37	ppb	1.09	40.00	90 - 110	
75 As	41.03	ppb	3.20	40.00	90 - 110	
82 Se	41.36	ppb	1.05	40.00	90 - 110	
107 Ag	39.81	ppb	3.10	40.00	90 - 110	
111 Cd	40.06	ppb	2.27	40.00	90 - 110	
121 Sb	40.04	ppb	2.39	40.00	90 - 110	
138 Ba	39.23	ppb	4.22	40.00	90 - 110	
202 Hg	1.04	ppb	3.23	1.00	90 - 110	
205 Tl	40.10	ppb	1.80	40.00	90 - 110	
208 Pb	40.30	ppb	1.29	40.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3005663	1.60	3455950	87.0	30 - 140	
45 Sc	5431984	1.64	5122447	106.0	30 - 140	
72 Ge	1279956	4.57	1227040	104.3	30 - 140	
115 In	7123713	1.96	7074815	100.7	30 - 140	
159 Tb	6416860	0.98	5892083	108.9	30 - 140	
209 Bi	1699841	2.30	1549389	109.7	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040708A.B\002CALB.D\002CALB.D#

Directory : C:\ICPCHEM\1\DATA\040705B.B

Data File List

Line	File Name	Sample Name	Misc Info	Acquired Date
1	001CALB.D	Blank		2004/07/05 12:28
2	002CALB.D	Blank		2004/07/05 12:33
3	003CALS.D	5 ppb / 500 PPB/0.2 HG	0.025 ML #446; 0.010ML A097-	2004/07/05 12:38
4	004CALS.D	40 ppb / 5000 ppb/1 HG	0.2 ML #446; 0.05 ML A097-50	2004/07/05 12:43
5	005CALS.D	100 ppb / 10000 PPB/ 4 HG	0.5 ML #97; O.2 ML # A097-50	2004/07/05 12:47
6	006ICV1.D	ICV-50 PPB ; 2 PPB HG	0.25 ML #444; 0.1 ML #A098-5	2004/07/05 12:52
7	007ICV1.D	ICV-50 PPB ; 2 PPB HG	0.25 ML #444; 0.1 ML #A098-5	2004/07/05 12:57
8	008_ICB.D	icb		2004/07/05 13:02
9	009SMPL.D	1 PPB CHECK		2004/07/05 13:07
10	010ICSA.D	ICSA STD	2.5 ML #448 - 25 ML	2004/07/05 13:12
11	011SMPL.D	rinse		2004/07/05 13:17
12	012ICSB.D	ICSB STD	2.5 ML #448, 0.05 ML #449 -	2004/07/05 13:22
13	013SMPL.D	RINSE		2004/07/05 13:27
14	014AREF.D	04062901-03	BATCH 1191	2004/07/05 13:32
15	015DUP1.D	04062901-03	BATCH 1191	2004/07/05 13:36
16	016LFM1.D	04062901-03	BATCH 1191	2004/07/05 13:41
17	017SMPL.D	04062901-05	BATCH 1191	2004/07/05 13:46
18	018SMPL.D	04062901-07	BATCH 1191	2004/07/05 13:51
19	019SMPL.D	04062901-09	BATCH 1191	2004/07/05 13:56
20	020SMPL.D	04062901-11	BATCH 1191	2004/07/05 14:01
21	021SMPL.D	RINSE		2004/07/05 14:06
22	022CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/05 14:11
23	023CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/05 14:16
24	024_CCB.D	CCB		2004/07/05 14:20
25	025_CCB.D	CCB		2004/07/05 14:25
26	026SMPL.D	04062901-13	BATCH 1191	2004/07/05 14:30
27	027SMPL.D	04062901-15	BATCH 1191	2004/07/05 14:35
28	028SMPL.D	04062914-01	BATCH 1191	2004/07/05 14:40
29	029SMPL.D	04070119-01	BATCH 1191	2004/07/05 14:45
30	030SMPL.D	04070119-02	BATCH 1191	2004/07/05 14:50
31	031SMPL.D	04070119-03	BATCH 1191	2004/07/05 14:55
32	032__PB.D	PB	BATCH 1189	2004/07/05 15:00
33	033_LCS.D	LCS	BATCH 1189	2004/07/05 15:05
34	034SMPL.D	04062804-01	BATCH 1189	2004/07/05 15:10
35	035SMPL.D	04062805-01	BATCH 1189	2004/07/05 15:14
36	036SMPL.D	RINSE		2004/07/05 15:19
37	037CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/05 15:24
38	038_CCB.D	CCB		2004/07/05 15:29
39	039SMPL.D	04062906-01	BATCH 1189	2004/07/05 15:34
40	040SMPL.D	04062906-02	BATCH 1189	2004/07/05 15:39
41	041SMPL.D	04062906-03	BATCH 1189	2004/07/05 15:44
42	042SMPL.D	04062906-04	BATCH 1189	2004/07/05 15:49
43	043SMPL.D	04062906-05	BATCH 1189	2004/07/05 15:54
44	044SMPL.D	04062909-01	BATCH 1189	2004/07/05 15:59
45	045SMPL.D	04062911-07	BATCH 1189	2004/07/05 16:03
46	046SMPL.D	04062914-05	BATCH 1189	2004/07/05 16:08
47	047SMPL.D	04063003-01	BATCH 1189	2004/07/05 16:13
48	048SMPL.D	04070109-01	BATCH 1189	2004/07/05 16:18
49	049SMPL.D	RINSE		2004/07/05 16:23
50	050CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/05 16:28
51	051_CCB.D	CCB		2004/07/05 16:33
52	052AREF.D	04070114-01	BATCH 1189	2004/07/05 16:38
53	053DUP1.D	04070114-01	BATCH 1189	2004/07/05 16:43
54	054LFM1.D	04070114-01	BATCH 1189	2004/07/05 16:48
55	055[illegible]	PB	BATCH 1190	2004/07/05 16:52
56	056_LCS.D	LCS	BATCH 1190	2004/07/05 16:57
57	057AREF.D	04062901-02	BATCH 1190	2004/07/05 17:02
58	058DUP1.D	04062901-02	BATCH 1190	2004/07/05 17:07
59	059LFM1.D	04062901-02	BATCH 1190	2004/07/05 17:12
60	060PDS1.D	04062901-02	BATCH 1190	2004/07/05 17:17
61	061DIL1.D	04062901-02	BATCH 1190	2004/07/05 17:22

Data File List

Directory : C:\ICPCHEM\1\DATA\040705B.B

Line	File Name	Sample Name	Misc Info	Acquired Date
62	062SMPL.D	RINSE		2004/07/05 17:27
63	063CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/05 17:32
64	064_CCB.D	CCB		2004/07/05 17:37
65	065SMPL.D	04062901-04	BATCH 1190	2004/07/05 17:42
66	066SMPL.D	04062901-06	BATCH 1190	2004/07/05 17:47
67	067SMPL.D	04062901-08	BATCH 1190	2004/07/05 17:51
68	068SMPL.D	04062901-10	BATCH 1190	2004/07/05 17:56
69	069SMPL.D	04062901-12	BATCH 1190	2004/07/05 18:01
70	070SMPL.D	04062901-14	BATCH 1190	2004/07/05 18:06
71	071SMPL.D	04070104-01	BATCH 1190	2004/07/05 18:11
72	072SMPL.D	04070104-02	BATCH 1190	2004/07/05 18:16
73	073SMPL.D	04070104-03	BATCH 1190	2004/07/05 18:21
74	074SMPL.D	04070104-04	BATCH 1190	2004/07/05 18:26
75	075SMPL.D	RINSE		2004/07/05 18:31
76	076CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/05 18:36
77	077_CCB.D	CCB		2004/07/05 18:41
78	078SMPL.D	04070117-12	BATCH 1190	2004/07/05 18:45
79	079AREF.D	04070117-14	BATCH 1190	2004/07/05 18:50
80	080DUP1.D	04070117-14	BATCH 1190	2004/07/05 18:55
81	081LFM1.D	04070117-15	BATCH 1190	2004/07/05 19:00
82	082LFM1.D	04070117-16	BATCH 1190	2004/07/05 19:05
83	083SMPL.D	04070117-21	BATCH 1190	2004/07/05 19:10
84	084SMPL.D	04070201-01	BATCH 1190	2004/07/05 19:15
85	085SMPL.D	04070206-01	BATCH 1190	2004/07/05 19:20
86	086SMPL.D	04070230-02	BATCH 1191	2004/07/05 19:25
87	087SMPL.D	RINSE		2004/07/05 19:29
88	088CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/07/05 19:34
89	089_CCB.D	CCB		2004/07/05 19:39
90	090ICSA.D	ICSA		2004/07/05 19:44
91	091SMPL.D	R		2004/07/05 19:49
92	092ICSB.D	ICSAB		2004/07/05 19:54
93	093SMPL.D	R		2004/07/05 19:59
94	094SMPL.D	LRC 5 PPM		2004/07/05 20:04
95	095SMPL.D	RINSE		2004/07/05 20:08
96	096SMPL.D	RINSE		2004/07/05 20:13
97	097SMPL.D	RINSE		2004/07/05 20:18
98	098SMPL.D	RINSE		2004/07/05 20:23
99	099SMPL.D	RINSE		2004/07/05 20:28
100	100SMPL.D	RINSE		2004/07/05 20:33

ICV QC Report

Data File: C:\ICPCHEM\1\DATA\040705B.B\007ICV1.D\007ICV1.D#
Date Acquired: Jul 5 2004 12:57 pm
Acq. Method: PPRCRA.M
Operator:
Sample Name: ICV-50 PPB ; 2 PPB HG
Misc Info: 0.25 ML #444; 0.1 ML #A098-50 ML
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040705B.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040705B.B\PPRCRA.C
Last Cal. Update: Jul 06 2004 08:07 am
Sample Type: ICV1
Dilution Factor: 1.00

QC Elements

Element	Raw Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	46.52	ppb	1.53	50.00	90 - 110	
52 Cr	49.03	ppb	1.23	50.00	90 - 110	
60 Ni	49.55	ppb	1.01	50.00	90 - 110	
63 Cu	45.93	ppb	0.44	50.00	90 - 110	
66 Zn	46.41	ppb	1.09	50.00	90 - 110	
75 As	46.58	ppb	0.51	50.00	90 - 110	
82 Se	46.85	ppb	0.51	50.00	90 - 110	
107 Ag	58.11	ppb	0.69	50.00	90 - 110	Fail
111 Cd	46.72	ppb	1.79	50.00	90 - 110	
121 Sb	46.31	ppb	0.81	50.00	90 - 110	
202 Hg	1.86	ppb	0.85	2.00	90 - 110	
205 Tl	50.48	ppb	1.16	50.00	90 - 110	
208 Pb	46.76	ppb	0.28	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3165778	3.53	3112456	101.7	30 - 140	
45 Sc	2653987	2.17	2647459	100.2	30 - 140	
72 Ge	434995	1.08	433452	100.4	30 - 140	
115 In	2629351	2.16	2644254	99.4	30 - 140	
209 Bi	1571288	1.24	1594019	98.6	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040705B.B\002CALB.D\002CALB.D#

All Reference Sample QC Report

Data File:	C:\ICPCHEM\1\DATA\040705B.B\014AREF.D\014AREF.D#
Date Acquired:	Jul 5 2004 01:32 pm
Acq. Method:	PPRCRA.M
Operator:	Lisa Miller
Sample Name:	04062901-03
Misc Info:	BATCH 1191
Vial Number:	2101
Current Method:	C:\ICPCHEM\1\DATA\040705B.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040705B.B\PPRCRA.C
Last Cal. Update:	Jul 06 2004 08:07 am
Sample Type:	AllRef
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	0.00	0.00	ppb	231.28	8000.00	
52 Cr	0.32	0.32	ppb	12.78	40000.00	
60 Ni	0.23	0.23	ppb	19.15	8000.00	
63 Cu	-9.69	-9.69	ppb	0.58	8000.00	
66 Zn	7.11	7.11	ppb	1.13	8000.00	
75 As	1.65	1.65	ppb	2.41	8000.00	
82 Se	-0.07	-0.07	ppb	174.05	8000.00	
107 Ag	-0.78	-0.78	ppb	1.76	8000.00	
111 Cd	-0.17	-0.17	ppb	21.05	8000.00	
121 Sb	-0.19	-0.19	ppb	3.63	8000.00	
202 Hg	0.04	0.04	ppb	11.79	8.00	
205 Tl	0.03	0.03	ppb	16.43	8000.00	
208 Pb	0.97	0.97	ppb	10.80	40000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	2938638	0.11	3112456	94.4	30 - 140	
45 Sc	2663826	3.55	2647459	100.6	30 - 140	
115 In	2818200	0.68	2644254	106.6	30 - 140	
209 Bi	1579309	6.14	1594019	99.1	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040705B.B\002CALB.D\002CALB.D#

Duplicate QC Report

Data File:	C:\ICPCHEM\1\DATA\040705B.B\015DUP1.D\015DUP1.D#
Date Acquired:	Jul 5 2004 01:36 pm
Acq. Method:	PPRCRA.M
Operator:	
Sample Name:	04062901-03
Misc Info:	BATCH 1191
Vial Number:	2102
Current Method:	C:\ICPCHEM\1\DATA\040705B.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040705B.B\PPRCRA.C
Last Cal. Update:	Jul 06 2004 08:07 am
Sample Type:	Dup1
Dilution Factor:	1.00

Duplicate Ref File: C:\ICPCHEM\1\DATA\040705B.B\014AREF.D\014AREF.D#

QC Elements

Element	Raw Conc	Units	RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	0.00	ppb	32899.00	0.00	192.49	20	<PQL
52 Cr	0.41	ppb	2.95	0.32	24.09	20	<PQL
60 Ni	0.16	ppb	16.88	0.23	37.11	20	<PQL
63 Cu	-9.70	ppb	0.14	-9.69	-0.08	20	<PQL
66 Zn	7.22	ppb	1.98	7.11	1.54	20	<PQL
75 As	1.63	ppb	0.74	1.65	0.98	20	
82 Se	-0.14	ppb	59.40	-0.07	-70.01	20	<PQL
107 Ag	-0.54	ppb	9.14	-0.78	-36.86	20	<PQL
111 Cd	-0.16	ppb	15.42	-0.17	-8.54	20	<PQL
121 Sb	-0.18	ppb	1.89	-0.19	-4.69	20	<PQL
202 Hg	0.04	ppb	10.79	0.04	5.24	20	<PQL
205 Tl	0.02	ppb	61.63	0.03	54.02	20	<PQL
208 Pb	0.96	ppb	11.74	0.97	1.18	20	<PQL

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	2942280	2.76	3112456	94.5	30 - 140	
45 Sc	2627941	1.31	2647459	99.3	30 - 140	
72 Ge	463330	1.48	433452	106.9	30 - 140	
115 In	2785084	1.17	2644254	105.3	30 - 140	
209 Bi	1586925	7.03	1594019	99.6	30 - 140	

ISTD Ref. File : C:\ICPCHEM\1\DATA\040705B.B\002CALB.D\002CALB.D#

LFM Sample QC Report

Data File: C:\ICPCHEM\1\DATA\040705B.B\016LFM1.D\016LFM1.D#
Date Acquired: Jul 5 2004 01:41 pm
Acq. Method: PPRCRA.M
Operator:
Sample Name: 04062901-03
Misc Info: BATCH 1191
Vial Number: 2103
Current Method: C:\ICPCHEM\1\DATA\040705B.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040705B.B\PPRCRA.C
Last Cal. Update: Jul 06 2004 08:07 am
Sample Type: LFM1
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: C:\ICPCHEM\1\DATA\040705B.B\014AREF.D\014AREF.D#

QC Elements

Element	Raw Conc	Units	Ref Conc	RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	45.58	ppb	0.00	1.18	50.00	91.2	75 - 125	
52 Cr	43.59	ppb	0.32	1.57	50.00	86.5	75 - 125	
60 Ni	44.57	ppb	0.23	2.98	50.00	88.7	75 - 125	
63 Cu	29.89	ppb	-9.69	0.89	50.00	79.2	75 - 125	
66 Zn	53.40	ppb	7.11	0.63	50.00	92.6	75 - 125	
75 As	46.89	ppb	1.65	0.57	50.00	90.5	75 - 125	
82 Se	51.39	ppb	-0.07	1.91	50.00	102.9	75 - 125	
107 Ag	33.93	ppb	-0.78	1.70	50.00	69.4	75 - 125	Fail
111 Cd	43.72	ppb	-0.17	0.85	50.00	87.8	75 - 125	
121 Sb	39.31	ppb	-0.19	0.79	50.00	79.0	75 - 125	
202 Hg	1.89	ppb	0.04	4.74	2.00	92.5	75 - 125	
205 Tl	47.64	ppb	0.03	4.18	50.00	95.2	75 - 125	
208 Pb	44.22	ppb	0.97	4.15	50.00	86.5	75 - 125	

ISTD Elements

Element	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	2938748	1.88	3112456	94.4	30 - 140	
45 Sc	2631119	2.64	2647459	99.4	30 - 140	
72 Ge	459293	0.47	433452	106.0	30 - 140	
115 In	2788382	1.66	2644254	105.5	30 - 140	
209 Bi	1652903	4.90	1594019	103.7	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040705B.B\002CALB.D\002CALB.D#

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040705B.B\023CCV1.D\023CCV1.D#
Date Acquired: Jul 5 2004 02:16 pm
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040705B.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040705B.B\PPRCRA.C
Last Cal Update: Jul 06 2004 08:07 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	49.87	ppb	0.51	50.00	90 - 110	
52 Cr	47.50	ppb	1.24	50.00	90 - 110	
60 Ni	47.38	ppb	1.85	50.00	90 - 110	
63 Cu	46.22	ppb	0.54	50.00	90 - 110	
66 Zn	46.65	ppb	0.43	50.00	90 - 110	
75 As	46.55	ppb	0.67	50.00	90 - 110	
82 Se	47.11	ppb	0.99	50.00	90 - 110	
107 Ag	58.49	ppb	1.60	50.00	90 - 110	Fail
111 Cd	47.17	ppb	0.74	50.00	90 - 110	
121 Sb	45.80	ppb	0.25	50.00	90 - 110	
202 Hg	1.81	ppb	1.53	2.00	90 - 110	
205 Tl	49.20	ppb	1.54	50.00	90 - 110	
208 Pb	45.59	ppb	0.56	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	2940031	2.68	3112456	94.5	30 - 140	
45 Sc	2720893	2.29	2647459	102.8	30 - 140	
72 Ge	416861	0.63	433452	96.2	30 - 140	
115 In	2360947	1.10	2644254	89.3	30 - 140	
209 Bi	1379018	1.08	1594019	86.5	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040705B.B\002CALB.D\002CALB.D#

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040705B.B\037CCV1.D\037CCV1.D#
Date Acquired: Jul 5 2004 03:24 pm
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040705B.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040705B.B\PPRCRA.C
Last Cal Update: Jul 06 2004 08:07 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	50.31	ppb	2.07	50.00	90 - 110	
52 Cr	47.11	ppb	1.39	50.00	90 - 110	
60 Ni	47.43	ppb	1.90	50.00	90 - 110	
63 Cu	46.19	ppb	2.24	50.00	90 - 110	
66 Zn	45.59	ppb	1.35	50.00	90 - 110	
75 As	45.52	ppb	0.66	50.00	90 - 110	
82 Se	45.61	ppb	1.25	50.00	90 - 110	
107 Ag	57.69	ppb	1.16	50.00	90 - 110	Fail
111 Cd	46.05	ppb	1.11	50.00	90 - 110	
121 Sb	45.31	ppb	1.23	50.00	90 - 110	
202 Hg	1.83	ppb	3.04	2.00	90 - 110	
205 Tl	48.70	ppb	0.86	50.00	90 - 110	
208 Pb	45.81	ppb	0.97	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	2905864	3.46	3112456	93.4	30 - 140	
45 Sc	2635892	2.37	2647459	99.6	30 - 140	
72 Ge	411261	0.88	433452	94.9	30 - 140	
115 In	2383791	0.79	2644254	90.1	30 - 140	
209 Bi	1392186	1.81	1594019	87.3	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040705B.B\002CALB.D\002CALB.D#

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062405.D
Acq On : 24 Jun 2004 12:00 pm
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 24 16:12 2004

Vial: 5
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Mon Jun 21 15:31:55 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) tert-Butylbenzene	0.00	119	0	Not Detected	
32) 1,2,4-Trimethylbenzene	10.73	105	62	Not Detected	
33) sec-Butylbenzene	11.26	105	133	Not Detected	
34) 4-Isopropyltoluene	0.00	119	0	Not Detected	
35) n-Butylbenzene	11.72	91	331	Not Detected	
36) 1,2,3-Trichlorobenzene	15.32	180	52	Not Detected	

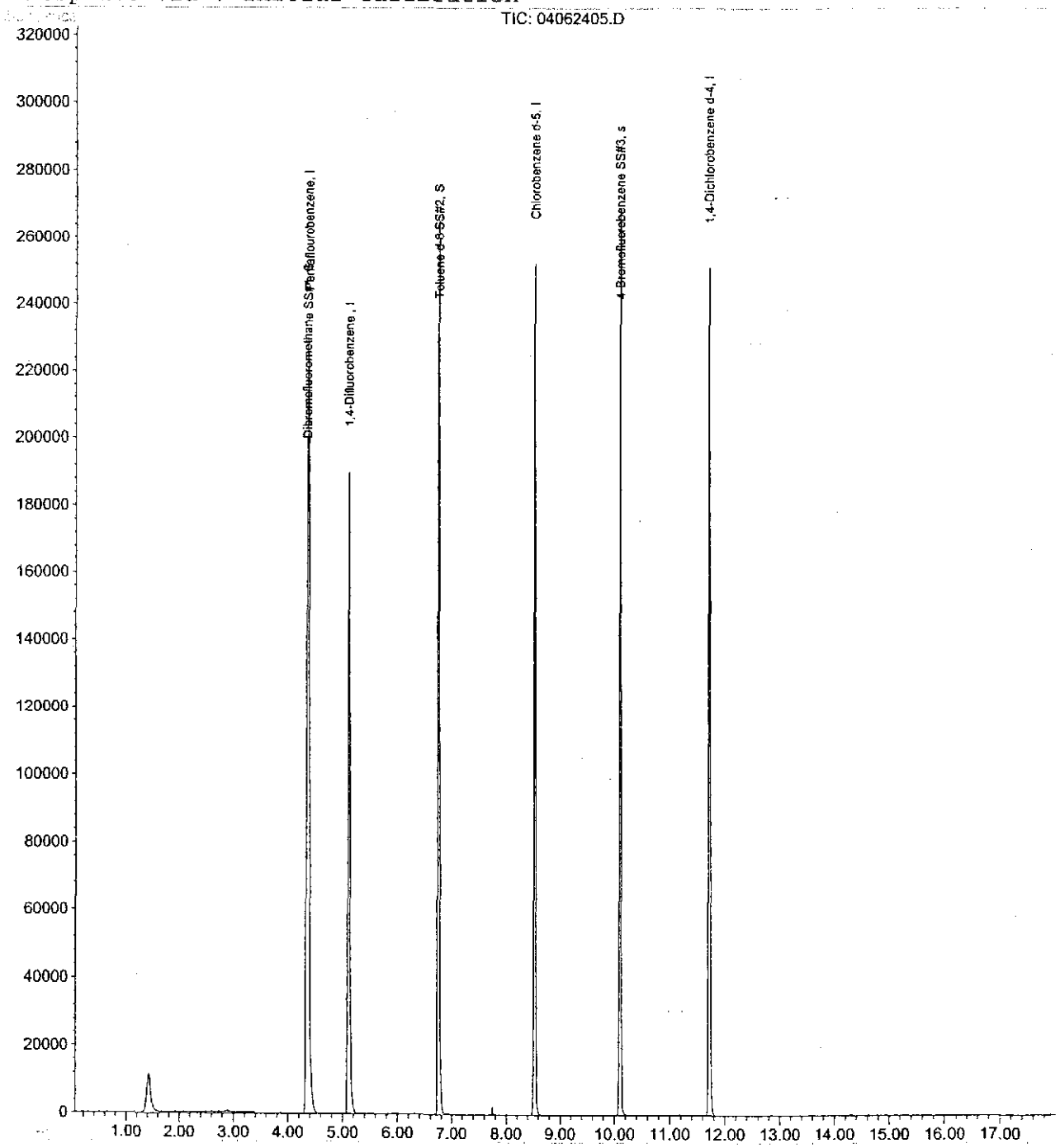
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040624\04062405.D
Acq On : 24 Jun 2004 12:00 pm
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 24 16:12 2004

Vial: 5
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Mon Jun 21 15:31:55 2004
Response via : Initial Calibration



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VOLATILE ORGANIC COMPOUNDS METHOD BLANK SUMMARY

ANALYSIS:	**GC/MS Volatiles**	**LAB CODE:**	**Method Blank**
METHOD:	**EPA 8260**	**LAB SAMPLE ID:**	**MBW**
LAB FILE ID:	**04062540.D**	**DATE/TIME ANALYZED:**	**06/26/04 03:28**
MATRIX:	**Water**		

This Method Blank applies to the following samples:

Sample ID	Lab Sample ID	Lab File ID	Date/Time Analyzed
LCS	LCS 25ppb	04062551.D	06/26/04 08:26:00 AM
TB-062404	04062409-01	04062541.D	06/26/04 03:54:00 AM

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040625\04062540.D
Acq On : 26 Jun 2004 3:28 am
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 28 10:45 2004

Vial: 40
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.38	168	113447	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.12	114	165734	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.54	117	130876	50.00 ug/L	0.01
48) 1,4-Dichlorobenzene d-4 IS	11.73	152	56844	50.00 ug/L	0.01
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	4.36	113	87884	50.95 ug/L	0.01
Spiked Amount 50.000			Recovery	= 101.90%	
33) Toluene d-8 SS#2	6.75	98	183538	51.00 ug/L	0.00
Spiked Amount 50.000			Recovery	= 102.00%	
50) 4-Bromofluorobenzene SS#3	10.11	95	94215	55.13 ug/L	0.01
Spiked Amount 50.000			Recovery	= 110.26%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85	0	Not Detected	
3) Chloromethane	0.00	50	0	Not Detected	
4) VINYL CHLORIDE	1.76	62	61	Not Detected	
5) Bromomethane	0.00	94	0	Not Detected	
6) Chloroethane	0.00	64	0	Not Detected	
7) Trichlorofluoromethane	0.00	101	0	Not Detected	
8) Acetone	0.00	43	0	Not Detected	d
9) 1,1-DICHLOROETHENE	0.00	96	0	Not Detected	
10) 1,1,2-Trichlorotrifluoroet	0.00	101	0	Not Detected	
11) Carbon Disulfide	0.00	76	0	Not Detected	
12) Methyl Acetate	0.00	74	0	Not Detected	
13) Methylene chloride	2.88	84	13431	11.85 ug/L	94
14) trans-1,2-Dichloroethene	0.00	96	0	Not Detected	
15) Methyl-t-Butyl Ether	0.00	73	0	Not Detected	
16) 1,1-Dichloroethane	0.00	63	0	Not Detected	
17) cis-1,2-Dichloroethene	0.00	96	0	Not Detected	
18) 2-Butanone (MEK)	3.98	43	170	Not Detected	
19) CHLOROFORM	4.21	83	51	Not Detected	
21) 1,1,1-Trichloroethane	0.00	97	0	Not Detected	
22) Cyclohexane	0.00	56	0	Not Detected	d
24) Carbon tetrachloride	0.00	117	0	Not Detected	
25) Benzene	0.00	78	0	Not Detected	
26) 1,2-Dichloroethane	0.00	62	0	Not Detected	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040625\04062540.D
Acq On : 26 Jun 2004 3:28 am
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 28 10:45 2004

Vial: 40
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) Trichloroethene	0.00	95	0	Not Detected	
28) 1,2-DICHLOROPROPANE	0.00	63	0	Not Detected	
29) Methylcyclohexane	0.00	83	0	Not Detected	
30) Bromodichloromethane	0.00	83	0	Not Detected	
31) cis-1,3-Dichloropropene	0.00	75	0	Not Detected	
32) 4-Methyl-2-Pentanone (MIBK	0.00	43	0	Not Detected	d
34) TOLUENE	0.00	92	0	Not Detected	
35) trans-1,3-Dichloropropene	0.00	75	0	Not Detected	
36) 1,1,2-Trichloroethane	0.00	83	0	Not Detected	
37) Tetrachloroethene	0.00	166	0	Not Detected	
38) 2-Hexanone (MBK)	0.00	43	0	Not Detected	
40) Dibromochloromethane	0.00	129	0	Not Detected	
41) 1,2-Dibromoethane	0.00	107	0	Not Detected	
42) Chlorobenzene	0.00	112	0	Not Detected	
43) ETHYLBENZENE	8.89	91	199	Not Detected	
44) m&p-Xylene	0.00	106	0	Not Detected	
45) o-Xylene	0.00	106	0	Not Detected	
46) Styrene	0.00	104	0	Not Detected	
47) Bromoform	0.00	173	0	Not Detected	
49) Isopropylbenzene	10.11	105	126	Not Detected	
51) 1,1,2,2-Tetrachloroethane	10.10	83	52	Not Detected	
52) 1,3-Dichlorobenzene	11.76	146	546	Not Detected	
53) 1,4-Dichlorobenzene	11.76	146	546	Not Detected	
54) 1,2-Dichlorobenzene	0.00	146	0	Not Detected	
55) 1,2-Dibromo-3-chloropropan	0.00	75	0	Not Detected	
56) 1,2,4-Trichlorobenzene	14.62	180	59	Not Detected	
57) Naphthalene	14.95	128	866	Not Detected	

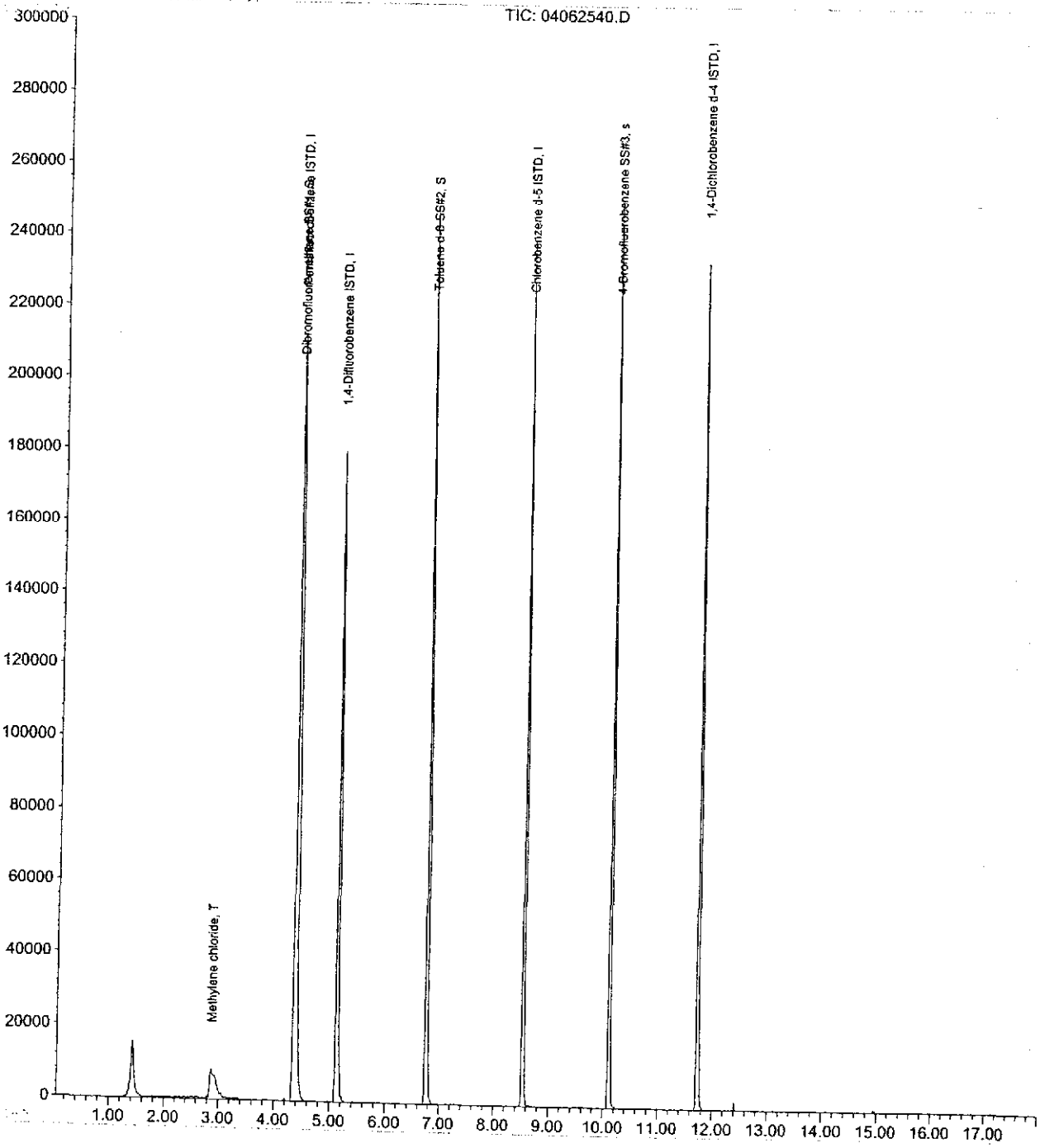
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040625\04062540.D
Acq On : 26 Jun 2004 3:28 am
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 28 10:45 2004

Vial: 40
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040625\04062540.D Vial: 40
Acq On : 26 Jun 2004 3:28 am Operator: MI
Sample : METHOD BLANK 5mL Inst : GC/MS Ins
Misc : IS/Surr 1uL #432 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 28 10:46 2004

Quant Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Mon Jun 21 15:31:55 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentaflourobenzene	4.38	168	113447	50.00	ug/L	0.00
12) 1,4-Difluorobenzene	5.12	114	165734	50.00	ug/L	0.00
19) Chlorobenzene d-5	8.54	117	130876	50.00	ug/L	0.01
27) 1,4-Dichlorobenzene d-4	11.73	152	56844	50.00	ug/L	0.01
System Monitoring Compounds						
11) Dibromofluoromethane SS#1	4.36	113	87884	50.69	ug/L	0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.38%			
18) Toluene d-8 SS#2	6.75	98	183538	51.03	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.06%			
23) 4-Bromofluorobenzene SS#3	10.11	95	94215	51.88	ug/L	0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.76%			

Target Compounds				Qvalue
2) acrolein	0.00	56	0	Not Detected
3) iodomethne	0.00	142	0	Not Detected
4) acrylonitrile	0.00	53	0	Not Detected
5) tert-butanol	0.00	59	0	Not Detected
6) vinyl acetate	0.00	43	0	Not Detected
7) diisopropyl ether	0.00	45	0	Not Detected
8) tert-Butyl ethyl ether	0.00	59	0	Not Detected
9) 2,2-Dichloropropane	0.00	77	0	Not Detected
10) Bromochloromethane	0.00	128	0	Not Detected
13) 1,1-Dichloropropene	0.00	75	0	Not Detected
14) tert-amyl methyl ether	0.00	73	0	Not Detected
15) Dibromomethane	0.00	93	0	Not Detected
16) 1,4-dioxane	0.00	58	0	Not Detected
17) 2-Chloroethylvinyl Ether	0.00	63	0	Not Detected
20) 1,3-Dichloropropane	0.00	76	0	Not Detected
21) 1,1,1,2-Tetrachloroethane	0.00	131	0	Not Detected
22) 1,2,3-Trichloropropane	0.00	110	0	Not Detected
24) Bromobenzene	0.00	156	0	Not Detected
25) trans-1,4-dichloro-2-buten	0.00	75	0	Not Detected d
26) n-Propylbenzene	10.48	91	121	Not Detected
28) 2-Chlorotoluene	10.48	91	121	Not Detected
29) 4-Chlorotoluene	10.60	91	114	Not Detected
30) 1,3,5-Trimethylbenzene	0.00	105	0	Not Detected

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040625\04062540.D
Acq On : 26 Jun 2004 3:28 am
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 28 10:46 2004

Vial: 40
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Mon Jun 21 15:31:55 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) tert-Butylbenzene	0.00	119	0	Not Detected	
32) 1,2,4-Trimethylbenzene	0.00	105	0	Not Detected	
33) sec-Butylbenzene	11.50	105	117	Not Detected	
34) 4-Isopropyltoluene	11.20	119	59	Not Detected	
35) n-Butylbenzene	11.73	91	283	Not Detected	
36) 1,2,3-Trichlorobenzene	0.00	180	0	Not Detected	

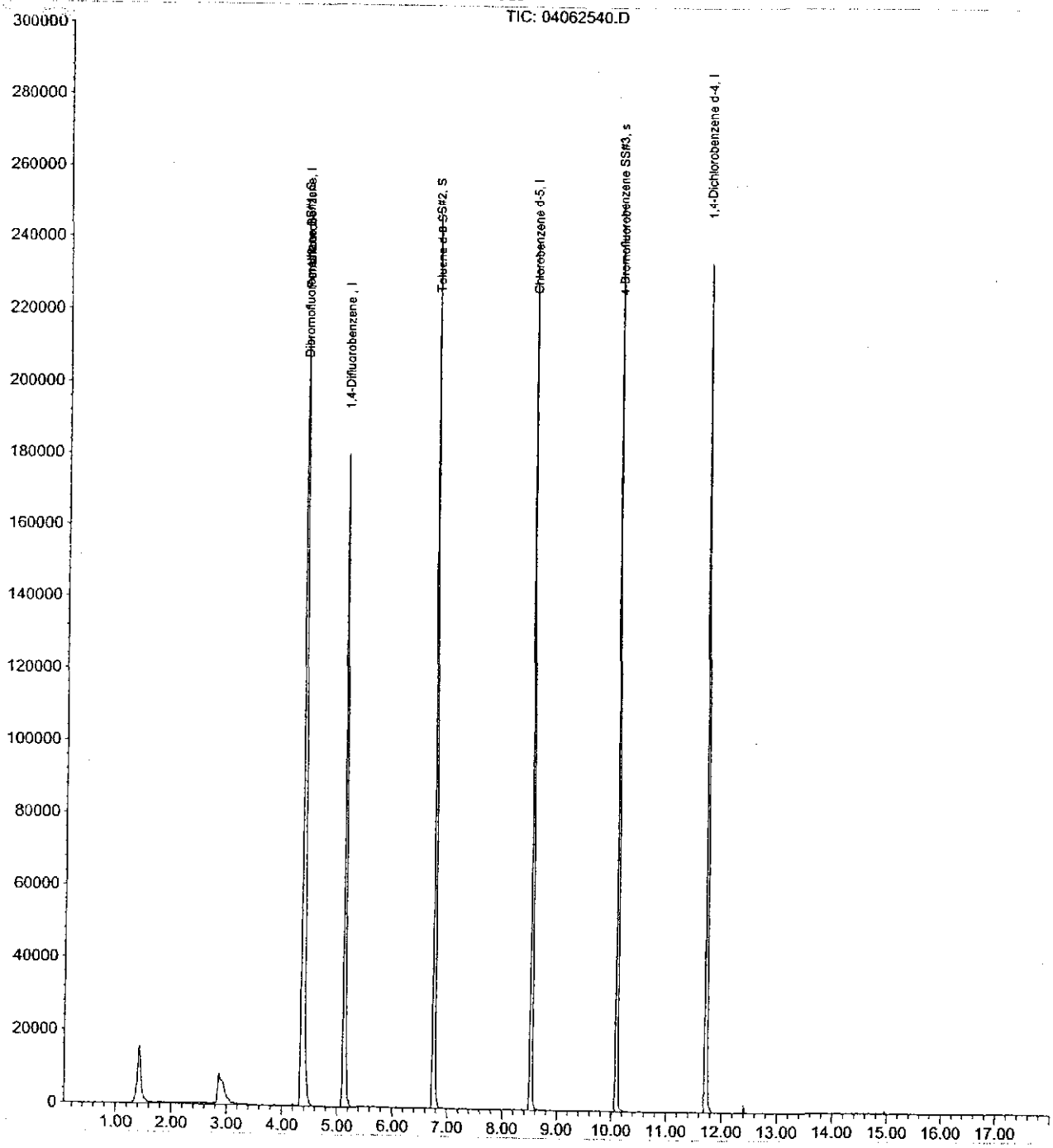
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040625\04062540.D
Acq On : 26 Jun 2004 3:28 am
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 28 10:46 2004

Vial: 40
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Mon Jun 21 15:31:55 2004
Response via : Initial Calibration



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VOLATILE ORGANIC COMPOUNDS
INSTRUMENT AND PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

ANALYSIS:	**GC/MS Volatiles**	**LAB CODE:**	**BFBW**
METHOD:	**EPA 8260**	**LAB SAMPLE ID:**	**BFB Tune**
LAB FILE ID:	**04062401.D**	**DATE/TIME ANALYZED:**	**06/24/04 10:16**

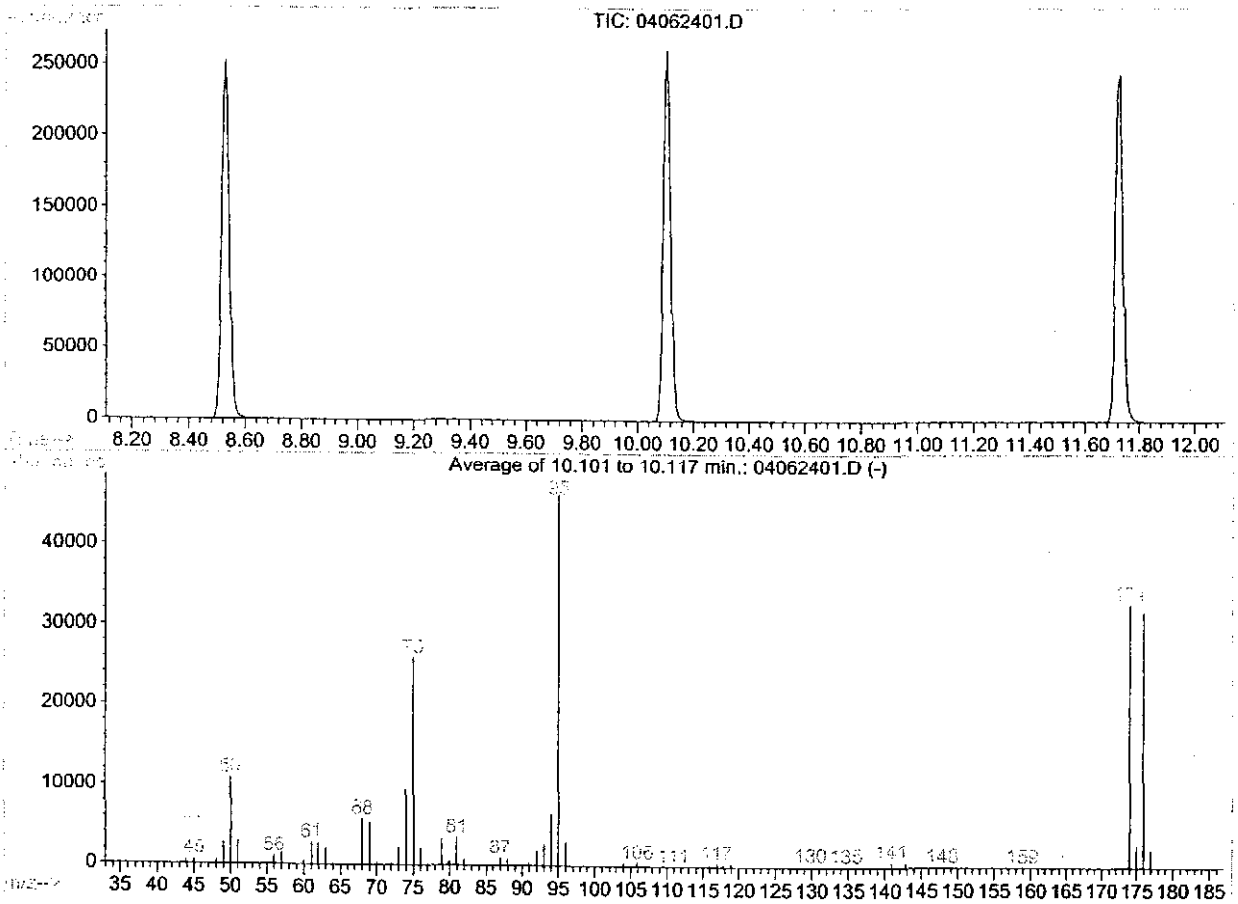
Target Mass	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	23.5
75	30.0 - 60.0% of mass 95	56.1
95	Base peak, 100% relative mass abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than2.0% of mass 174	0.0
174	Greater than 50.0% of mass 95	71.0
175	5.0 - 9.0% of mass 174	8.4
176	Greater than 95.0%, but less than 101.0% of mass 174	97.2
177	5.0 - 9.0% of mass 176	6.8

This Tune applies to the following samples:

Sample ID	Lab Sample ID	Lab File ID	Date/Time Analyzed
LCS	LCS 25ppb	04062427.D	06/24/04 10:26:00 PM
DMW-9S-062404	04062409-02	04062419.D	06/24/04 06:50:00 PM
DMW-9D-062404	04062409-04	04062420.D	06/24/04 07:19:00 PM
DMW-9I-062404	04062409-06	04062421.D	06/24/04 07:47:00 PM
DMW-7I-062404	04062409-08	04062418.D	06/24/04 06:22:00 PM

BFB

Data File : C:\HPCHEM\2\DATA\040624\04062401.D Vial: 1
Acq On : 24 Jun 2004 10:16 am Operator: MI
Sample : BFB TUNE Water 5mL Inst : GC/MS Ins
Misc : IS/Surr 1uL #432 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics



AutoFind: Scans 1225, 1226, 1227; Background Corrected with Scan 1218

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.5	10875	PASS
75	95	30	60	56.1	25933	PASS
95	95	100	100	100.0	46251	PASS
96	95	5	9	6.5	3022	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	71.0	32829	PASS
175	174	5	9	8.4	2744	PASS
176	174	95	101	97.2	31909	PASS
177	176	5	9	6.8	2179	PASS

04062401.D TCL-W.M Thu Jun 24 10:35:00 2004

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PHASE SEPARATION SCIENCE, INC.

VOLATILE ORGANIC COMPOUNDS INSTRUMENT AND PERFORMANCE CHECK BROMOFLUOROBENZENE (BFB)

ANALYSIS:	**GC/MS Volatiles**	**LAB CODE:**	**BFBW**
METHOD:	**EPA 8260**	**LAB SAMPLE ID:**	**BFB Tune**
LAB FILE ID:	**04062535.D**	**DATE/TIME ANALYZED:**	**06/26/04 01:20**

Target Mass	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	24.5
75	30.0 - 60.0% of mass 95	55.4
95	Base peak, 100% relative mass abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than2.0% of mass 174	0.0
174	Greater than 50.0% of mass 95	66.7
175	5.0 - 9.0% of mass 174	5.4
176	Greater than 95.0%, but less than 101.0% of mass 174	98.1
177	5.0 - 9.0% of mass 176	7.0

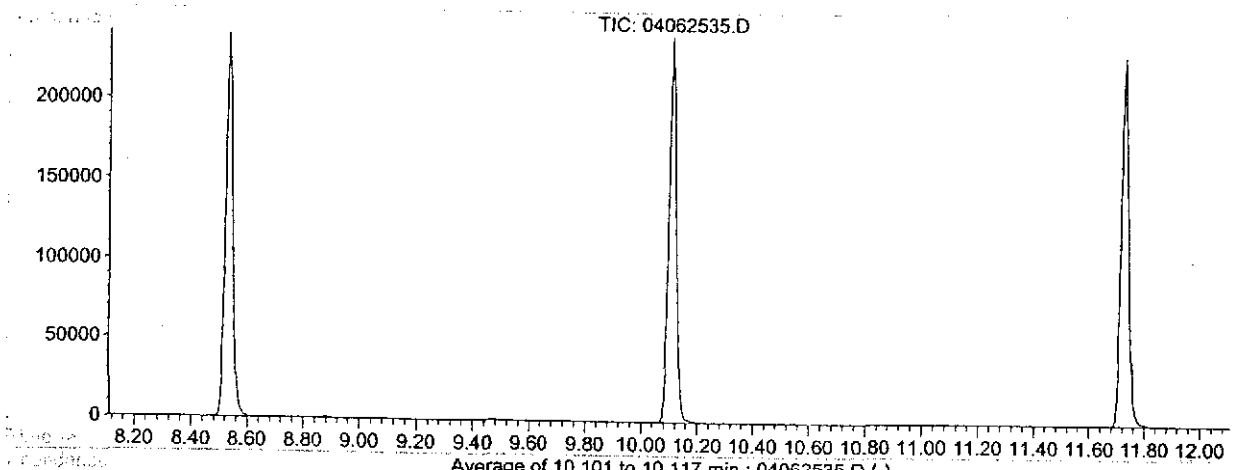
This Tune applies to the following samples:

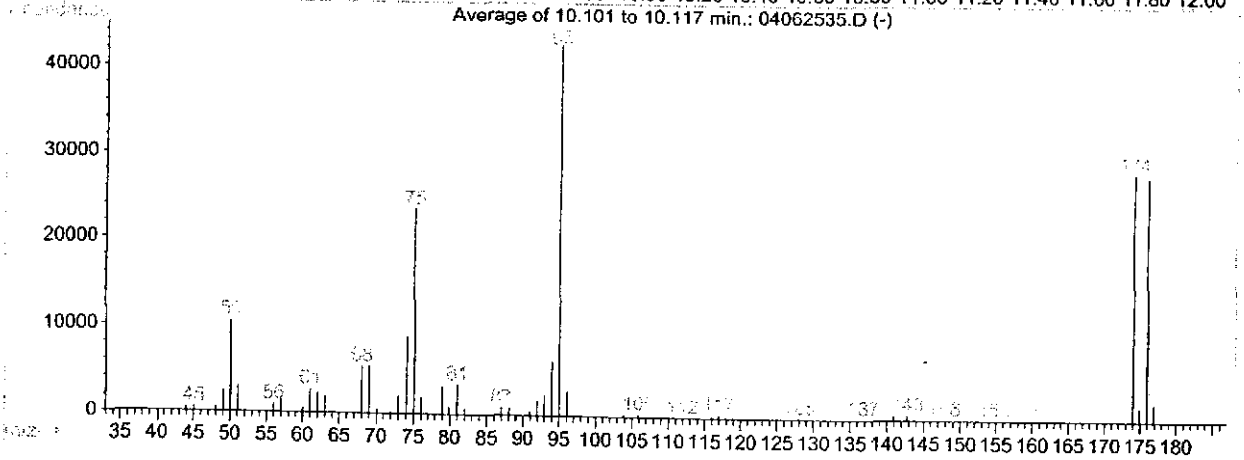
Sample ID	Lab Sample ID	Lab File ID	Date/Time Analyzed
LCS	LCS 25ppb	04062551.D	06/26/04 08:26:00 AM
TB-062404	04062409-01	04062541.D	06/26/04 03:54:00 AM

BFB

Data File : C:\HPCHEM\2\DATA\040625\04062535.D
Acq On : 26 Jun 2004 1:20 am
Sample : BFB TUNE Water 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics

Vial: 35
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00





AutoFind: Scans 1225, 1226, 1227; Background Corrected with Scan 1218

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.5	10473	PASS
75	95	30	60	55.4	23664	PASS
95	95	100	100	100.0	42739	PASS
96	95	5	9	6.7	2879	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	66.7	28504	PASS
175	174	5	9	5.4	1545	PASS
176	174	95	101	98.1	27971	PASS
177	176	5	9	7.0	1955	PASS

04062535.D TCL-W.M Mon Jun 28 09:57:10 2004

Injection Log

Directory: c:\hpchem\2\data\040625

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	04062501.d	1.	BFB TUNE Soil 5mL	IS/Surr 1uL #432	25 Jun 04 09:3
2	2	04062502.d	1.	TCL-S, CCV 80ppb	IS/Surr 1uL #432, CCV 2uL #415	25 Jun 04 10:1
3	3	04062503.d	1.	UNREG-S, CCV 80ppb	IS/Surr 1uL #432, CCV 2uL #463	25 Jun 04 10:4
4	4	04062504.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	25 Jun 04 11:1
5	5	04062505.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	25 Jun 04 11:3
6	6	04062506.d	1.	04062418-01 5.02g	IS/Surr 1uL #432	25 Jun 04 12:0
7	7	04062507.d	1.	04062418-03 5.05g	IS/Surr 1uL #432	25 Jun 04 12:3
8	8	04062508.d	1.	04062418-05 5.17g	IS/Surr 1uL #432	25 Jun 04 13:0
9	9	04062509.d	1.	04062422-02 5.05g	IS/Surr 1uL #432	25 Jun 04 13:3
10	10	04062510.d	1.	04062423-02 5.20g	IS/Surr 1uL #432	25 Jun 04 13:5
11	11	04062511.d	1.	04062426-01 5.04g	IS/Surr 1uL #432	25 Jun 04 14:2
12	12	04062512.d	1.	04062426-02 5.04g	IS/Surr 1uL #432	25 Jun 04 14:5
13	13	04062513.d	1.	04062426-03 5.12g	IS/Surr 1uL #432	25 Jun 04 15:2
14	14	04062514.d	1.	04062426-04 5.04g	IS/Surr 1uL #432	25 Jun 04 15:4
15	15	04062515.d	1.	04062426-05 5.11g	IS/Surr 1uL #432	25 Jun 04 16:1
16	16	04062516.d	1.	04062426-06 5.15g	IS/Surr 1uL #432	25 Jun 04 16:4
17	17	04062517.d	1.	04062426-07 5.21g	IS/Surr 1uL #432	25 Jun 04 17:1
18	18	04062518.d	1.	04062426-08 5.10g	IS/Surr 1uL #432	25 Jun 04 17:3
19	19	04062519.d	1.	04062501-01 1:1	IS/Surr 1uL #432	25 Jun 04 18:0
20	20	04062520.d	1.	04062501-02 1:1	IS/Surr 1uL #432	25 Jun 04 18:3
21	21	04062521.d	1.	04062501-03 1:1	IS/Surr 1uL #432	25 Jun 04 18:5
22	22	04062522.d	1.	04062501-04 1:1	IS/Surr 1uL #432	25 Jun 04 19:2
23	23	04062523.d	1.	04062501-05 1:1	IS/Surr 1uL #432	25 Jun 04 19:5
24	24	04062524.d	1.	04062501-06 1:1	IS/Surr 1uL #432	25 Jun 04 20:2
25	25	04062525.d	1.	04062517-04 5.08g	IS/Surr 1uL #432	25 Jun 04 20:4
26	26	04062526.d	1.	04062527-01 5.18g	IS/Surr 1uL #432	25 Jun 04 21:1
27	27	04062527.d	1.	LCS 40ppb	IS/Surr 1uL #432, LCS 1uL #350	25 Jun 04 21:4
28	28	04062528.d	1.	LCS-DUP 40ppb	IS/Surr 1uL #432, LCS 1uL #350	25 Jun 04 22:1
29	29	04062529.d	1.	04062418-01 MS 40ppb	IS/Surr 1uL #432, MS 1uL #350	25 Jun 04 22:3
30	30	04062530.d	1.	04062418-01 MSD 40ppb	IS/Surr 1uL #432, MS 1uL #350	25 Jun 04 23:0
31	31	04062531.d	1.	04062426-08 MS 40ppb	IS/Surr 1uL #432, MS 1uL #350	25 Jun 04 23:3
32	32	04062532.d	1.	04062426-08 MSD 40ppb	IS/Surr 1uL #432, MS 1uL #350	25 Jun 04 23:5
33	33	04062533.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	26 Jun 04 00:2
34	34	04062534.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	26 Jun 04 00:5
35	35	04062535.d	1.	BFB TUNE Water 5mL	IS/Surr 1uL #432	26 Jun 04 01:2
36	36	04062536.d	1.	TCL-W, CCV 50ppb	IS/Surr 1uL #432, CCV 10uL #415	26 Jun 04 01:4
37	37	04062537.d	1.	TCL-W, CCV 50ppb	IS/Surr 1uL #432, CCV 10uL #415	26 Jun 04 02:1
38	38	04062538.d	1.	UNREG-W, CCV 50ppb	IS/Surr 1uL #432, CCV 10uL #463	26 Jun 04 02:3
39	39	04062539.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	26 Jun 04 03:0
40	40	04062540.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	26 Jun 04 03:2
41	41	04062541.d	1.	04062409-01 5mL	IS/Surr 1uL #432	26 Jun 04 03:5
42	42	04062542.d	1.	04062409-06 200D	IS/Surr 1uL #432	26 Jun 04 04:2
43	43	04062543.d	1.	04062409-02 500D	IS/Surr 1uL #432	26 Jun 04 04:4
44	44	04062544.d	1.	04062118-04 400D	IS/Surr 1uL #432	26 Jun 04 05:1
45	45	04062545.d	1.	04062118-10 1000D	IS/Surr 1uL #432	26 Jun 04 05:3
46	46	04062546.d	1.	04062118-06 20D	IS/Surr 1uL #432	26 Jun 04 06:0
47	47	04062547.d	1.	04062118-08 100D	IS/Surr 1uL #432	26 Jun 04 06:3
48	48	04062548.d	1.	04062118-12 100D	IS/Surr 1uL #432	26 Jun 04 07:0
49	49	04062549.d	1.	04062118-14 100D	IS/Surr 1uL #432	26 Jun 04 07:3
50	50	04062550.d	1.	04062409-04 100D	IS/Surr 1uL #432	26 Jun 04 08:0

Injection Log

Directory: c:\hpchem\2\data\040624

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	04062401.d	1.	BFB TUNE Water 5mL	IS/Surr 1uL #432	24 Jun 04 10:1
2	2	04062402.d	1.	TCL-W, CCV 50ppb	IS/Surr 1uL #432, CCV 10uL #415	24 Jun 04 10:4
3	3	04062403.d	1.	UNREG-W, CCV 50ppb	IS/Surr 1uL #432, CCV 10uL #463	24 Jun 04 11:0
4	4	04062404.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	24 Jun 04 11:3
5	5	04062405.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	24 Jun 04 12:0
6	6	04062406.d	1.	04061717-08 200D	IS/Surr 1uL #432	24 Jun 04 12:2
7	7	04062407.d	1.	04061717-06 5mL	IS/Surr 1uL #432	24 Jun 04 12:5
8	8	04062408.d	1.	04061717-04 10D	IS/Surr 1uL #432	24 Jun 04 13:1
9	9	04062409.d	1.	04061717-10 100D	IS/Surr 1uL #432	24 Jun 04 13:4
10	10	04062410.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	24 Jun 04 14:2
11	11	04062411.d	1.	04062118-01 5mL	IS/Surr 1uL #432	24 Jun 04 15:2
12	12	04062412.d	1.	04062118-04 5mL	IS/Surr 1uL #432	24 Jun 04 15:4
13	13	04062413.d	1.	04062118-06 5mL	IS/Surr 1uL #432	24 Jun 04 16:1
14	14	04062414.d	1.	04062118-08 5mL	IS/Surr 1uL #432	24 Jun 04 16:3
15	15	04062415.d	1.	04062118-12 5mL	IS/Surr 1uL #432	24 Jun 04 17:0
16	16	04062416.d	1.	04062118-14 5mL	IS/Surr 1uL #432	24 Jun 04 17:3
17	17	04062417.d	1.	04062409-01 5mL	IS/Surr 1uL #432	24 Jun 04 17:5
18	18	04062418.d	1.	04062409-08 5mL	IS/Surr 1uL #432	24 Jun 04 18:2
19	19	04062419.d	1.	04062409-02 20D	IS/Surr 1uL #432	24 Jun 04 18:5
20	20	04062420.d	1.	04062409-04 20D	IS/Surr 1uL #432	24 Jun 04 19:1
21	21	04062421.d	1.	04062409-06 20D	IS/Surr 1uL #432	24 Jun 04 19:4
22	22	04062422.d	1.	04062118-02 100D	IS/Surr 1uL #432	24 Jun 04 20:1
23	23	04062423.d	1.	04062118-10 100D	IS/Surr 1uL #432	24 Jun 04 20:4
24	24	04062424.d	1.	04062409-08 MS 25ppb	IS/Surr 1uL #432, MS 5uL #350	24 Jun 04 21:1
25	25	04062425.d	1.	04062409-08 MSD 25ppb	IS/Surr 1uL #432, MS 5uL #350	24 Jun 04 21:3
26	26	04062426.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	24 Jun 04 22:0
27	27	04062427.d	1.	LCS 25ppb	IS/Surr 1uL #432, LCS 5uL #350	24 Jun 04 22:2
28	28	04062428.d	1.	LCS-DUP 25ppb	IS/Surr 1uL #432, LCS 5uL #350	24 Jun 04 22:5
29	29	04062429.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	24 Jun 04 23:1
30	30	04062430.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	24 Jun 04 23:4

Injection Log

Directory: c:\hpchem\2\data\040625

L e	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
51	51	04062551.d	1.	LCS 25ppb	IS/Surr 1uL #432, LCS 5uL #350	26 Jun 04 08:2
5	52	04062552.d	1.	LCS-1 25ppb	IS/Surr 1uL #432, LCS 5uL #350	26 Jun 04 08:5
53	53	04062553.d	1.	LCS-1, DUP 25ppb	IS/Surr 1uL #432, LCS 5uL #350	26 Jun 04 09:1
5	54	04062554.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	26 Jun 04 09:4
55	55	04062555.d	1.	METHOD BLANK 5mL	IS/Surr 1uL #432	26 Jun 04 10:0

PHASE SEPARATION SCIENCE, INC.

Analytical Chemistry Environmental Science

QA/QC SUMMARY DATA

Semivolatile Organic Compounds

- *Surrogate Summary*
- *Method Blank Summary*
- *Continuing Calibration Verification Summary*
- *LCS Summary*
- *MS/MSD Summary*
- *DFTPP Tune Summary*

6630 Baltimore National Pike Baltimore, MD 21228 (800) 932-9047 (410) 747-8770 FAX (410) 788-8723

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PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

SEMI-VOLATILE ORGANIC COMPOUNDS
SYSTEM MONITORING COMPOUND RECOVERY
(SURROGATES)

ANALYSIS: GC/MS Semi-Volatiles

LAB CODE: SURR

METHOD NO.: EPA 8270

Date/Time Analyzed	Sample ID	S1 A (2FP) #	S2 A (PHL) #	S1 BN (NBZ) #	S2 BN (FBP) #	S3 A (TBP) #	S3 BN (TPH) #	Total Out
	Upper Limit	110	110	114	116	123	141	
	Lower Limit	21	10	35	43	10	33	
6/24/04 02:34:00 PM	Calibration Verification	50	51	101	105	52	95	
06/24/04 08:15:00 PM	Method Blank	85	85	87	94	81	81	
06/24/04 07:06:00 PM	LCS	71	77	81	88	90	84	
6/24/04 05:24:00 PM	DMW-9S-062404	42	61	79	89	83	88	

S1 A (2FP) = 2-Fluorophenol
S2 A (PHL) = Phenol-d6
S1 BN (NBZ) = Nitrobenzene-d5
S2 BN (FBP) = 2-Fluorobiphenyl
S3 A (TBP) = 2,4,6-Tribromophenol
S3 BN (TPH) = Terphenyl-d14

Control Limits:

Water	Soil
21-110	25-121
10-110	24-113
35-114	23-120
43-116	30-115
10-123	19-122
33-141	18-137

Column used to flag recovery values
* Values outside QC limits. Affected by 100 fold dilution.
D Surrogate diluted out

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE •

SEMI-VOLATILE ORGANICS COMPOUNDS
LCS & LCS DUPLICATE SUMMARY

DATE ANALYZED: 06/24/04 **Batch Number:** 1121

METHOD: EPA 8270 **Lab File IDs:** 04062410.D 04062411.D

Matrix: Water

Sample ID: LCS 1000mL

SAMPLE SPIKE COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPIKE CONC (ug/L)	SPIKE REC (%)	LCL (%)	UCL (%)
Phenol	40	ND	27	67	12	110
2-Chlorophenol	40	ND	29	72	27	123
N-Nitroso-di-n-propylamine	40	ND	41	102	41	116
4-Chloro-3-methylphenol	40	ND	38	96	23	97
Acenaphthene	40	ND	34	85	46	118
4-Nitrophenol	40	ND	33	83 *	10	80
2,4-Dinitrotoluene	40	ND	41	102 *	24	96
Pentachlorophenol	40	ND	41	102	9	103
Pyrene	40	ND	44	111	26	127

Sample ID: LCS-DUP 1000mL

SAMPLE SPIKE DUP COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPK DUP CONC (ug/L)	SPIKE DUP REC (%)	RPD (%)	QC RPD (%)	LCL (%)	UCL (%)
Phenol	40	ND	32	79	16.0	42	12	110
2-Chlorophenol	40	ND	32	80	11.2	40	27	123
N-Nitroso-di-n-propylamine	40	ND	33	83	20.5	38	41	116
4-Chloro-3-methylphenol	40	ND	34	86	11.1	42	23	97
Acenaphthene	40	ND	32	79	7.5	31	46	118
4-Nitrophenol	40	ND	36	89 *	0.0	50	10	80
2,4-Dinitrotoluene	40	ND	38	94	7.3	38	24	96
Pentachlorophenol	40	ND	42	106 *	0.0	50	9	103
Pyrene	40	ND	40	101	9.0	31	26	127

D = Spike compound diluted out
# - Column used to flag out of control recoveries
* = Values outside QC limits.
Calculation: spike or spike dup %Recovery
*=[(spike conc - original sample conc)/(spike added)]*100*
Calculation: spike/spike dup Relative Percent Difference
*=absolute value [(spike dup conc - spike conc)/((spike dup conc + spike conc)/2))]*100*
Note: QC limits are based on CLP OLM04.2

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062410.D
Acq On : 24 Jun 2004 7:06 pm
Sample : LCS 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:26 2004

Vial: 10
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Quant Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 IST	5.49	152	469493	40.00 mg/L	0.00
18) Naphthalene-d8 ISTD	6.63	136	1660185	40.00 mg/L	0.00
33) Acenaphthene-d10 ISTD	8.53	164	1212703	40.00 mg/L	0.00
59) Phenanthrene-d10 ISTD	10.75	188	2122117	40.00 mg/L	0.00
71) Chrysene-d12 ISTD	16.04	240	1276894	40.00 mg/L	-0.02
81) Perylene-d12 ISTD	19.80	264	748842	40.00 mg/L	-0.02

System Monitoring Compounds

4) 2-Fluorophenol Acid SS 1	4.36	112	1799536	142.57 mg/L	0.02
Spiked Amount 200.000	Range 21 - 100		Recovery = 71.29%		
5) Phenol-d6 Acid SS 2	5.13	99	2438312	152.99 mg/L	0.00
Spiked Amount 200.000	Range 10 - 94		Recovery = 76.50%		
19) Nitrobenzene-d5 BN SS 1	5.99	82	1369647	81.01 mg/L	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 81.01%		
37) 2-Fluorobiphenyl BN SS 2	7.66	172	3013411	87.97 mg/L	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 87.97%		
58) 2,4,6-Tribromophenol Acid	9.64	329	839147	179.43 mg/L	0.00
Spiked Amount 200.000	Range 10 - 123		Recovery = 89.72%		
74) Terphenyl-d14 BN SS 3	13.74	244	3214397	83.87 mg/L	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 83.87%		

'arget Compounds

					Qvalue
2) Pyridine	3.25	79	458357m	32.65 mg/L	
3) N-Nitrosodimethylamine	3.25	74	280031	33.28 mg/L	96
6) PHENOL	5.15	94	479308	26.91 mg/L #	67
7) Bis(2-chloroethyl)ether	5.25	63	368386	37.82 mg/L #	74
8) 2-Chlorophenol	5.33	128	400118	28.76 mg/L	98
9) 1,4'-DICHLOROBENZENE	5.50	146	851640m	40.64 mg/L	
10) 1,3'-Dichlorobenzene	5.47	146	320293m	24.80 mg/L	
11) 1,2'-Dichlorobenzene	5.68	146	535636	34.57 mg/L	99
12) Benzyl Alcohol	5.60	108	281723	35.73 mg/L	98
13) 2-Methylphenol	5.67	107	310355	32.46 mg/L	97
14) bis(2-chloroisopropyl)ethe	5.72	45	530019	42.12 mg/L #	94
15) 3,4-Methylphenol	5.78	107	435770	35.00 mg/L	88
16) N-Nitrosodi-n-propyl amine	5.84	70	421080	38.30 mg/L	97
17) Hexachloroethane	5.95	117	206212	34.27 mg/L #	100
20) Nitrobenzene	6.00	77	573949	35.93 mg/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062410.D
Acq On : 24 Jun 2004 7:06 pm
Sample : LCS 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:26 2004

Vial: 10
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Quant Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
21) Isophorone	6.20	82	1166443	37.53 mg/L	99
22) 2-NITROPHENOL	6.28	139	281743	30.87 mg/L	98
23) 2,4-dimethylphenol	6.24	122	354884	28.52 mg/L	94
24) Bis(2-chloroethoxy)methane	6.33	93	588977	38.18 mg/L	98
25) 2,4-DICHLOROPHENOL	6.47	162	454929	30.44 mg/L	99
26) 1,2,4'-Trichlorobenzene	6.58	180	557059	34.15 mg/L	98
27) Naphthalene`	6.65	128	1369020	35.79 mg/L	98
28) 4-Chloroaniline	6.67	127	682096	34.85 mg/L	99
29) HEXACHLOROBUTADIENE`	6.77	227	173231	33.14 mg/L	99
30) 4-CHLORO-3-METHYLPHENOL	7.07	107	445691	33.36 mg/L	97
31) 2-Methylnaphthalene	7.30	142	1046656	34.05 mg/L	98
32) 1-Methylnaphthalene	7.41	142	1005050	34.11 mg/L	97
34) Hexachlorocyclopentadiene	7.52	237	124996	18.62 mg/L	95
35) 2,4,6-TRICHLOROPHENOL	7.59	97	202370	36.83 mg/L	90
36) 2,4,5-trichlorophenol	7.64	97	170473	35.33 mg/L	97
38) 2-Chloronaphthalene	7.83	162	1111905	35.73 mg/L	99
39) 2-Nitroaniline	7.93	65	349195	40.16 mg/L	100
40) 1,4-dinitrobenzene	7.98	168	377	Not Detected	
41) 1,3-dinitrobenzene	8.23	168	304	Not Detected	
42) 1,2-dinitrobenzene	8.43	168	1377	Not Detected	
43) 3-Nitroaniline	8.43	138	310469	39.03 mg/L	97
44) 4-Nitroaniline	9.27	138	241506	39.37 mg/L	99
45) Dimethylphthalate	8.11	163	1523497	39.34 mg/L	100
46) 2,6-Dinitrotoluene	8.23	165	401219	39.91 mg/L	89
47) Acenaphthylene	8.34	152	1734707	35.95 mg/L	99
48) ACENAPHTHENE	8.57	154	1147055	40.63 mg/L	97
49) 2,4-Dinitrophenol	8.55	184	120174	25.29 mg/L #	75
50) 4-nitrophenol	8.54	139	231777	40.86 mg/L	99
51) 2,4-Dinitrotoluene	8.74	165	535570	44.22 mg/L	98
52) Dibenzofuran	8.77	168	1720055	40.41 mg/L	99
53) 2,3,5,6-tetrachlorophenol	8.96	232	2831	Not Detected	
54) 2,3,4,6-tetrachlorophenol	8.96	232	2831	Not Detected	
55) Diethylphthalate	9.01	149	1556218	44.40 mg/L	98
56) 4-chlorophenyl phenyl ethe	9.17	204	715228	39.74 mg/L	98
57) Fluorene	9.25	166	1348370	39.52 mg/L	98
60) 4,6-Dinitro-2-methylphenol	9.32	198	241797	34.38 mg/L	96
61) N-NITROSODI-N-PHENYLAMINE	9.34	169	1222076	42.54 mg/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062410.D
Acq On : 24 Jun 2004 7:06 pm
Sample : LCS 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:26 2004

Vial: 10
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Quant Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
62) Azobenzene	9.42	77	1326838	52.26 mg/L	97
63) 4-bromophenyl phenyl ether	9.92	248	369455	39.55 mg/L	99
64) Hexachlorobenzene	10.22	142	166810	43.50 mg/L #	94
65) PENTACHLOROPHENOL	10.49	266	198297	33.62 mg/L #	100
66) Phenanthrene	10.80	178	2012942	41.48 mg/L	99
67) Anthracene	10.88	178	2021331	41.78 mg/L	99
68) Carbazole	11.10	167	1863022	49.71 mg/L	100
69) Di-n-Butylphthalate	11.68	149	2859188	45.33 mg/L	100
70) FLUORANTHENE	13.03	202	2209098	43.65 mg/L	99
72) Benzidine	13.20	184	75067	4.24 mg/L	98
73) Pyrene	13.50	202	2171972	36.55 mg/L	99
75) Butylbenzylphthalate	14.73	149	1266982	39.61 mg/L	99
76) Bis 2-ethylhexyl adipate	14.74	129	527	Not Detected	
77) 3,3'-Dichlorobenzidine	15.89	252	451520	58.91 mg/L	99
78) Bis(2-ethylhexyl)phthalate	15.93	149	1632773	41.25 mg/L	99
79) Benzo[a]anthracene	16.00	228	1498691	40.37 mg/L	100
80) Chrysene	16.10	228	1365169	41.32 mg/L	99
82) DI-N-OCTYLPHTHALATE	17.29	149	2605154	42.73 mg/L	99
83) Benzo[b]fluoranthene	18.64	252	1040257	36.35 mg/L	96
84) Benzo[k]fluoranthene	18.71	252	1013187	46.06 mg/L	99
85) BENZO[A]PYRENE	19.62	252	807584	40.70 mg/L	99
86) Indeno(1,2,3-c,d)pyrene	23.81	276	428033	37.78 mg/L	97
87) Dibenzo[a,h]anthracene	23.83	278	359498	37.58 mg/L	99
88) Benzo[g,h,i]perylene	25.02	276	294986	36.85 mg/L	100

(#) = qualifier out of range (m) = manual integration

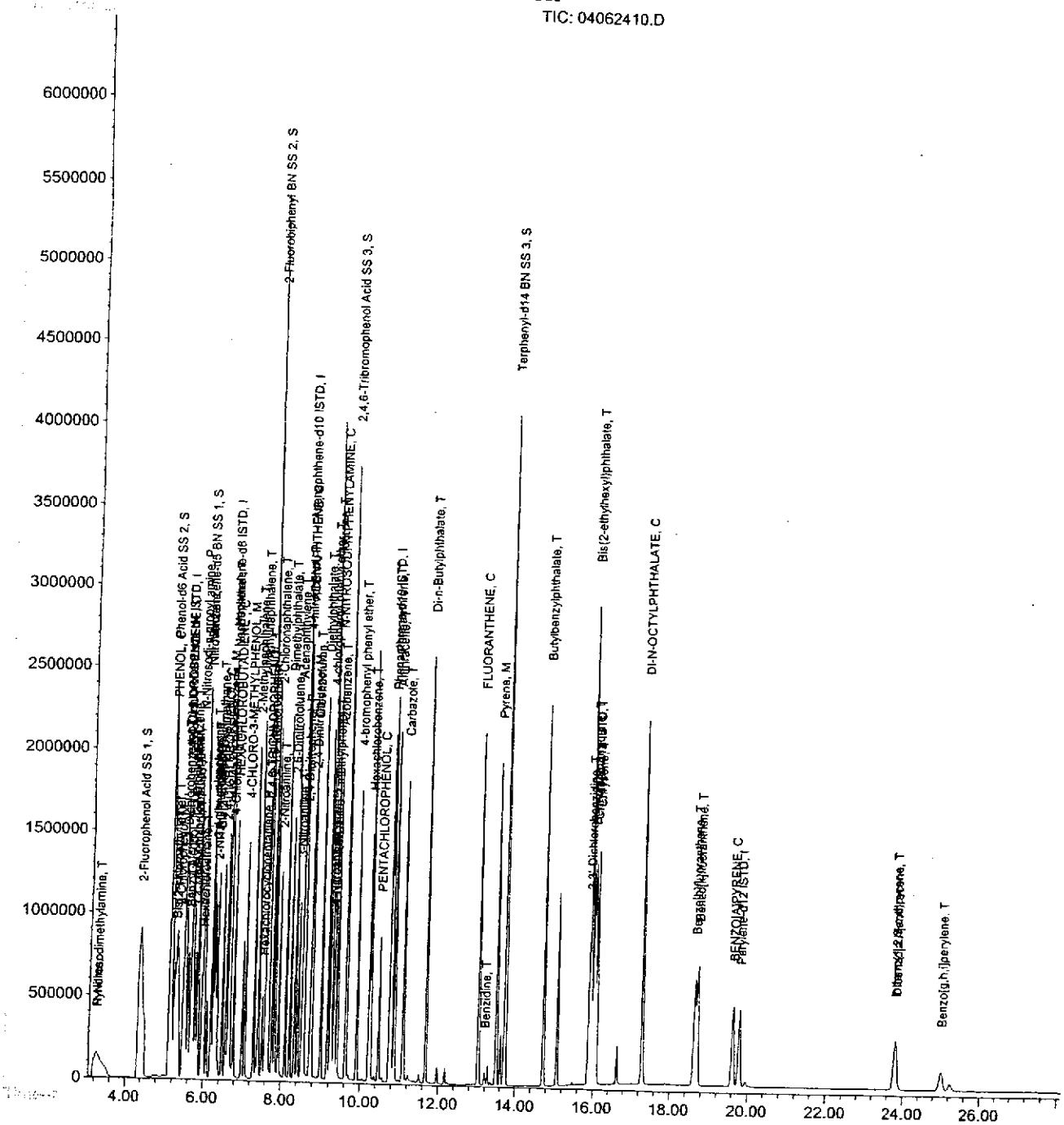
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040624\04062410.D
Acq On : 24 Jun 2004 7:06 pm
Sample : LCS 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:26 2004

Vial: 10
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062410.D
Acq On : 24 Jun 2004 7:06 pm
Sample : LCS 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:04 2004

Vial: 10
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: MDE_CHN.RES

Quant Method : C:\HPCHEM\1\METHODS\MDE_CHN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 09:53:26 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene d-4 IS	5.49	152	469493	40.00 mg/L	0.00
4) Naphthalene-D8 ISTD	6.63	136	1660185	40.00 mg/L	0.00
7) Acenaphthene-d10 ISTD	8.53	164	1212703	40.00 mg/L	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) n-Decane	5.29	43	422538	38.13 mg/L	94
3) Acetophenone	5.84	105	604910	31.96 mg/L	100
5) e-Caprolactam	7.01	55	258815	43.06 mg/L	98
6) Biphenyl	7.77	154	1428204	39.30 mg/L	100
8) Atrazine	0.00	200	0	Not Detected	
9) Octadecane	10.26	57	734823	43.30 mg/L	99

(#) = qualifier out of range (m) = manual integration

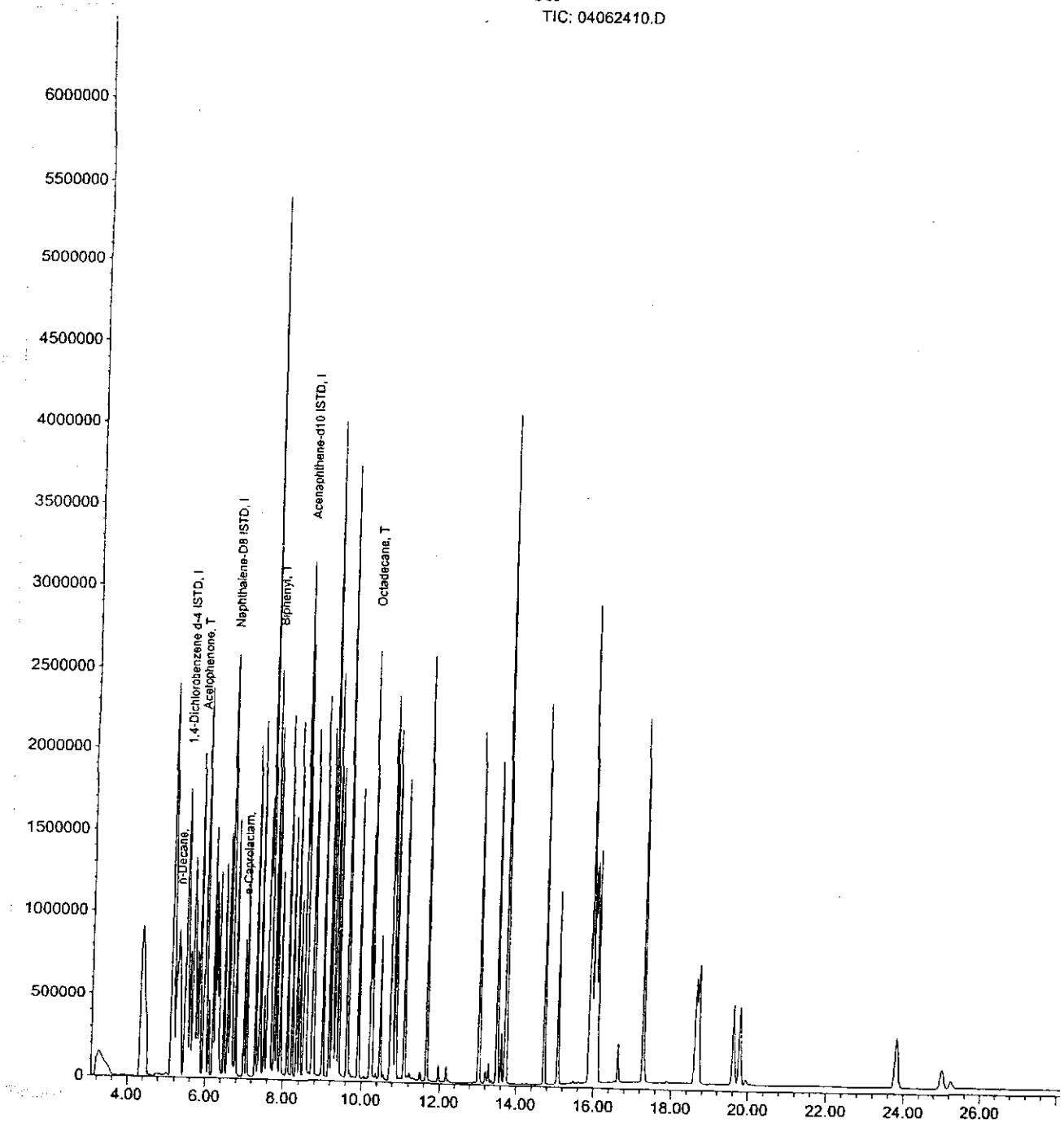
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040624\04062410.D
Acq On : 24 Jun 2004 7:06 pm
Sample : LCS 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:04 2004

Vial: 10
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: MDE_CHN.RES

Method : C:\HPCHEM\1\METHODS\MDE_CHN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 09:53:26 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062411.D
Acq On : 24 Jun 2004 7:40 pm
Sample : LCSD 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:34 2004

Vial: 11
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00
Quant Results File: HPBNAN.RES

Quant Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 IST	5.49	152	526781	40.00 mg/L	0.00
18) Naphthalene-d8 ISTD	6.62	136	1806442	40.00 mg/L	-0.01
33) Acenaphthene-d10 ISTD	8.53	164	1316624	40.00 mg/L	0.00
59) Phenanthrene-d10 ISTD	10.75	188	2222838	40.00 mg/L	-0.01
71) Chrysene-d12 ISTD	16.04	240	1286993	40.00 mg/L	-0.01
81) Perylene-d12 ISTD	19.79	264	788866	40.00 mg/L	-0.02

System Monitoring Compounds

4) 2-Fluorophenol Acid SS 1	4.32	112	1980039	139.81 mg/L	-0.01
Spiked Amount 200.000	Range 21 - 100		Recovery = 69.91%		
5) Phenol-d6 Acid SS 2	5.12	99	2613956	146.17 mg/L	0.00
Spiked Amount 200.000	Range 10 - 94		Recovery = 73.08%		
19) Nitrobenzene-d5 BN SS 1	5.99	82	1409138	76.60 mg/L	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 76.60%		
37) 2-Fluorobiphenyl BN SS 2	7.66	172	3079199	82.79 mg/L	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 82.79%		
58) 2,4,6-Tribromophenol Acid	9.65	329	859742	169.33 mg/L	0.00
Spiked Amount 200.000	Range 10 - 123		Recovery = 84.67%		
74) Terphenyl-d14 BN SS 3	13.74	244	3129412	81.01 mg/L	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 81.01%		

Target Compounds

					Qvalue
2) Pyridine	3.17	79	477144	30.29 mg/L	98
3) N-Nitrosodimethylamine	3.19	74	295842	31.34 mg/L	93
6) PHENOL	5.13	94	631324	31.59 mg/L	82
7) Bis(2-chloroethyl)ether	5.24	63	368057	33.68 mg/L #	76
8) 2-Chlorophenol	5.32	128	502382	32.18 mg/L	98
9) 1,4'-DICHLOROBENZENE	5.50	146	777714m	33.08 mg/L	
10) 1,3'-Dichlorobenzene	5.46	146	328832m	22.69 mg/L	
11) 1,2'-Dichlorobenzene	5.67	146	558937	32.15 mg/L	99
12) Benzyl Alcohol	5.59	108	286903	32.43 mg/L	96
13) 2-Methylphenol	5.66	107	388697	36.23 mg/L	96
14) bis(2-chloroisopropyl)ethe	5.71	45	538425	37.87 mg/L #	95
15) 3,4-Methylphenol	5.78	107	528145	37.81 mg/L	88
16) N-Nitrosodi-n-propyl amine	5.84	70	422596	34.26 mg/L	98
17) Hexachloroethane	5.95	117	214863	31.82 mg/L #	100
20) Nitrobenzene	6.01	77	582451	33.51 mg/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062411.D
Acq On : 24 Jun 2004 7:40 pm
Sample : LCSD 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:34 2004

Vial: 11
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Quant Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
21) Isophorone	6.19	82	1157916	34.24 mg/L	99
22) 2-NITROPHENOL	6.27	139	348259	35.07 mg/L	95
23) 2,4-dimethylphenol	6.24	122	415955	30.73 mg/L	97
24) Bis(2-chloroethoxy)methane	6.34	93	589715	35.14 mg/L	97
25) 2,4-DICHLOROPHENOL	6.48	162	551346	33.90 mg/L	99
26) 1,2,4'-Trichlorobenzene	6.57	180	562160	31.67 mg/L	99
27) Naphthalene`	6.64	128	1392884	33.47 mg/L	98
28) 4-Chloroaniline	6.66	127	688640	32.34 mg/L	100
29) HEXACHLOROBUTADIENE`	6.78	227	180350	31.71 mg/L	99
30) 4-CHLORO-3-METHYLPHENOL	7.07	107	520248	35.79 mg/L	99
31) 2-Methylnaphthalene	7.30	142	1072958	32.08 mg/L	98
32) 1-Methylnaphthalene	7.42	142	1032713	32.21 mg/L	98
34) Hexachlorocyclopentadiene	7.51	237	143805	19.70 mg/L	95
35) 2,4,6-TRICHLOROPHENOL	7.59	97	229363	38.45 mg/L	93
36) 2,4,5-trichlorophenol	7.64	97	204625	39.06 mg/L	98
38) 2-Chloronaphthalene	7.84	162	1125646	33.32 mg/L	99
39) 2-Nitroaniline	7.93	65	350367	37.11 mg/L	99
40) 1,4-dinitrobenzene	7.97	168	94	Not Detected	
41) 1,3-dinitrobenzene	8.19	168	236	Not Detected	
42) 1,2-dinitrobenzene	8.43	168	1579	Not Detected	
43) 3-Nitroaniline	8.43	138	300851	34.84 mg/L	98
44) 4-Nitroaniline	9.27	138	232589	34.93 mg/L	96
45) Dimethylphthalate	8.11	163	1515639	36.05 mg/L	100
46) 2,6-Dinitrotoluene	8.24	165	402396	36.87 mg/L	88
47) Acenaphthylene	8.35	152	1741378	33.24 mg/L	99
48) ACENAPHTHENE	8.57	154	1157770	37.77 mg/L	99
49) 2,4-Dinitrophenol	8.55	184	165199	31.82 mg/L	99
50) 4-nitrophenol	8.53	139	261305	42.43 mg/L	98
51) 2,4-Dinitrotoluene	8.74	165	531400	40.41 mg/L	99
52) Dibenzofuran	8.77	168	1705498	36.91 mg/L	99
53) 2,3,5,6-tetrachlorophenol	8.95	232	2975	Not Detected	
54) 2,3,4,6-tetrachlorophenol	8.95	232	2975	Not Detected	
55) Diethylphthalate	9.01	149	1526053	40.10 mg/L	99
56) 4-chlorophenyl phenyl ethe	9.18	204	700740	35.86 mg/L	98
57) Fluorene	9.25	166	1337394	36.10 mg/L	99
60) 4,6-Dinitro-2-methylphenol	9.33	198	301475	40.89 mg/L	92
61) N-NITROSODI-N-PHENYLAMINE	9.35	169	1202745	39.97 mg/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062411.D
Acq On : 24 Jun 2004 7:40 pm
Sample : LCSD 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:34 2004

Vial: 11
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Quant Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
62) Azobenzene	9.41	77	1310271	49.27 mg/L	97
63) 4-bromophenyl phenyl ether	9.92	248	367512	37.56 mg/L	99
64) Hexachlorobenzene	10.22	142	163299	40.65 mg/L #	94
65) PENTACHLOROPHENOL	10.49	266	233424	37.57 mg/L #	100
66) Phenanthrene	10.80	178	1937109	38.11 mg/L	99
67) Anthracene	10.87	178	1981584	39.10 mg/L	99
68) Carbazole	11.11	167	1681990	42.85 mg/L	99
69) Di-n-Butylphthalate	11.68	149	2797707	42.35 mg/L	100
70) FLUORANTHENE	13.04	202	2153113	40.61 mg/L	99
72) Benzidine	13.20	184	75134	4.21 mg/L	99
73) Pyrene	13.51	202	2086560	34.84 mg/L	99
75) Butylbenzylphthalate	14.73	149	1198367	37.17 mg/L	98
76) Bis 2-ethylhexyl adipate	14.73	129	508	Not Detected	
77) 3,3'-Dichlorobenzidine	15.89	252	428640	55.48 mg/L	100
78) Bis(2-ethylhexyl)phthalate	15.93	149	1535071	38.47 mg/L	98
79) Benzo[a]anthracene	15.99	228	1422611	38.02 mg/L	100
80) Chrysene	16.09	228	1287389	38.66 mg/L	99
82) DI-N-OCTYLPHTHALATE	17.29	149	2427767	37.80 mg/L	99
83) Benzo[b]fluoranthene	18.65	252	1049663	34.82 mg/L	96
84) Benzo[k]fluoranthene	18.71	252	923383	39.85 mg/L	99
85) BENZO[A]PYRENE	19.63	252	790908	37.84 mg/L	100
86) Indeno(1,2,3-c,d)pyrene	23.83	276	470034	39.38 mg/L	98
87) Dibenzo[a,h]anthracene	23.83	278	397435	39.44 mg/L	99
88) Benzo[g,h,i]perylene	25.01	276	335813	39.82 mg/L	99

(#) = qualifier out of range (m) = manual integration

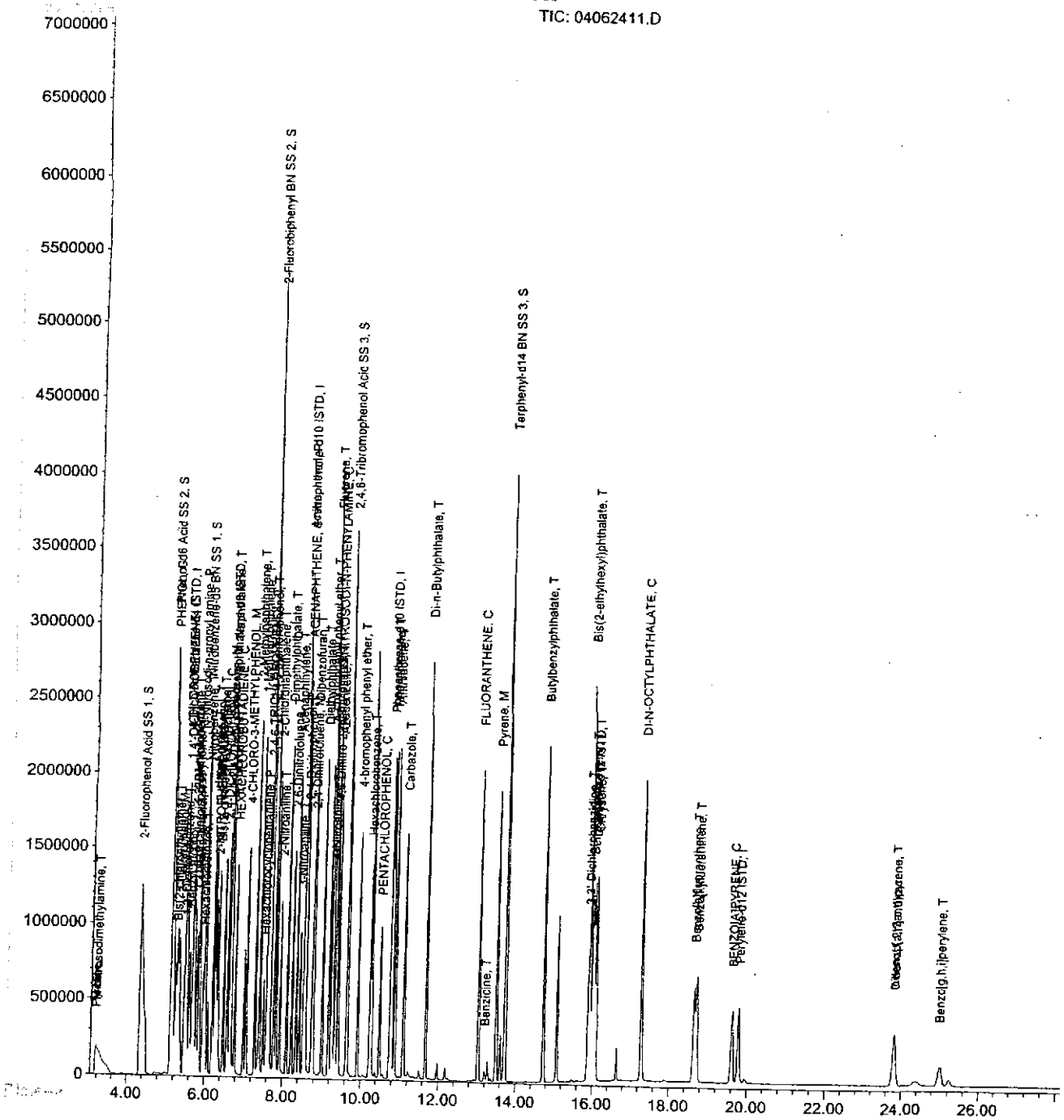
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040624\04062411.D
Acq On : 24 Jun 2004 7:40 pm
Sample : LCSD 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:34 2004

Vial: 11
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062411.D
Acq On : 24 Jun 2004 7:40 pm
Sample : LCSD 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:04 2004

Vial: 11
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: MDE_CHN.RES

Quant Method : C:\HPCHEM\1\METHODS\MDE_CHN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 09:53:26 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene d-4 IS	5.49	152	526781	40.00 mg/L	0.00
4) Naphthalene-D8 ISTD	6.62	136	1806442	40.00 mg/L	0.00
7) Acenaphthene-d10 ISTD	8.53	164	1316624	40.00 mg/L	0.01

System Monitoring Compounds

Target Compounds					Qvalue
2) n-Decane	5.28	43	432894	34.82 mg/L	95
3) Acetophenone	5.85	105	610657	28.75 mg/L	99
5) e-Caprolactam	7.00	55	258804	39.57 mg/L	100
6) Biphenyl	7.78	154	1441378	36.45 mg/L	100
8) Atrazine	0.00	200	0	Not Detected	
9) Octadecane	10.27	57	718054	38.73 mg/L	99

(#) = qualifier out of range (m) = manual integration

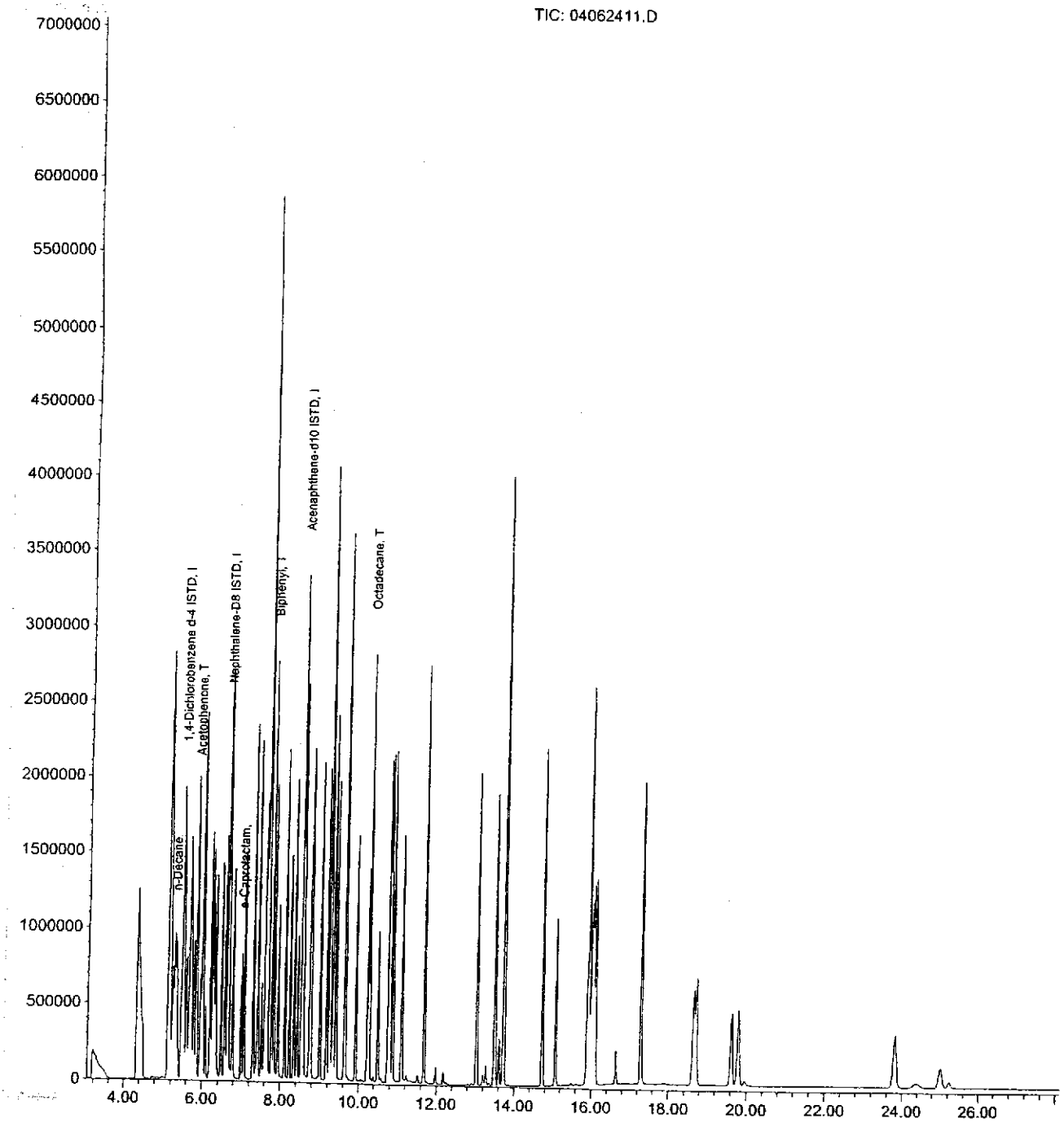
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040624\04062411.D
Acq On : 24 Jun 2004 7:40 pm
Sample : LCSD 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:04 2004

Vial: 11
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: MDE_CHN.RES

Method : C:\HPCHEM\1\METHODS\MDE_CHN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 09:53:26 2004
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040624\04062402.D
Acq On : 24 Jun 2004 2:34 pm
Sample : HPBNA CCV @ 50ppm
Misc : 05-26-04 A268 DJP
MS Integration Params: rteint.p

Vial: 2
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4 ISTD	1.000	1.000	0.0	96	0.00
2		Pyridine	1.196	1.192	0.3	97	0.00
	T	N-Nitrosodimethylamine	0.717	0.712	0.7	97	0.00
4	S	2-Fluorophenol Acid SS 1	1.075	1.084	-0.8	94	0.00
5	S	Phenol-d6 Acid SS 2	1.358	1.386	-2.1	94	0.00
	C	PHENOL	1.518	1.510	0.5	95	0.00
7	T	Bis(2-chloroethyl)ether	0.830	0.853	-2.8	95	0.00
8	M	2-Chlorophenol	1.185	1.149	3.0	94	0.00
	C	1,4'-DICHLOROBENZENE	1.785	1.840	-3.1	98	0.00
10	T	1,3'-Dichlorobenzene	1.100	1.051	4.5	93	0.00
11	T	1,2'-Dichlorobenzene	1.320	1.320	0.0	95	0.00
12	T	Benzyl Alcohol	0.672	0.690	-2.7	97	0.00
13	T	2-Methylphenol	0.815	0.809	0.7	94	0.00
14	T	bis(2-chloroisopropyl)ether	1.089	1.178	-8.2	101	0.00
15	T	3,4-Methylphenol	1.061	1.062	-0.1	97	0.00
16	P	N-Nitrosodi-n-propyl amine	0.937	0.981	-4.7	99	0.00
17	T	Hexachloroethane	0.513	0.519	-1.2	97	0.00
18	I	Naphthalene-d8 ISTD	1.000	1.000	0.0	99	0.00
19	S	Nitrobenzene-d5 BN SS 1	0.407	0.413	-1.5	101	0.00
20	T	Nitrobenzene	0.385	0.390	-1.3	100	0.00
21	T	Isophorone	0.749	0.748	0.1	98	0.00
22	C	2-NITROPHENOL	0.220	0.211	4.1	92	0.00
23	T	2,4-dimethylphenol	0.300	0.288	4.0	95	0.00
24	T	Bis(2-chloroethoxy)methane	0.372	0.369	0.8	98	0.00
25	C	2,4-DICHLOROPHENOL	0.360	0.357	0.8	98	0.00
26	M	1,2,4'-Trichlorobenzene	0.393	0.378	3.8	95	0.00
27	T	Naphthalene`	0.922	0.934	-1.3	99	0.00
28	T	4-Chloroaniline	0.472	0.479	-1.5	99	0.00
29	C	HEXACHLOROBUTADIENE`	0.126	0.123	2.4	98	0.00
30	M	4-CHLORO-3-METHYLPHENOL	0.322	0.319	0.9	98	0.00
31	T	2-Methylnaphthalene	0.741	0.764	-3.1	98	0.00
32	T	1-Methylnaphthalene	0.710	0.739	-4.1	99	0.00
33	I	Acenaphthene-d10 ISTD	1.000	1.000	0.0	99	0.00
34	P	Hexachlorocyclopentadiene	0.230	0.185	19.6	82	0.00
35	C	2,4,6-TRICHLOROPHENOL	0.181	0.181	0.0	101	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040624\04062402.D
Acq On : 24 Jun 2004 2:34 pm
Sample : HPBNA CCV @ 50ppm
Misc : 05-26-04 A268 DJP
MS Integration Params: rteint.p

Vial: 2
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
36	T	2,4,5-trichlorophenol	0.159	0.161	-1.3	101	0.00
37	S	2-Fluorobiphenyl BN SS 2	1.130	1.192	-5.5	98	0.00
38	T	2-Chloronaphthalene	1.026	1.028	-0.2	99	0.00
39	T	2-Nitroaniline	0.287	0.293	-2.1	102	0.00
40	T	1,4-dinitrobenzene	0.248	0.242	2.4	99	0.00
41	T	1,3-dinitrobenzene	0.265	0.264	0.4	100	0.00
42	T	1,2-dinitrobenzene	0.180	0.181	-0.6	100	0.00
43	T	3-Nitroaniline	0.262	0.248	5.3	99	0.00
44	T	4-Nitroaniline	0.202	0.199	1.5	102	0.00
45	T	Dimethylphthalate	1.277	1.262	1.2	100	0.00
46	T	2,6-Dinitrotoluene	0.332	0.331	0.3	99	0.00
47	T	Acenaphthylene	1.592	1.602	-0.6	99	0.00
48	C	ACENAPHTHENE	0.931	0.970	-4.2	99	0.00
49	P	2,4-Dinitrophenol	0.142	0.128	9.9	87	0.00
50	P	4-nitrophenol	0.187	0.198	-5.9	101	0.00
51	M	2,4-Dinitrotoluene	0.400	0.425	-6.2	100	0.00
52	T	Dibenzofuran	1.404	1.435	-2.2	100	0.00
53	T	2,3,5,6-tetrachlorophenol	0.282	0.278	1.4	101	0.00
54	T	2,3,4,6-tetrachlorophenol	0.278	0.276	0.7	101	0.00
55	T	Diethylphthalate	1.156	1.184	-2.4	102	0.00
56	T	4-chlorophenyl phenyl ether	0.594	0.582	2.0	99	0.00
57	T	Fluorene	1.125	1.153	-2.5	99	0.00
58	S	2,4,6-Tribromophenol Acid S	0.154	0.162	-5.2	103	0.00
59	I	Phenanthrene-d10 ISTD	1.000	1.000	0.0	98	0.00
60	T	4,6-Dinitro-2-methylphenol	0.120	0.116	3.3	94	0.00
61	C	N-NITROSODI-N-PHENYLAMINE	0.542	0.564	-4.1	101	0.00
62	T	Azobenzene	0.546	0.562	-2.9	101	0.00
63	T	4-bromophenyl phenyl ether	0.176	0.173	1.7	100	0.00
64	T	Hexachlorobenzene	0.072	0.072	0.0	99	0.00
65	C	PENTACHLOROPHENOL	0.110	0.112	-1.8	102	0.00
66	T	Phenanthrene	0.915	0.927	-1.3	99	0.00
67	T	Anthracene	0.912	0.965	-5.8	102	0.00
68	T	Carbazole	0.706	0.669	5.2	100	0.00
69	T	Di-n-Butylphthalate	1.189	1.233	-3.7	102	0.00
70	C	FLUORANTHENE	0.954	0.959	-0.5	100	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040624\04062402.D
Acq On : 24 Jun 2004 2:34 pm
Sample : HPBNA CCV @ 50ppm
Misc : 05-26-04 A268 DJP
MS Integration Params: rteint.p

Vial: 2
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
72	T	Benzidine	0.555	0.513	7.6	113	0.00
73	M	Pyrene	1.861	1.678	9.8	100	0.00
4	S	Terphenyl-d14 BN SS 3	1.201	1.143	4.8	104	0.00
75	T	Butylbenzylphthalate	1.002	0.971	3.1	106	0.00
76	T	Bis 2-ethylhexyl adipate	0.742	0.712	4.0	103	0.00
7	T	3,3'-Dichlorobenzidine	0.240	0.252	-5.0	137	0.00
3	T	Bis(2-ethylhexyl)phthalate	1.240	1.202	3.1	104	0.00
79	T	Benzo[a]anthracene	1.163	1.132	2.7	107	0.00
)	T	Chrysene	1.035	1.015	1.9	107	0.00
81	I	Perylene-d12 ISTD	1.000	1.000	0.0	120	0.00
2	C	DI-N-OCTYLPHTHALATE	3.257	2.847	12.6	107	0.00
3	T	Benzo[b]fluoranthene	1.529	1.296	15.2	109	0.00
84	T	Benzo[k]fluoranthene	1.175	1.206	-2.6	120	0.00
5	C	BENZO[A]PYRENE	1.060	1.018	4.0	117	0.00
	T	Indeno(1,2,3-c,d)pyrene	0.605	0.644	-6.4	131	0.00
87	T	Dibenzo[a,h]anthracene	0.511	0.558	-9.2	136	0.00
88	T	Benzo[g,h,i]perylene	0.428	0.466	-8.9	135	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Response Factor Report SVOC GC/M

Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration

Calibration Files
C1 =04061704.D C2 =04061705.D C3 =04062402.D
C4 =04061707.D C5 =04061708.D C6 =04061709.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
2)		Pyridine	1.157	1.197	1.170	1.194	1.210	1.249	1.196	2.69
3)	T	N-Nitrosodimethylam	0.716	0.719	0.701	0.708	0.718	0.740	0.717	1.83
4)	S	2-Fluorophenol Acid	0.971	1.019	1.101	1.077	1.124	1.161	1.075	6.50
5)	S	Phenol-d6 Acid SS 2	1.283	1.315	1.405	1.334	1.378	1.432	1.358	4.16
6)	C	PHENOL	1.574	1.557	1.521	1.494	1.503	1.457	1.518	2.84
7)	T	Bis(2-chloroethyl)e	0.905	0.866	0.858	0.793	0.766	0.790	0.830	6.54
8)	M	2-Chlorophenol	1.165	1.175	1.166	1.181	1.191	1.234	1.185	2.18
9)	C	1,4'-DICHLOROBENZEN	1.817	1.858	1.804	1.788	1.656	1.789	1.785	3.83
10)	T	1,3'-Dichlorobenzen	1.135	1.092	1.084	1.074	1.173	1.045	1.100	4.20
11)	T	1,2'-Dichlorobenzen	1.350	1.350	1.325	1.334	1.290	1.272	1.320	2.43
12)	T	Benzyl Alcohol	0.662	0.657	0.679	0.676	0.675	0.682	0.672	1.49
13)	T	2-Methylphenol	0.842	0.829	0.823	0.796	0.790	0.807	0.815	2.51
14)	T	bis(2-chloroisoprop	1.372	1.286	1.118	0.981	0.901	0.875	1.089	18.93
15)	T	3,4-Methylphenol	1.070	1.068	1.047	1.043	1.054	1.082	1.061	1.41
16)	P	N-Nitrosodi-n-propy	1.039	0.999	0.951	0.898	0.857	0.877	0.937	7.69
17)	T	Hexachloroethane	0.542	0.533	0.509	0.502	0.493	0.497	0.513	3.90
18)	I	Naphthalene-d8 ISTD	----------ISTD----------							
19)	S	Nitrobenzene-d5 BN	0.427	0.442	0.404	0.398	0.388	0.385	0.407	5.55
20)	T	Nitrobenzene	0.430	0.422	0.385	0.368	0.353	0.352	0.385	8.87
21)	T	Isophorone	0.799	0.797	0.754	0.739	0.706	0.697	0.749	5.81
22)	C	2-NITROPHENOL	0.210	0.222	0.226	0.220	0.217	0.224	0.220	2.64
23)	T	2,4-dimethylphenol	0.296	0.300	0.301	0.302	0.299	0.300	0.300	0.75
24)	T	Bis(2-chloroethoxy)	0.395	0.394	0.372	0.362	0.350	0.357	0.372	5.15
25)	C	2,4-DICHLOROPHENOL	0.346	0.358	0.362	0.368	0.363	0.364	0.360	2.14
26)	M	1,2,4'-Trichloroben	0.396	0.400	0.396	0.397	0.381	0.388	0.393	1.79
27)	T	Naphthalene`	0.941	0.959	0.935	0.933	0.890	0.871	0.922	3.63
28)	T	4-Chloroaniline	0.484	0.497	0.478	0.472	0.454	0.443	0.472	4.21
29)	C	HEXACHLOROBUTADIENE	0.125	0.125	0.125	0.128	0.125	0.127	0.126	1.31
30)	M	4-CHLORO-3-METHYLPH	0.323	0.327	0.323	0.322	0.315	0.323	0.322	1.18
31)	T	2-Methylnaphthalene	0.753	0.757	0.771	0.759	0.712	0.692	0.741	4.23
32)	T	1-Methylnaphthalene	0.745	0.753	0.738	0.709	0.674	0.641	0.710	6.27
33)	I	Acenaphthene-d10 ISTD	----------ISTD----------							
34)	P	Hexachlorocyclopent	0.177	0.205	0.224	0.246	0.259	0.268	0.230	15.07
35)	C	2,4,6-TRICHLOROPHEN	0.187	0.195	0.179	0.175	0.172	0.179	0.181	4.72
36)	T	2,4,5-trichlorophen	0.170	0.164	0.158	0.160	0.158	0.144	0.159	5.42
37)	S	2-Fluorobiphenyl BN	1.205	1.263	1.209	1.141	1.044	0.918	1.130	11.34

) = Out of Range All CCC RSD must be <= 30% or r>=0.995 or r2>=0.99

Response Factor Report SVOC GC/M

Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration

Calibration Files
C1 =04061704.D C2 =04061705.D C3 =04062402.D
C4 =04061707.D C5 =04061708.D C6 =04061709.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
8)	T	2-Chloronaphthalene	1.070	1.088	1.036	1.029	0.993	0.943	1.026	5.13
39)	T	2-Nitroaniline	0.304	0.309	0.286	0.279	0.274	0.269	0.287	5.74
40)	T	1,4-dinitrobenzene	0.216	0.234	0.243	0.255	0.266	0.277	0.248	8.91
41)	T	1,3-dinitrobenzene	0.244	0.260	0.261	0.272	0.274	0.280	0.265	4.98
42)	T	1,2-dinitrobenzene	0.181	0.189	0.180	0.180	0.177	0.177	0.180	2.42
43)	T	3-Nitroaniline	0.263	0.266	0.249	0.253	0.268	0.276	0.262	3.88
44)	T	4-Nitroaniline	0.229	0.221	0.194	0.187	0.190	0.193	0.202	8.82
45)	T	Dimethylphthalate	1.344	1.331	1.258	1.257	1.228	1.245	1.277	3.77
46)	T	2,6-Dinitrotoluene	0.330	0.336	0.331	0.329	0.331	0.333	0.332	0.70
47)	T	Acenaphthylene	1.674	1.708	1.613	1.572	1.524	1.459	1.592	5.83
48)	C	ACENAPHTHENE	0.960	1.002	0.969	0.947	0.870	0.838	0.931	6.78
49)	P	2,4-Dinitrophenol	0.073	0.108	0.146	0.172	0.179	0.174	0.142	30.19
50)	P	4-nitrophenol	0.168	0.183	0.195	0.204	0.195	0.178	0.187	7.03
51)	M	2,4-Dinitrotoluene	0.412	0.429	0.422	0.415	0.373	0.346	0.400	8.17
52)	T	Dibenzofuran	1.492	1.516	1.432	1.408	1.303	1.272	1.404	7.02
53)	T	2,3,5,6-tetrachloro	0.236	0.263	0.273	0.292	0.310	0.315	0.282	10.71
54)	T	2,3,4,6-tetrachloro	0.241	0.265	0.272	0.290	0.298	0.303	0.278	8.45
55)	T	Diethylphthalate	1.293	1.275	1.152	1.127	1.074	1.016	1.156	9.48
56)	T	4-chlorophenyl phen	0.591	0.602	0.582	0.599	0.594	0.594	0.594	1.17
57)	T	Fluorene	1.188	1.203	1.154	1.120	1.064	1.023	1.125	6.29
58)	S	2,4,6-Tribromopheno	0.133	0.143	0.156	0.158	0.166	0.170	0.154	9.01
59)	I	Phenanthrene-d10 ISTD	----------ISTD----------							
60)	T	4,6-Dinitro-2-methy	0.083	0.105	0.122	0.138	0.138	0.132	0.120	18.41
61)	C	N-NITROSODI-N-PHENY	0.605	0.589	0.549	0.538	0.496	0.472	0.542	9.50
62)	T	Azobenzene	0.670	0.627	0.548	0.502	0.450	0.479	0.546	15.90
63)	T	4-bromophenyl pheny	0.181	0.179	0.170	0.178	0.174	0.174	0.176	2.26
64)	T	Hexachlorobenzene	0.080	0.079	0.071	0.071	0.068	0.065	0.072	8.17
65)	C	PENTACHLOROPHENOL	0.078	0.097	0.109	0.121	0.126	0.130	0.110	17.83
66)	T	Phenanthrene	0.943	0.958	0.917	0.927	0.894	0.849	0.915	4.24
67)	T	Anthracene	0.977	0.989	0.931	0.925	0.850	0.800	0.912	8.07
68)	T	Carbazole	0.808	0.767	0.660	0.668	0.669	0.668	0.706	9.05
69)	T	Di-n-Butylphthalate	1.334	1.318	1.189	1.169	1.090	1.032	1.189	10.15
70)	C	FLUORANTHENE	0.984	0.982	0.945	0.963	0.934	0.916	0.954	2.87
71)	I	Chrysene-d12 ISTD	----------ISTD----------							
72)	T	Benzidine	0.577	0.486	0.482	0.540	0.587	0.656	0.555	11.98
73)	M	Pyrene	1.953	2.019	1.775	1.794	1.780	1.847	1.861	5.49
74)	S	Terphenyl-d14 BN SS	1.205	1.289	1.172	1.163	1.170	1.206	1.201	3.91
75)	T	Butylbenzylphthalat	1.055	1.132	0.978	0.978	0.931	0.939	1.002	7.70

(#) = Out of Range All CCC RSD must be <= 30% or r>=0.995 or r2>=0.99

Response Factor Report SVOC GC/M

Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration

Calibration Files
C1 =04061704.D C2 =04061705.D C3 =04062402.D
C4 =04061707.D C5 =04061708.D C6 =04061709.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
76)	T	Bis 2-ethylhexyl ad	0.834	0.858	0.737	0.704	0.660	0.660	0.742	11.56
77)	T	3,3'-Dichlorobenzid	0.281	0.218	0.196	0.230	0.249	0.267	0.240	13.30
78)	T	Bis(2-ethylhexyl)ph	1.395	1.424	1.229	1.197	1.116	1.079	1.240	11.48
79)	T	Benzo[a]anthracene	1.149	1.192	1.122	1.174	1.161	1.179	1.163	2.14
80)	T	Chrysene	1.026	1.057	1.010	1.036	1.040	1.041	1.035	1.51
81)	I	Perylene-d12 ISTD	----------ISTD----------							
82)	C	DI-N-OCTYLPHTHALATE	3.242	3.542	3.197	3.147	3.132	3.281	3.257	4.63
83)	T	Benzo[b]fluoranthen	1.379	1.506	1.420	1.418	1.701	1.746	1.529	10.30
84)	T	Benzo[k]fluoranthen	1.279	1.269	1.207	1.269	1.015	1.011	1.175	10.89
85)	C	BENZO[A]PYRENE	1.016	1.068	1.040	1.074	1.075	1.086	1.060	2.49
86)	T	Indeno(1,2,3-c,d)py	0.581	0.564	0.587	0.646	0.624	0.629	0.605	5.35
87)	T	Dibenzo[a,h]anthrac	0.481	0.465	0.490	0.549	0.539	0.542	0.511	7.11
88)	T	Benzo[g,h,i]perylen	0.426	0.406	0.413	0.457	0.435	0.429	0.428	4.16

) = Out of Range All CCC RSD must be <= 30% or r>=0.995 or r2>=0.99

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062402.D
Acq On : 24 Jun 2004 2:34 pm
Sample : HPBNA CCV @ 50ppm
Misc : 05-26-04 A268 DJP
MS Integration Params: rteint.p
Quant Time: Jun 25 11:00 2004

Vial: 2
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Quant Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 IST	5.49	152	610692	40.00 mg/L	0.00
18) Naphthalene-d8 ISTD	6.64	136	2118994	40.00 mg/L	0.00
33) Acenaphthene-d10 ISTD	8.54	164	1597078	40.00 mg/L	-0.02
59) Phenanthrene-d10 ISTD	10.76	188	2801861	40.00 mg/L	-0.02
71) Chrysene-d12 ISTD	16.06	240	1565923	40.00 mg/L	-0.02
81) Perylene-d12 ISTD	19.82	264	979204	40.00 mg/L	-0.04

System Monitoring Compounds					
4) 2-Fluorophenol Acid SS 1	4.34	112	827535	50.40 mg/L	0.00
Spiked Amount 200.000	Range 21 - 100		Recovery = 25.20%		
5) Phenol-d6 Acid SS 2	5.12	99	1058307	51.05 mg/L	0.00
Spiked Amount 200.000	Range 10 - 94		Recovery = 25.53%		
19) Nitrobenzene-d5 BN SS 1	5.99	82	1093049m	50.65 mg/L	-0.02
Spiked Amount 100.000	Range 35 - 114		Recovery = 50.65%		
37) 2-Fluorobiphenyl BN SS 2	7.67	172	2379006	52.73 mg/L	-0.02
Spiked Amount 100.000	Range 43 - 116		Recovery = 52.73%		
58) 2,4,6-Tribromophenol Acid	9.64	329	323251	52.48 mg/L	-0.02
Spiked Amount 200.000	Range 10 - 123		Recovery = 26.24%		
74) Terphenyl-d14 BN SS 3	13.74	244	2237859	47.61 mg/L	-0.02
Spiked Amount 100.000	Range 33 - 141		Recovery = 47.61%		

Target Compounds					Qvalue
2) Pyridine	3.17	79	910040	49.84 mg/L	100
3) N-Nitrosodimethylamine	3.19	74	543515	49.66 mg/L	95
6) PHENOL	5.13	94	1152978	49.76 mg/L	98
7) Bis(2-chloroethyl)ether	5.24	63	651119	51.40 mg/L	98
8) 2-Chlorophenol	5.33	128	876930	48.46 mg/L	98
9) 1,4'-DICHLOROBENZENE	5.50	146	1404579m	51.53 mg/L	
10) 1,3'-Dichlorobenzene	5.46	146	802660m	47.77 mg/L	
11) 1,2'-Dichlorobenzene	5.68	146	1007914	50.01 mg/L	99
12) Benzyl Alcohol	5.59	108	526784	51.36 mg/L	99
13) 2-Methylphenol	5.67	107	617508	49.65 mg/L	98
14) bis(2-chloroisopropyl)ethe	5.72	45	899518	56.29 mg/L #	100
15) 3,4-Methylphenol	5.79	107	811003	50.08 mg/L	99
16) N-Nitrosodi-n-propyl amine	5.85	70	748655	52.35 mg/L	100
17) Hexachloroethane	5.95	117	396159	50.61 mg/L #	95
20) Nitrobenzene	6.01	77	1032407	50.64 mg/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062402.D
Acq On : 24 Jun 2004 2:34 pm
Sample : HPBNA CCV @ 50ppm
Misc : 05-26-04 A268 DJP
MS Integration Params: rteint.p
Quant Time: Jun 25 11:00 2004

Vial: 2
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Quant Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
21) Isophorone	6.21	82	1981793	49.96 mg/L	100
22) 2-NITROPHENOL	6.29	139	558447	47.94 mg/L	98
23) 2,4-dimethylphenol	6.25	122	763608	48.09 mg/L	98
24) Bis(2-chloroethoxy)methane	6.34	93	976513	49.60 mg/L	100
25) 2,4-DICHLOROPHENOL	6.48	162	946214	49.60 mg/L	100
26) 1,2,4'-Trichlorobenzene	6.58	180	1000716	48.07 mg/L	99
27) Naphthalene`	6.66	128	2475213	50.70 mg/L	100
28) 4-Chloroaniline	6.68	127	1268640	50.79 mg/L	100
29) HEXACHLOROBUTADIENE`	6.78	227	326660	48.97 mg/L	99
30) 4-CHLORO-3-METHYLPHENOL	7.07	107	845691	49.59 mg/L	100
31) 2-Methylnaphthalene	7.30	142	2024126	51.59 mg/L	100
32) 1-Methylnaphthalene	7.42	142	1957941	52.06 mg/L	99
34) Hexachlorocyclopentadiene	7.52	237	368425	40.33 mg/L	94
35) 2,4,6-TRICHLOROPHENOL	7.60	97	361050	49.89 mg/L	99
36) 2,4,5-trichlorophenol	7.64	97	320586	50.44 mg/L	98
38) 2-Chloronaphthalene	7.84	162	2052873	50.09 mg/L	100
39) 2-Nitroaniline	7.94	65	585384	51.11 mg/L	99
40) 1,4-dinitrobenzene	8.06	168	482824	48.68 mg/L	100
41) 1,3-dinitrobenzene	8.21	168	526236	49.73 mg/L	99
42) 1,2-dinitrobenzene	8.37	168	362227	50.29 mg/L	99
43) 3-Nitroaniline	8.44	138	494199	47.18 mg/L	98
44) 4-Nitroaniline	9.29	138	397179	49.17 mg/L	97
45) Dimethylphthalate	8.14	163	2518558	49.39 mg/L	100
46) 2,6-Dinitrotoluene	8.25	165	660417	49.89 mg/L	100
47) Acenaphthylene	8.36	152	3199060	50.34 mg/L	100
48) ACENAPHTHENE	8.59	154	1936338	52.08 mg/L	100
49) 2,4-Dinitrophenol	8.57	184	254645	40.11 mg/L	95
50) 4-nitrophenol	8.55	139	395169	52.90 mg/L	98
51) 2,4-Dinitrotoluene	8.76	165	848965	53.22 mg/L	100
52) Dibenzofuran	8.78	168	2865404	51.12 mg/L	100
53) 2,3,5,6-tetrachlorophenol	8.90	232	554774	49.35 mg/L	98
54) 2,3,4,6-tetrachlorophenol	8.97	232	551881	49.69 mg/L	96
55) Diethylphthalate	9.02	149	2364066	51.22 mg/L	100
56) 4-chlorophenyl phenyl ethe	9.19	204	1162377	49.04 mg/L	100
57) Fluorene	9.26	166	2302228	51.23 mg/L	100
60) 4,6-Dinitro-2-methylphenol	9.35	198	407536	43.84 mg/L	99
61) N-NITROSODI-N-PHENYLAMINE	9.36	169	1975412	52.08 mg/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062402.D
Acq On : 24 Jun 2004 2:34 pm
Sample : HPBNA CCV @ 50ppm
Misc : 05-26-04 A268 DJP
MS Integration Params: rteint.p
Quant Time: Jun 25 11:00 2004

Vial: 2
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Quant Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
62) Azobenzene	9.43	77	1967453	58.69 mg/L	99
63) 4-bromophenyl phenyl ether	9.94	248	604477	49.02 mg/L	100
64) Hexachlorobenzene	10.23	142	251895	49.75 mg/L #	97
65) PENTACHLOROPHENOL	10.50	266	393248	49.41 mg/L #	100
66) Phenanthrene	10.82	178	3245304	50.65 mg/L	100
67) Anthracene	10.89	178	3378686	52.89 mg/L	100
68) Carbazole	11.11	167	2342311	47.34 mg/L	100
69) Di-n-Butylphthalate	11.69	149	4318552	51.86 mg/L	100
70) FLUORANTHENE	13.05	202	3357629	50.25 mg/L	99
72) Benzidine	13.22	184	1004710	46.26 mg/L	100
73) Pyrene	13.52	202	3283669	45.06 mg/L	100
75) Butylbenzylphthalate	14.75	149	1900437	48.45 mg/L	99
76) Bis 2-ethylhexyl adipate	14.80	129	1393687	47.97 mg/L	100
77) 3,3'-Dichlorobenzidine	15.91	252	493409	52.49 mg/L	99
78) Bis(2-ethylhexyl)phthalate	15.95	149	2352449	48.46 mg/L	100
79) Benzo[a]anthracene	16.02	228	2215464	48.67 mg/L	100
80) Chrysene	16.12	228	1987741	49.06 mg/L	99
82) DI-N-OCTYLPHTHALATE	17.31	149	3485007	43.71 mg/L	100
83) Benzo[b]fluoranthene	18.67	252	1586817m	42.41 mg/L	
84) Benzo[k]fluoranthene	18.74	252	1475766	51.31 mg/L	100
85) BENZO[A]PYRENE	19.65	252	1245492	48.01 mg/L	100
86) Indeno(1,2,3-c,d)pyrene	23.87	276	788400	53.22 mg/L	97
87) Dibenzo[a,h]anthracene	23.88	278	683575	54.65 mg/L	99
88) Benzo[g,h,i]perylene	25.07	276	569887	54.44 mg/L	99

(#) = qualifier out of range (m) = manual integration

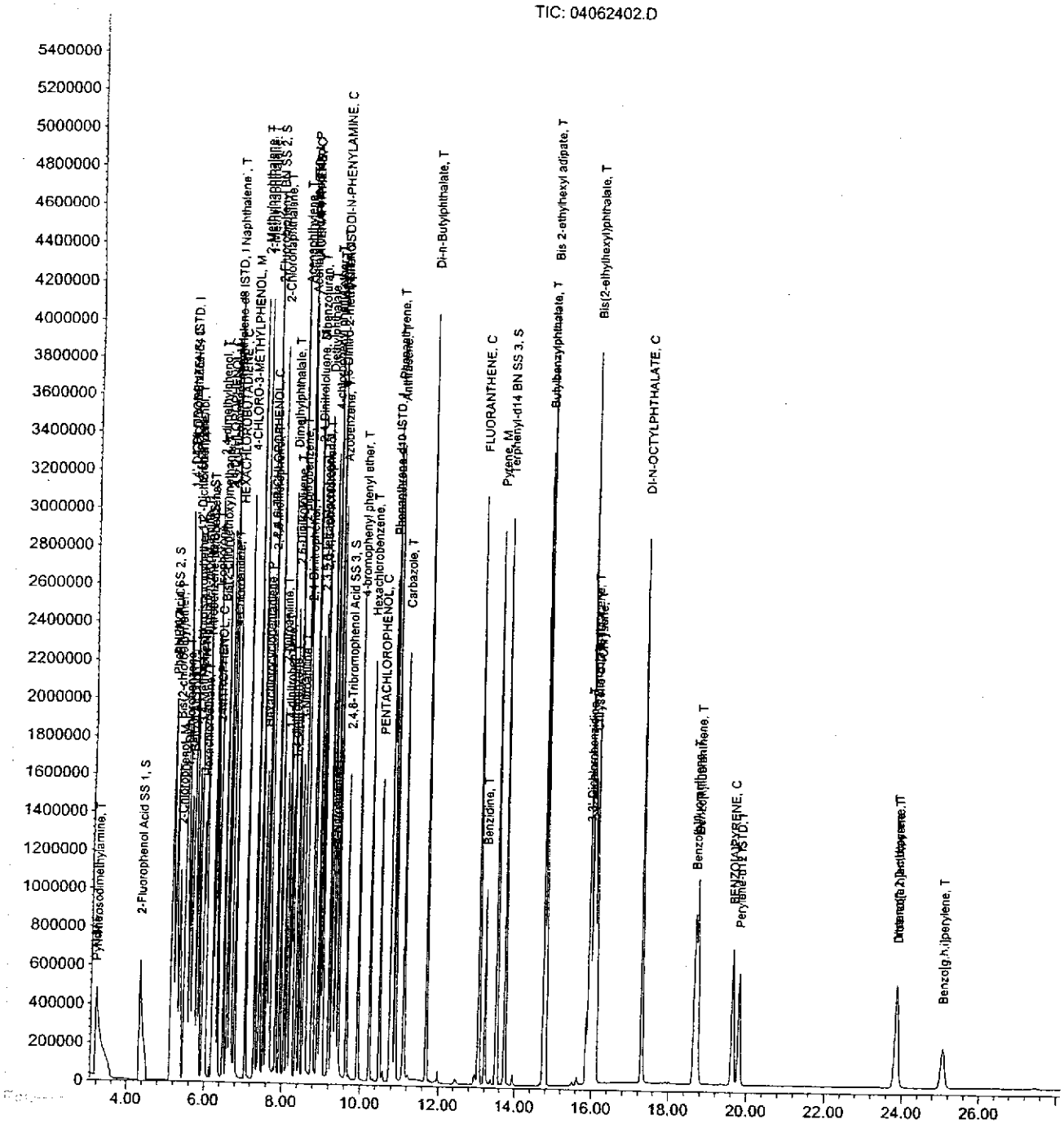
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040624\04062402.D
Acq On : 24 Jun 2004 2:34 pm
Sample : HPBNA CCV @ 50ppm
Misc : 05-26-04 A268 DJP
MS Integration Params: rteint.p
Quant Time: Jun 25 11:00 2004

Vial: 2
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040624\04062403.D
Acq On : 24 Jun 2004 3:08 pm
Sample : MDE-CH CCV @ 50ppm
Misc : 05-26-04 A270 DJP
MS Integration Params: rteint.p

Vial: 3
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MDE_CHN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 09:53:26 2004
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene d-4 IST	1.000	1.000	0.0	95	0.00
2		n-Decane	1.100	1.094	0.5	90	0.00
	T	Acetophenone	1.613	1.625	-0.7	95	0.00
4	I	Naphthalene-D8 ISTD	1.000	1.000	0.0	95	0.00
		e-Caprolactam	0.145	0.148	-2.1	95	0.00
	T	Biphenyl	0.876	0.917	-4.7	96	0.00
	I	Acenaphthene-d10 ISTD	1.000	1.000	0.0	97	0.00
	T	Atrazine	0.363	0.361	0.6	95	0.00
9	T	Octadecane	0.582	0.589	-1.2	97	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Response Factor Report SVOC GC/M

Method : C:\HPCHEM\1\METHODS\MDE_CHN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 09:53:26 2004
Response via : Initial Calibration

Calibration Files
c1 =04061002.D C2 =04061003.D C3 =04062403.D
C4 =04061005.D C5 =04061006.D C6 =04061007.D

		Compound	c1	C2	C3	C4	C5	C6	Avg	%RSD
1)	I	1,4-Dichlorobenzene d	----------ISTD----------							
2)		n-Decane	1.343	1.247	1.158	1.008	0.945	0.901	1.100	16.08
3)	T	Acetophenone	1.699	1.683	1.639	1.585	1.549	1.522	1.613	4.49
4)	I	Naphthalene-D8 ISTD	----------ISTD----------							
5)		e-Caprolactam	0.149	0.149	0.149	0.142	0.141	0.139	0.145	3.24
6)	T	Biphenyl	0.932	0.935	0.914	0.881	0.826	0.766	0.876	7.70
7)	I	Acenaphthene-d10 ISTD	----------ISTD----------							
8)	T	Atrazine	0.372	0.369	0.368	0.362	0.356	0.349	0.363	2.38
9)	T	Octadecane	0.753	0.675	0.588	0.510	0.489	0.476	0.582	19.28

:) = Out of Range
All CCC RSD must be <= 30% or r>=0.995 or r2>=0.99

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062403.D
Acq On : 24 Jun 2004 3:08 pm
Sample : MDE-CH CCV @ 50ppm
Misc : 05-26-04 A270 DJP
MS Integration Params: rteint.p
Quant Time: Jun 25 11:02 2004

Vial: 3
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: MDE_CHN.RES

Quant Method : C:\HPCHEM\1\METHODS\MDE_CHN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 09:53:26 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene d-4 IS	5.49	152	561802	40.00 mg/L	-0.14
4) Naphthalene-D8 ISTD	6.62	136	1985389	40.00 mg/L	-0.16
7) Acenaphthene-d10 ISTD	8.52	164	1427483	40.00 mg/L	-0.20

System Monitoring Compounds

Target Compounds					Qvalue
2) n-Decane	5.28	43	768430	57.96 mg/L	100
3) Acetophenone	5.83	105	1141217	50.38 mg/L	99
5) e-Caprolactam	7.00	55	366312	50.96 mg/L	98
6) Biphenyl	7.78	154	2275450	52.36 mg/L	99
8) Atrazine	10.15	200	643526	49.74 mg/L	98
9) Octadecane	10.27	57	1051607	53.39 mg/L	99

(#) = qualifier out of range (m) = manual integration

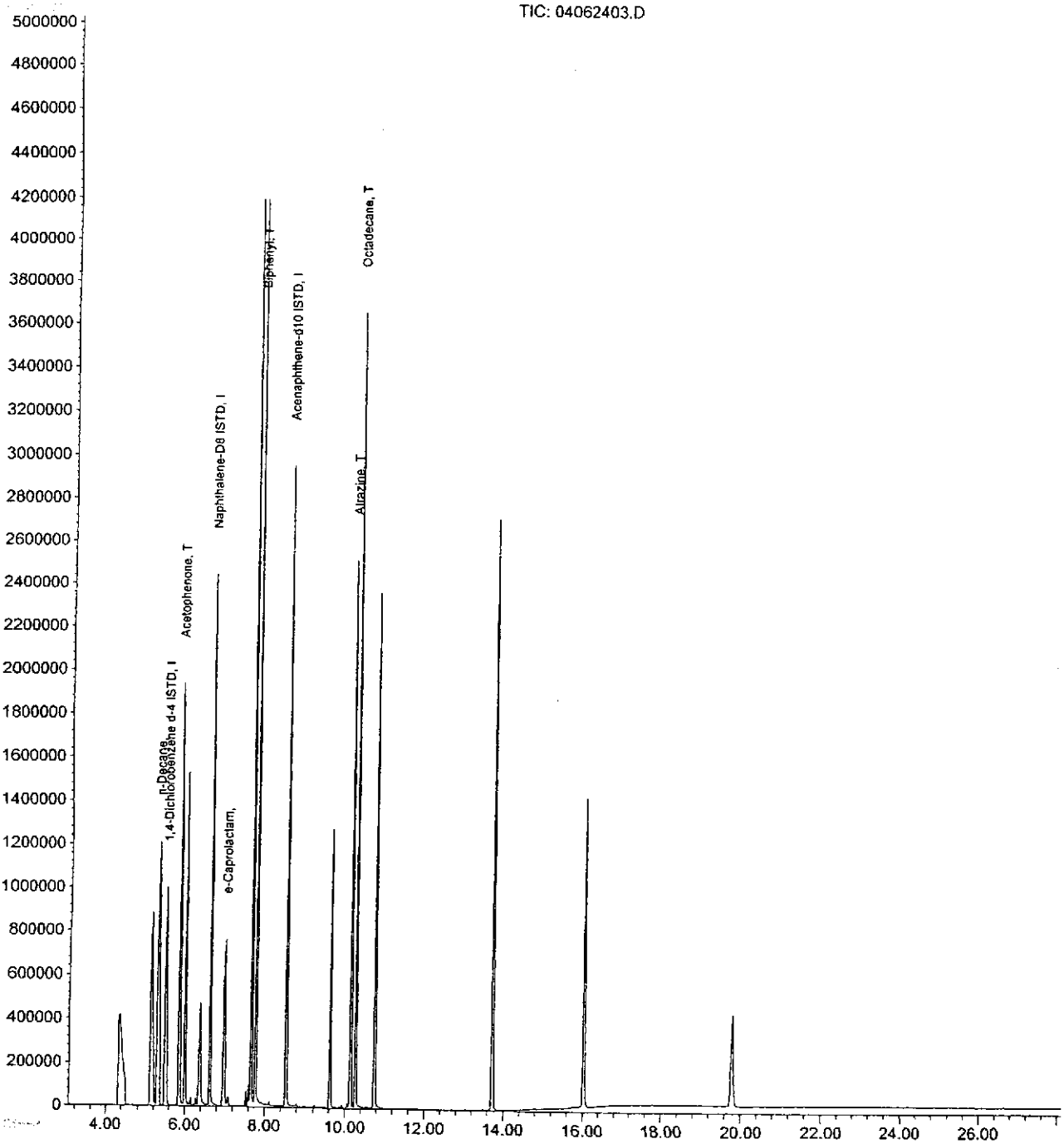
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040624\04062403.D
Acq On : 24 Jun 2004 3:08 pm
Sample : MDE-CH CCV @ 50ppm
Misc : 05-26-04 A270 DJP
MS Integration Params: rteint.p
Quant Time: Jun 25 11:02 2004

Vial: 3
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: MDE_CHN.RES

Method : C:\HPCHEM\1\METHODS\MDE_CHN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 09:53:26 2004
Response via : Initial Calibration



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PHASE SEPARATION SCIENCE, INC.

SEMI-VOLATILE ORGANIC COMPOUNDS METHOD BLANK SUMMARY

ANALYSIS:	**GC/MS Semi-Volatiles**	**LAB CODE:**	**MBW**
METHOD NO.:	**EPA 8270**	**LAB SAMPLE ID:**	**MB1121**
LAB FILE ID:	**04062412.D**	**DATE/TIME ANALYZED:**	**6/24/04 20:15**
MATRIX:	**Water**		

This Method Blank applies to the following samples:

Sample ID	Lab Sample ID	Lab File ID	Date/Time Analyzed
LCS	LCSW	04062410.D	06/24/04 07:06:00 PM
DMW-9S-062404	04062409-02	04062407.D	06/24/04 05:24:00 PM

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062412.D
Acq On : 24 Jun 2004 8:15 pm
Sample : Method Blank 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:05 2004

Vial: 12
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Quant Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 IST	5.49	152	524801	40.00	mg/L	0.00
18) Naphthalene-d8 ISTD	6.62	136	1925666	40.00	mg/L	-0.01
33) Acenaphthene-d10 ISTD	8.52	164	1377198	40.00	mg/L	-0.01
59) Phenanthrene-d10 ISTD	10.75	188	2289059	40.00	mg/L	-0.01
71) Chrysene-d12 ISTD	16.03	240	1335839	40.00	mg/L	-0.03
81) Perylene-d12 ISTD	19.78	264	603768	40.00	mg/L	-0.04

System Monitoring Compounds

4) 2-Fluorophenol Acid SS 1	4.36	112	2387978	169.26	mg/L	0.03
Spiked Amount 200.000	Range 21 - 100		Recovery = 84.63%			
5) Phenol-d6 Acid SS 2	5.13	99	3010545	168.99	mg/L	0.00
Spiked Amount 200.000	Range 10 - 94		Recovery = 84.50%			
19) Nitrobenzene-d5 BN SS 1	5.99	82	1705093	86.95	mg/L	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 86.95%			
37) 2-Fluorobiphenyl BN SS 2	7.66	172	3657586	94.02	mg/L	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 94.02%			
58) 2,4,6-Tribromophenol Acid	9.64	329	856562	161.28	mg/L	0.00
Spiked Amount 200.000	Range 10 - 123		Recovery = 80.64%			
74) Terphenyl-d14 BN SS 3	13.73	244	3237219	80.74	mg/L	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 80.74%			

Target Compounds

				Qvalue
2) Pyridine	0.00	79	0	Not Detected
3) N-Nitrosodimethylamine	0.00	74	0	Not Detected
6) PHENOL	5.16	94	913	Not Detected
7) Bis(2-chloroethyl)ether	5.25	63	409	Not Detected
8) 2-Chlorophenol	0.00	128	0	Not Detected
9) 1,4'-DICHLOROBENZENE	0.00	146	0	Not Detected
10) 1,3'-Dichlorobenzene	0.00	146	0	Not Detected
11) 1,2'-Dichlorobenzene	0.00	146	0	Not Detected
12) Benzyl Alcohol	5.49	108	1639	Not Detected
13) 2-Methylphenol	5.47	107	153	Not Detected
14) bis(2-chloroisopropyl)ethe	0.00	45	0	Not Detected
15) 3,4-Methylphenol	0.00	107	0	Not Detected
16) N-Nitrosodi-n-propyl amine	5.85	70	584	Not Detected
17) Hexachloroethane	0.00	117	0	Not Detected
20) Nitrobenzene	5.99	77	6194	Not Detected

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062412.D
Acq On : 24 Jun 2004 8:15 pm
Sample : Method Blank 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:05 2004

Vial: 12
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Quant Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
21) Isophorone	0.00	82	0	Not Detected	
22) 2-NITROPHENOL	0.00	139	0	Not Detected	
23) 2,4-dimethylphenol	0.00	122	0	Not Detected	
24) Bis(2-chloroethoxy)methane	0.00	93	0	Not Detected	
25) 2,4-DICHLOROPHENOL	0.00	162	0	Not Detected	
26) 1,2,4'-Trichlorobenzene	0.00	180	0	Not Detected	
27) Naphthalene`	6.65	128	368	Not Detected	
28) 4-Chloroaniline	0.00	127	0	Not Detected	
29) HEXACHLOROBUTADIENE`	0.00	227	0	Not Detected	
30) 4-CHLORO-3-METHYLPHENOL	0.00	107	0	Not Detected	
31) 2-Methylnaphthalene	0.00	142	0	Not Detected	
32) 1-Methylnaphthalene	7.60	142	139	Not Detected	
34) Hexachlorocyclopentadiene	0.00	237	0	Not Detected	
35) 2,4,6-TRICHLOROPHENOL	7.59	97	218	Not Detected	
36) 2,4,5-trichlorophenol	7.59	97	218	Not Detected	
38) 2-Chloronaphthalene	7.60	162	940	Not Detected	
39) 2-Nitroaniline	7.77	65	112	Not Detected	
40) 1,4-dinitrobenzene	7.91	168	94	Not Detected	
41) 1,3-dinitrobenzene	0.00	168	0	Not Detected	
42) 1,2-dinitrobenzene	0.00	168	0	Not Detected	
43) 3-Nitroaniline	0.00	138	0	Not Detected	
44) 4-Nitroaniline	0.00	138	0	Not Detected	
45) Dimethylphthalate	0.00	163	0	Not Detected	
46) 2,6-Dinitrotoluene	0.00	165	0	Not Detected	
47) Acenaphthylene	8.34	152	509	Not Detected	
48) ACENAPHTHENE	8.52	154	4074	Not Detected	
49) 2,4-Dinitrophenol	8.79	184	1449	Not Detected	
50) 4-nitrophenol	0.00	139	0	Not Detected	
51) 2,4-Dinitrotoluene	8.79	165	1792	Not Detected	
52) Dibenzofuran	0.00	168	0	Not Detected	
53) 2,3,5,6-tetrachlorophenol	0.00	232	0	Not Detected	
54) 2,3,4,6-tetrachlorophenol	0.00	232	0	Not Detected	
55) Diethylphthalate	8.99	149	286	Not Detected	
56) 4-chlorophenyl phenyl ethe	0.00	204	0	Not Detected	
57) Fluorene	9.25	166	94	Not Detected	
60) 4,6-Dinitro-2-methylphenol	0.00	198	0	Not Detected	
61) N-NITROSODI-N-PHENYLAMINE	0.00	169	0	Not Detected	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062412.D
Acq On : 24 Jun 2004 8:15 pm
Sample : Method Blank 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:05 2004

Vial: 12
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Quant Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
62) Azobenzene	9.63	77	6260	Not Detected	
63) 4-bromophenyl phenyl ether	0.00	248	0	Not Detected	
64) Hexachlorobenzene	0.00	142	0	Not Detected	
65) PENTACHLOROPHENOL	0.00	266	0	Not Detected	
66) Phenanthrene	10.79	178	454	Not Detected	
67) Anthracene	10.85	178	531	Not Detected	
68) Carbazole	0.00	167	0	Not Detected	
69) Di-n-Butylphthalate	11.67	149	719	Not Detected	
70) FLUORANTHENE	13.03	202	386	Not Detected	
72) Benzidine	0.00	184	0	Not Detected	
73) Pyrene	13.73	202	10849	Not Detected	
75) Butylbenzylphthalate	14.73	149	346	Not Detected	
76) Bis 2-ethylhexyl adipate	0.00	129	0	Not Detected	
77) 3,3'-Dichlorobenzidine	0.00	252	0	Not Detected	
78) Bis(2-ethylhexyl)phthalate	15.95	149	243	Not Detected	
79) Benzo[a]anthracene	16.01	228	4124	Not Detected	
80) Chrysene	16.01	228	4124	Not Detected	
82) DI-N-OCTYLPHTHALATE	17.30	149	500	Not Detected	
83) Benzo[b]fluoranthene	18.68	252	739	Not Detected	
84) Benzo[k]fluoranthene	18.68	252	739	Not Detected	
85) BENZO[A]PYRENE	19.79	252	2746	Not Detected	
86) Indeno(1,2,3-c,d)pyrene	0.00	276	0	Not Detected	
87) Dibenzo[a,h]anthracene	0.00	278	0	Not Detected	
88) Benzo[g,h,i]perylene	0.00	276	0	Not Detected	

(#) = qualifier out of range (m) = manual integration

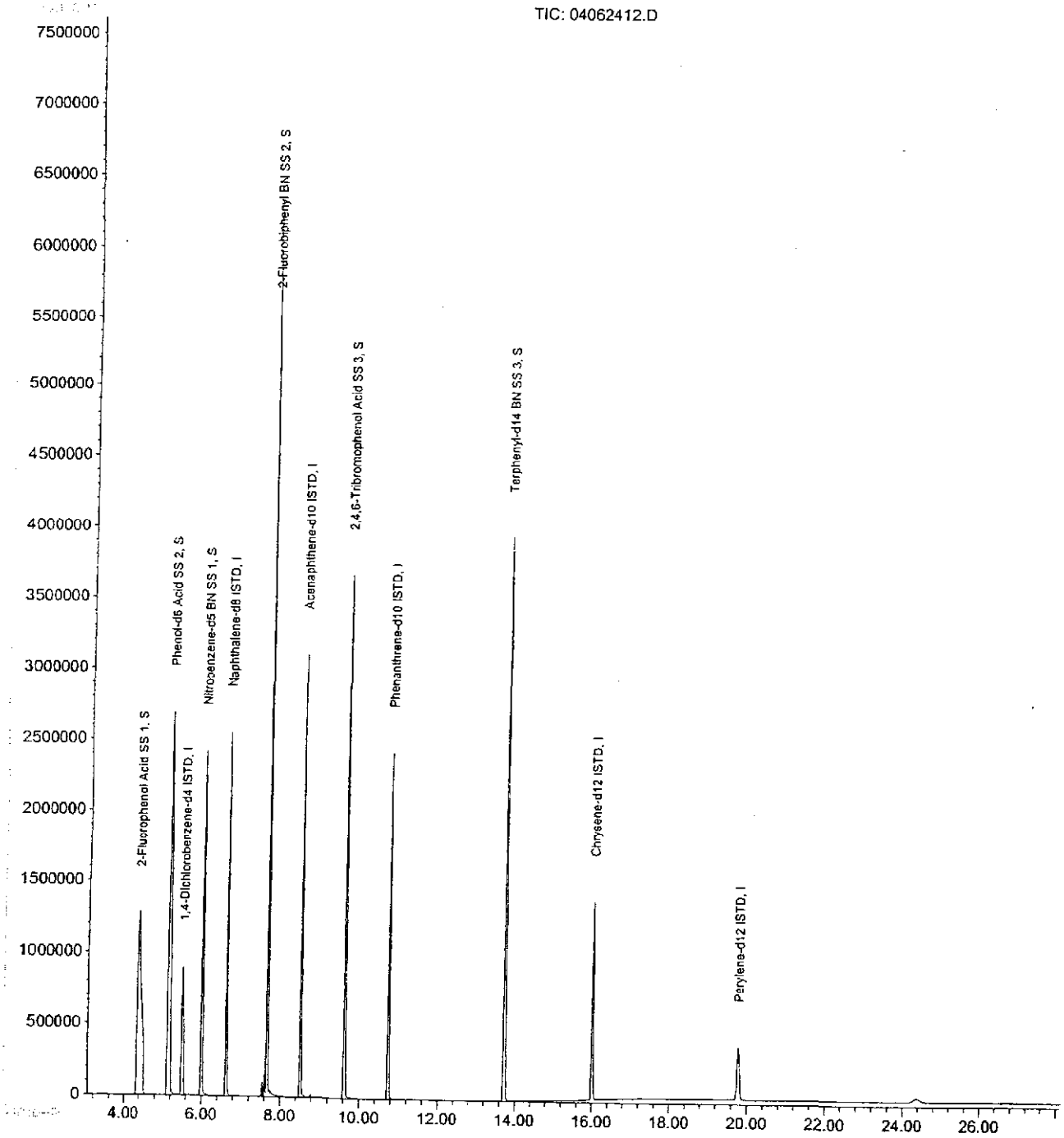
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040624\04062412.D
Acq On : 24 Jun 2004 8:15 pm
Sample : Method Blank 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:05 2004

Vial: 12
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: HPBNAN.RES

Method : C:\HPCHEM\1\METHODS\HPBNAN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 10:46:34 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040624\04062412.D
Acq On : 24 Jun 2004 8:15 pm
Sample : Method Blank 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:04 2004

Vial: 12
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: MDE_CHN.RES

Quant Method : C:\HPCHEM\1\METHODS\MDE_CHN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 09:53:26 2004
Response via : Initial Calibration
DataAcq Meth : ALSHPBNA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene d-4 IS	5.49	152	524801	40.00 mg/L	0.00
4) Naphthalene-D8 ISTD	6.62	136	1925186	40.00 mg/L	0.00
7) Acenaphthene-d10 ISTD	8.52	164	1377198	40.00 mg/L	0.00

System Monitoring Compounds

Target Compounds				Qvalue
2) n-Decane	0.00	43	0	Not Detected
3) Acetophenone	6.01	105	318	Not Detected
5) e-Caprolactam	0.00	55	0	Not Detected
6) Biphenyl	7.77	154	9630	Not Detected
8) Atrazine	0.00	200	0	Not Detected
9) Octadecane	0.00	57	0	Not Detected

(#) = qualifier out of range (m) = manual integration

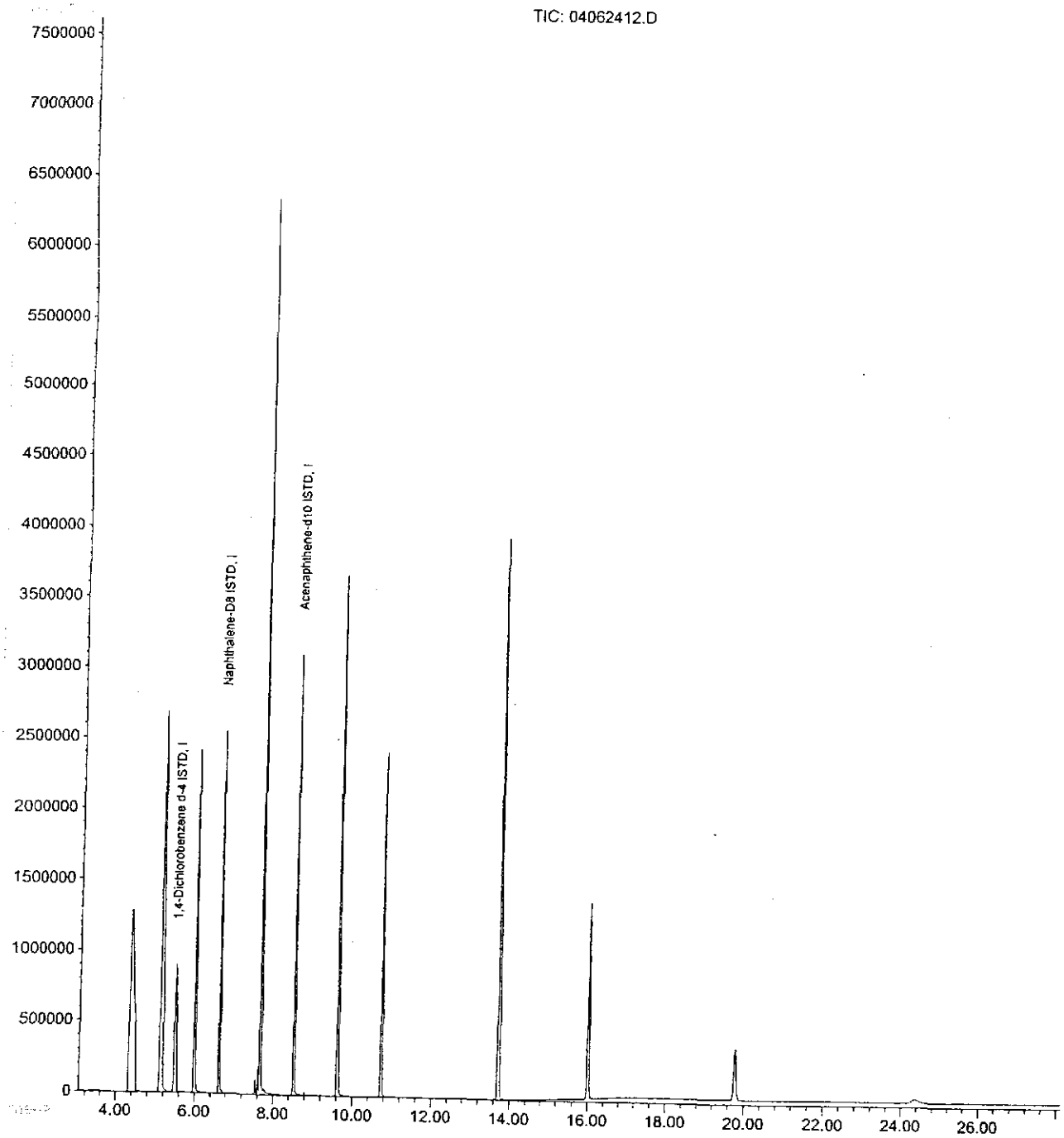
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040624\04062412.D
Acq On : 24 Jun 2004 8:15 pm
Sample : Method Blank 1000mL
Misc : Batch #1121
MS Integration Params: rteint.p
Quant Time: Jun 25 11:04 2004

Vial: 12
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00

Quant Results File: MDE_CHN.RES

Method : C:\HPCHEM\1\METHODS\MDE_CHN.M (RTE Integrator)
Title : ALS8270.M
Last Update : Tue Jun 22 09:53:26 2004
Response via : Initial Calibration



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PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

SEMI-VOLATILE ORGANIC COMPOUNDS INSTRUMENT AND PERFORMANCE CHECK DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

ANALYSIS:	**GC/MS Semi-Volatiles**	**LAB CODE:**	**BFBW**
METHOD NO.:	**EPA 8270**	**LAB SAMPLE ID:**	**DFTPP Tune**
LAB FILE ID:	**04062401.D**	**DATE/TIME ANALYZED:**	**6/24/04 14:00**

Target Mass	Ion Abundance Criteria	% Relative Abundance
51	30.0 - 60.0% of mass 198	35.7
68	0 - 2.0% of mass 69	0.0
69	0 - 100.0% of mass 198	51.0
70	0 - 2.0% of mass 69	0.4
127	40.0 - 60.0% of mass 198	43.1
197	0 - 1.0% of mass 198	0.0
198	100% of mass 198	100.0
199	5.0 - 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	20.4
365	1.0 - 100.0% of mass 198	2.2
441	Present but less than mass 443	93.1
442	40.0 - 100.0% of mass 198	71.6
443	17.0 - 23.0% of mass 442	19.8

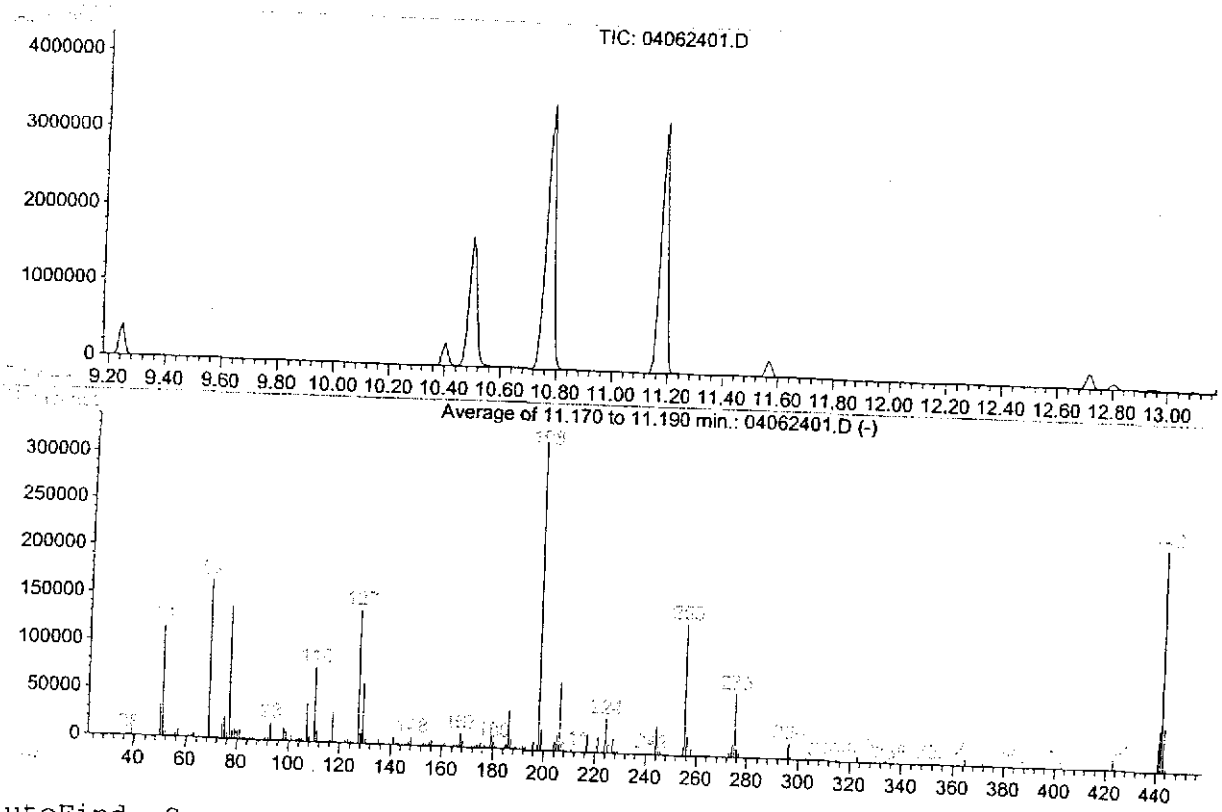
This Tune applies to the following samples:

Sample ID	Lab Sample ID	Lab File ID	Date/Time Analyzed
LCS	LCSW	04062410.D	06/24/04 07:06:00 PM
DMW-9S-062404	04062409-02	04062407.D	06/24/04 05:24:00 PM

DFTPP

Data File : C:\HPCHEM\1\DATA\040624\04062401.D
Acq On : 24 Jun 2004 2:00 pm
Sample : ULTRA Tune Solution @ 50ppm
Misc : 05-05-04 A261 DJP
MS Integration Params: rteint.p
Method : C:\HPCHEM\1\METHODS\TUNE.M (RTE Integrator)
Title : ALS8270.M

Vial: 1
Operator: DJP
Inst : SVOC GC/M
Multiplr: 1.00



AutoFind: Scans 796, 797, 798; Background Corrected with Scan 790

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.7	115709	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	51.0	165589	PASS
70	69	0.00	2	0.4	732	PASS
127	198	40	60	43.1	139925	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	324416	PASS
199	198	5	9	7.0	22677	PASS
275	198	10	30	20.4	66312	PASS
365	198	1	100	2.2	7274	PASS
441	443	0.01	100	93.1	42867	PASS
442	198	40	100	71.6	232277	PASS
443	442	17	23	19.8	46059	PASS

04062401.D TUNE.M Fri Jun 25 16:51:17 2004

Injection Log

Directory: C:\HPCHEM\1\DATA\040624

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
	1	04062401.d	1.	ULTRA Tune Solution @ 50ppm	05-05-04 A261 DJP	24 Jun 2004 14:00
	2	04062402.d	1.	HPBNA CCV @ 50ppm	05-26-04 A268 DJP	24 Jun 2004 14:34
	3	04062403.d	1.	MDE-CH CCV @ 50ppm	05-26-04 A270 DJP	24 Jun 2004 15:08
	4	04062404.d	1.	04062207-05 1000mL	Batch #1121	24 Jun 2004 15:42
	5	04062405.d	1.	04062207-09 1000mL	Batch #1121	24 Jun 2004 16:16
	6	04062406.d	1.	04062207-12 1040mL	Batch #1121	24 Jun 2004 16:51
	7	04062407.d	1.	04062409-02 1000mL	Batch #1121	24 Jun 2004 17:24
	8	04062408.d	1.	04062314-02 1000mL 10mL	Batch #1121	24 Jun 2004 17:58
	9	04062409.d	1.	04062410-02 1000mL 10mL	Batch #1121	24 Jun 2004 18:32
0	10	04062410.d	1.	LCS 1000mL	Batch #1121	24 Jun 2004 19:06
1	11	04062411.d	1.	LCSD 1000mL	Batch #1121	24 Jun 2004 19:40
2	12	04062412.d	1.	Method Blank 1000mL	Batch #1121	24 Jun 2004 20:15
3	13	04062413.d	1.	04062128-01 30.31g	Batch #1123	24 Jun 2004 20:48
4	14	04062414.d	1.	04062128-02 30.06g	Batch #1123	24 Jun 2004 21:23
5	15	04062415.d	1.	04062130-03 30.11g	Batch #1123	24 Jun 2004 21:57
6	16	04062416.d	1.	04062130-03 MS 30.21g	Batch #1123	24 Jun 2004 22:31
7	17	04062417.d	1.	04062130-03 MSD 30.18g	Batch #1123	24 Jun 2004 23:05
8	18	04062418.d	1.	LCS 30.03g	Batch #1123	24 Jun 2004 23:38
9	19	04062419.d	1.	LCSD 30.07g	Batch #1123	25 Jun 2004 00:12
0	20	04062420.d	1.	Method Blank 30.14g	Batch #1123	25 Jun 2004 00:46

25 Jun 2004 16:50

Batch Report

Batch No.	1121	Date	6/24/04	BN Surrogate ID	469
Work Area	Semi-Volatiles			Acid Surrogate ID	473
Test Method	EPA 8270	Int. Stnd. ID	460	Surrogate Pipet ID	402
Extraction Method	EPA 3510C	Int. Stnd. Vol.	10ul	Surr Added (BN/Acid)	100ul
Matrix	Water	Int. Stnd. Pipet ID	400	BN MS/LCS ID	441
Prepared By	MW			Acid MS/LCS ID	297
				MS/LCS Pipet ID	401
				MS Added (BN/Acid)	40/20ul

SampleNo.	Client Code / ID	Sample Size mL	FV (mL)	Comments
04062207-05	ESC / GP-2	1000	1	
04062207-09	ESC / GP-3	1000	1	
04062207-12	ESC / GP-4	1040	1	
04062314-02	CH / Tk 9A	1000	10	
QC	CCV			
QC	LCS	1000	1	
QC	LCSD	1000	1	
QC	MB	1000	1	

Item ID	Item	Lot No
482	Dichloromethane	041082
315	10N Sodium Hydroxide	3195
419	Sulfuric Acid 1:1	4030-12
490	Sodium Sulfate	040858

Batch Report

Batch No.	1121	Date	6/24/04	BN Surrogate ID	469
Work Area	Semi-Volatiles			Acid Surrogate ID	473
Test Method	EPA 8270	Int. Stnd. ID	460	Surrogate Pipet ID	402
Extraction Method	EPA 3510C	Int. Stnd. Vol.	10ul	Surr Added (BN/Acid)	100ul
Matrix	Water	Int. Stnd. Pipet ID	400	BN MS/LCS ID	441
Prepared By	MW			Acid MS/LCS ID	297
				MS/LCS Pipet ID	401
				MS Added (BN/Acid)	40/20ul

SampleNo.	Client Code / ID	Sample Size mL	g	FV (mL)	Comments
04062207-05	ESC / GP-2				
04062207-09	ESC / GP-3				
04062207-12	ESC / GP-4				
04062314-02	CH / Tk 9A				
04062409-02	TETRACA / DMW-9S-062404	1000		1	ADDED FOR BATCH
04062410-02	CH / Tk 8	1040		10	
QC	CCV				
QC	LCS				
QC	LCSD				
QC	MB				

Item ID	Item	Lot No
482	Dichloromethane	041082
315	10N Sodium Hydroxide	3195
419	Sulfuric Acid 1:1	4030-12
490	Sodium Sulfate	040858

PHASE SEPARATION SCIENCE, INC.

Analytical Chemistry Environmental Science

QA/QC SUMMARY DATA

Metals

- *Initial Calibration Verification Summary*
- *Continuing Calibration Verification Summary*
- *Duplicate Summary*
- *Matrix Spike Summary (LFM)*
- *Method Blank Summary (PB)*
- *LCS Summary*

6630 Baltimore National Pike Baltimore, MD 21228 (800) 932-9047 (410) 747-8770 FAX (410) 788-8723

Data File List

Directory : C:\ICPCHEM\1\DATA\040628A.B

Line	File Name	Sample Name	Misc Info	Acquired Date
1	001CALB.D	Blank		2004/06/28 09:19
2	002CALB.D	Blank		2004/06/28 09:24
3	003CALS.D	5 ppb / 500 PPB/0.2 HG	0.025 ML #446; 0.010ML A097-	2004/06/28 09:33
4	004CALS.D	40 ppb / 5000 ppb/1 HG	0.2 ML #446; 0.05 ML A097-50	2004/06/28 09:38
5	005CALS.D	100 ppb / 10000 PPB/ 4 HG	0.5 ML #97; 0.2 ML # A097-50	2004/06/28 09:43
6	006ICV1.D	ICV-50 PPB ; 2 PPB HG	0.25 ML #444; 0.1 ML #A098-5	2004/06/28 09:48
7	007ICV1.D	ICV-50 PPB ; 2 PPB HG	0.25 ML #444; 0.1 ML #A098-5	2004/06/28 09:52
8	008_ICB.D	icb		2004/06/28 09:57
9	009SMPL.D	1 PPB CHECK		2004/06/28 10:02
10	010ICSA.D	ICSA STD	2.5 ML #448 - 25 ML	2004/06/28 10:07
11	011SMPL.D	rinse		2004/06/28 10:12
12	012ICSB.D	ICSB STD	2.5 ML #448, 0.05 ML #449 -	2004/06/28 10:17
13	013SMPL.D	RINSE		2004/06/28 10:22
14	014AREF.D	04062118-03	BATCH 1130	2004/06/28 10:27
15	015DUP1.D	04062118-03 DUP	BATCH 1130	2004/06/28 10:31
16	016LFM1.D	04062118-03 LFM	BATCH 1130	2004/06/28 10:36
17	017SMPL.D	04062118-05	BATCH 1130	2004/06/28 10:41
18	018SMPL.D	04062118-07	BATCH 1130	2004/06/28 10:46
19	019SMPL.D	04062118-09	BATCH 1130	2004/06/28 10:51
20	020SMPL.D	04062118-11	BATCH 1130	2004/06/28 10:56
21	021SMPL.D	RINSE		2004/06/28 11:01
22	022CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/28 11:06
23	023CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/28 11:11
24	024_CCB.D	CCB		2004/06/28 11:15
25	025_CCB.D	CCB		2004/06/28 11:20
26	026SMPL.D	04062118-13	BATCH 1130	2004/06/28 11:25
27	027SMPL.D	04062118-15	BATCH 1130	2004/06/28 11:30
28	028SMPL.D	04062128-03	BATCH 1130	2004/06/28 11:35
29	029SMPL.D	04062129-01	BATCH 1130	2004/06/28 11:40
30	030SMPL.D	04062130-01	BATCH 1130	2004/06/28 11:45
31	031__PB.D	PB	BATCH 1120	2004/06/28 11:50
32	032_LCS.D	LCS	BATCH 1120	2004/06/28 11:55
33	033SMPL.D	04062118-02	BATCH 1120	2004/06/28 12:00
34	034SMPL.D	04062118-04	BATCH 1120	2004/06/28 12:05
35	035SMPL.D	04062118-06	BATCH 1120	2004/06/28 12:10
36	036SMPL.D	RINSE		2004/06/28 12:22
37	037CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/28 12:27
38	038_CCB.D	CCB		2004/06/28 12:31
39	039SMPL.D	04062118-08	BATCH 1120	2004/06/28 12:36
40	040SMPL.D	04062118-10	BATCH 1120	2004/06/28 12:41
41	041SMPL.D	04062118-12	BATCH 1120	2004/06/28 12:46
42	042SMPL.D	04062118-14	BATCH 1120	2004/06/28 12:51
43	043AREF.D	04062305-01	BATCH 1120	2004/06/28 12:56
44	044DUP1.D	04062305-01	BATCH 1120	2004/06/28 13:01
45	045LFM1.D	04062305-01	BATCH 1120	2004/06/28 13:06
46	046PDS1.D	04062305-01	BATCH 1120	2004/06/28 13:11
47	047SMPL.D	04062526-01	BATCH 1141	2004/06/28 13:16
48	048SMPL.D	04062328-01	BATCH 1141	2004/06/28 13:21
49	049SMPL.D	RINSE		2004/06/28 13:25
50	050CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/28 13:30
51	051_CCB.D	CCB		2004/06/28 13:35
52	052__PB.D	PB 500D	BATCH 1142	2004/06/28 13:40
53	053_LCS.D	LCS 500D	BATCH 1142	2004/06/28 13:45
54	054SMPL.D	04062128-01 1.050 500D	BATCH 1142	2004/06/28 13:50
55	055SMPL.D	04062128-02 1.044 500D	BATCH 1142	2004/06/28 13:55
56	056CCV1.D	RR BE		2004/06/28 14:00
57	057_LCS.D	RR ZN	BATCH 1142	2004/06/28 14:05
58	058SMPL.D	04062130-03 1.009 500D	BATCH 1142	2004/06/28 14:10
59	059SMPL.D	04062132-06 1.276 500D	BATCH 1142	2004/06/28 14:15
60	060SMPL.D	04062132-07 1.141 500D	BATCH 1142	2004/06/28 14:20
61	061SMPL.D	04062132-08 1.166 500D	BATCH 1142	2004/06/28 14:25

Directory : C:\ICPCHEM\1\DATA\040628A.B

Data File List

Line	File Name	Sample Name	Misc Info	Acquired Date
62	062AREF.D	04062418-06 1.139 500D	BATCH 1142	2004/06/28 14:29
63	063SMPL.D	RINSE		2004/06/28 14:34
64	064CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/28 14:39
65	065_CCB.D	CCB		2004/06/28 14:44
66	066DUP1.D	04062418-06 1.138 500D	BATCH 1142	2004/06/28 14:49
67	067LFM1.D	04062418-06 1.146 500D	BATCH 1142	2004/06/28 14:54
68	068PDS1.D	04062418-06 500D	BATCH 1142	2004/06/28 14:59
69	069DIL1.D	04062418-06 2500D	BATCH 1142	2004/06/28 15:04
70	070SMPL.D	04062135-01	BATCH 1120	2004/06/28 15:09
71	071SMPL.D	04062135-02	BATCH 1120	2004/06/28 15:14
72	072SMPL.D	04062202-01	BATCH 1120	2004/06/28 15:18
73	073SMPL.D	04062301-01	BATCH 1120	2004/06/28 15:23
74	074SMPL.D	04062314-02	BATCH 1120	2004/06/28 15:28
75	075SMPL.D	04062401-01	BATCH 1120	2004/06/28 15:33
76	076SMPL.D	RINSE		2004/06/28 15:38
77	077CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/28 15:43
78	078_CCB.D	CCB		2004/06/28 15:48
79	079__PB.D	PB	BATCH 1141	2004/06/28 15:53
80	080_LCS.D	LCS	BATCH 1141	2004/06/28 15:58
81	081AREF.D	04062328-01	BATCH 1141	2004/06/28 16:03
82	082DUP1.D	04062328-01	BATCH 1141	2004/06/28 16:07
83	083LFM1.D	04062328-01	BATCH 1141	2004/06/28 16:12
84	084SMPL.D	04062335-01	BATCH 1141	2004/06/28 16:17
85	085SMPL.D	04062335-02	BATCH 1141	2004/06/28 16:22
86	086SMPL.D	04062335-03	BATCH 1141	2004/06/28 16:27
87	087SMPL.D	04062335-04	BATCH 1141	2004/06/28 16:32
88	088SMPL.D	04062335-05	BATCH 1141	2004/06/28 16:37
89	089SMPL.D	RINSE		2004/06/28 16:42
90	090CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/28 16:47
91	091_CCB.D	CCB		2004/06/28 16:52
92	092SMPL.D	04062335-06	BATCH 1141	2004/06/28 16:56
93	093SMPL.D	04062335-07	BATCH 1141	2004/06/28 17:01
94	094SMPL.D	04062335-08	BATCH 1141	2004/06/28 17:06
95	095SMPL.D	04062216-01	BATCH 1141	2004/06/28 17:11
96	096SMPL.D	04062414-01	BATCH 1141	2004/06/28 17:16
97	097SMPL.D	04062425-01	BATCH 1141	2004/06/28 17:21
98	098SMPL.D	04062409-03	BATCH 1130	2004/06/28 17:26
99	099SMPL.D	04062409-05	BATCH 1130	2004/06/28 17:31
100	100SMPL.D	04062409-07	BATCH 1130	2004/06/28 17:36
101	101AREF.D	04062409-09	BATCH 1130	2004/06/28 17:41
102	102SMPL.D	RINSE		2004/06/28 17:45
103	103CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/28 17:50
104	104_CCB.D	CCB		2004/06/28 17:55
105	105DUP1.D	04062409-09 DUP	BATCH 1130	2004/06/28 18:00
106	106SMPL.D	04062134-02 1.072 500D	BATCH 1142	2004/06/28 18:05
107	107SMPL.D	04062134-03 1.051 500D	BATCH 1142	2004/06/28 18:10
108	108SMPL.D	04062134-05 1.217 500D	BATCH 1142	2004/06/28 18:15
109	109SMPL.D	04062309-01 1.117 500D	BATCH 1142	2004/06/28 18:20
110	110SMPL.D	04062309-02 1.020 500D	BATCH 1142	2004/06/28 18:25
111	111SMPL.D	04062309-03 1.123 500D	BATCH 1142	2004/06/28 18:30
112	112SMPL.D	04062418-02 1.217 500D	BATCH 1142	2004/06/28 18:35
113	113SMPL.D	04062418-04 1.216 500D	BATCH 1142	2004/06/28 18:40
114	114SMPL.D	04062422-02 1.003 500D	BATCH 1142	2004/06/28 18:44
115	115SMPL.D	RINSE		2004/06/28 18:49
116	116CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/28 18:54
117	117_CCB.D	CCB		2004/06/28 18:59
118	118SMPL.D	04062423-02 1.014 500D	BATCH 1142	2004/06/28 19:04
119	119SMPL.D	04062517-01 1.032 500D	BATCH 1142	2004/06/28 19:09
120	120SMPL.D	04062517-02 1.245 500D	BATCH 1142	2004/06/28 19:14
121	121SMPL.D	04062517-04 1.053 500D	BATCH 1142	2004/06/28 19:19
122	122SMPL.D	RINSE		2004/06/28 19:24

Data File List

Directory : C:\ICPCHEM\1\DATA\040628A.B

Line	File Name	Sample Name	Misc Info	Acquired Date
123	123CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/28 19:29
124	124_CCB.D	CCB		2004/06/28 19:34
125	125SMPL.D	LRC 5 PPM		2004/06/28 19:39
126	126SMPL.D			2004/06/28 19:43
127	127SMPL.D			2004/06/28 19:48
128	128SMPL.D			2004/06/28 19:53
129	129SMPL.D			2004/06/28 19:58
130	130SMPL.D			2004/06/28 20:03
131	131SMPL.D			2004/06/28 20:08

ICV QC Report

Data File:	C:\ICPCHEM\1\DATA\040628A.B\007ICV1.D\007ICV1.D#
Date Acquired:	Jun 28 2004 09:52 am
Acq. Method:	PPRCRA.M
Operator:	
Sample Name:	ICV-50 PPB ; 2 PPB HG
Misc Info:	0.25 ML #444; 0.1 ML #A098-50 ML
Vial Number:	1105
Current Method:	C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.C
Last Cal. Update:	Jun 28 2004 02:04 pm
Sample Type:	ICV1
Dilution Factor:	1.00

QC Elements

Element	Raw Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	50.89	ppb	2.87	50.00	90 - 110	
52 Cr	48.23	ppb	3.03	50.00	90 - 110	
60 Ni	51.79	ppb	1.78	50.00	90 - 110	
63 Cu	49.27	ppb	2.75	50.00	90 - 110	
66 Zn	52.86	ppb	4.30	50.00	90 - 110	
75 As	50.09	ppb	3.19	50.00	90 - 110	
82 Se	50.42	ppb	3.14	50.00	90 - 110	
107 Ag	59.97	ppb	1.63	50.00	90 - 110	Fail
111 Cd	51.01	ppb	1.07	50.00	90 - 110	
121 Sb	51.25	ppb	0.61	50.00	90 - 110	
138 Ba	49.69	ppb	0.80	50.00	90 - 110	
202 Hg	1.98	ppb	0.97	2.00	90 - 110	
205 Tl	47.68	ppb	0.91	50.00	90 - 110	
208 Pb	49.33	ppb	1.09	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	2917246	5.11	3186132	91.6	30 - 140	
45 Sc	3998169	2.39	4244239	94.2	30 - 140	
72 Ge	827551	4.09	891206	92.9	30 - 140	
115 In	5173911	2.67	5438300	95.1	30 - 140	
159 Tb	6164217	2.53	6240441	98.8	30 - 140	
209 Bi	3462712	2.17	3529962	98.1	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040628A.B\002CALB.D\002CALB.D#

All Reference Sample QC Report

Data File:	C:\ICPCHEM\1\DATA\040628A.B\014AREF.D\014AREF.D#
Date Acquired:	Jun 28 2004 10:27 am
Acq. Method:	PPRCRA.M
Operator:	Lisa Miller
Sample Name:	04062118-03
Misc Info:	BATCH 1130
Vial Number:	2101
Current Method:	C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.C
Last Cal. Update:	Jun 28 2004 10:17 am
Sample Type:	AllRef
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	0.00	0.00	ppb	153.63	8000.00	
52 Cr	5.03 ✓	5.03	ppb	2.47	40000.00	
60 Ni	-0.73	-0.73	ppb	5.69	8000.00	
63 Cu	36.29 ✓	36.29	ppb	2.16	8000.00	
66 Zn	8.18	8.18	ppb	1.00	8000.00	
75 As	27.78 ✓	27.78	ppb	2.00	8000.00	
82 Se	8.97 ✓	8.97	ppb	5.53	8000.00	
107 Ag	-0.04	-0.04	ppb	13.07	8000.00	
111 Cd	-0.38	-0.38	ppb	53.55	8000.00	
121 Sb	0.47	0.47	ppb	3.99	8000.00	
138 Ba	114.70	114.70	ppb	0.50	8000.00	
202 Hg	0.14	0.14	ppb	7.10	8.00	
205 Tl	-0.01	-0.01	ppb	108.89	8000.00	
208 Pb	0.16	0.16	ppb	8.32	40000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	2220595	1.20	3186132	69.7	30 - 140	
45 Sc	3496371	0.79	4244239	82.4	30 - 140	
72 Ge	656172	1.89	891206	73.6	30 - 140	
115 In	4132012	1.72	5438300	76.0	30 - 140	
159 Tb	5265394	1.40	6240441	84.4	30 - 140	
209 Bi	2582834	0.14	3529962	73.2	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040628A.B\002CALB.D\002CALB.D#

Duplicate QC Report

Data File:	C:\ICPCHEM\1\DATA\040628A.B\015DUP1.D\015DUP1.D#
Date Acquired:	Jun 28 2004 10:31 am
Acq. Method:	PPRCRA.M
Operator:	
Sample Name:	04062118-03 DUP
Misc Info:	BATCH 1130
Vial Number:	2102
Current Method:	C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.C
Last Cal. Update:	Jun 28 2004 10:17 am
Sample Type:	Dup1
Dilution Factor:	1.00

Duplicate Ref File: C:\ICPCHEM\1\DATA\040628A.B\014AREF.D\014AREF.D#

QC Elements

Element	Raw Conc	Units	RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	-0.01	ppb	89.87	0.00	-57.69	20	<PQL
52 Cr	5.58	ppb	0.71	5.03	10.26	20	
60 Ni	-0.73	ppb	11.89	-0.73	-0.10	20	<PQL
63 Cu	35.49	ppb	2.94	36.29	2.23	20	
66 Zn	8.16	ppb	1.68	8.18	0.21	20	<PQL
75 As	27.84	ppb	1.71	27.78	0.22	20	
82 Se	8.90	ppb	7.14	8.97	0.74	20	
107 Ag	-0.05	ppb	3.91	-0.04	-10.12	20	<PQL
111 Cd	-0.53	ppb	42.42	-0.38	-32.29	20	<PQL
121 Sb	0.43	ppb	1.16	0.47	10.95	20	<PQL
138 Ba	112.90	ppb	0.45	114.70	1.58	20	
202 Hg	0.14	ppb	1.67	0.14	2.84	20	<PQL
205 Tl	-0.01	ppb	54.57	-0.01	-31.98	20	<PQL
208 Pb	0.20	ppb	46.11	0.16	23.89	20	<PQL

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	2326961	2.74	3186132	73.0	30 - 140	
45 Sc	3455159	0.88	4244239	81.4	30 - 140	
72 Ge	649170	3.15	891206	72.8	30 - 140	
115 In	4120388	2.26	5438300	75.8	30 - 140	
159 Tb	5198684	0.94	6240441	83.3	30 - 140	
209 Bi	2596370	0.80	3529962	73.6	30 - 140	

ISTD Ref. File : C:\ICPCHEM\1\DATA\040628A.B\002CALB.D\002CALB.D#

LFM Sample QC Report

Data File: C:\ICPCHEM\1\DATA\040628A.B\016LFM1.D\016LFM1.D#
Date Acquired: Jun 28 2004 10:36 am
Acq. Method: PPRCRA.M
Operator:
Sample Name: 04062118-03 LFM
Misc Info: BATCH 1130
Vial Number: 2103
Current Method: C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.C
Last Cal. Update: Jun 28 2004 10:17 am
Sample Type: LFM1
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: C:\ICPCHEM\1\DATA\040628A.B\014AREF.D\014AREF.D#

QC Elements

Element	Raw Conc	Units	Ref Conc	RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	50.11	ppb	0.00	5.06	50.00	100.2	75 - 125	
52 Cr	48.79	ppb	5.03	1.53	50.00	87.5	75 - 125	
60 Ni	42.10	ppb	-0.73	0.62	50.00	85.7	75 - 125	
63 Cu	76.29	ppb	36.29	1.39	50.00	80.0	75 - 125	
66 Zn	51.19	ppb	8.18	1.01	50.00	86.0	75 - 125	
75 As	81.56	ppb	27.78	2.23	50.00	107.6	75 - 125	
82 Se	60.76	ppb	8.97	5.15	50.00	103.6	75 - 125	
107 Ag	27.25	ppb	-0.04	4.08	50.00	54.6	75 - 125	Fail
111 Cd	42.72	ppb	-0.38	0.25	50.00	86.2	75 - 125	
121 Sb	47.65	ppb	0.47	0.26	50.00	94.4	75 - 125	
138 Ba	161.80	ppb	114.70	0.62	50.00	94.2	75 - 125	
202 Hg	0.89	ppb	0.14	5.07	2.00	37.7	75 - 125	Fail
205 Tl	48.41	ppb	-0.01	0.62	50.00	96.8	75 - 125	
208 Pb	49.84	ppb	0.16	0.33	50.00	99.4	75 - 125	

Spiked at 1 ppb

ISTD Elements

Element	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	2048782	12.83	3186132	64.3	30 - 140	
45 Sc	3286406	4.53	4244239	77.4	30 - 140	
72 Ge	616048	1.88	891206	69.1	30 - 140	
115 In	3915716	1.93	5438300	72.0	30 - 140	
159 Tb	4971462	1.74	6240441	79.7	30 - 140	
209 Bi	2493151	0.93	3529962	70.6	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040628A.B\002CALB.D\002CALB.D#

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040628A.B\022CCV1.D\022CCV1.D#
Date Acquired: Jun 28 2004 11:06 am
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.C
Last Cal Update: Jun 28 2004 02:04 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	50.08	ppb	0.70	50.00	90 - 110	
52 Cr	46.52	ppb	0.91	50.00	90 - 110	
60 Ni	50.87	ppb	1.37	50.00	90 - 110	
63 Cu	48.65	ppb	1.09	50.00	90 - 110	
66 Zn	53.85	ppb	0.25	50.00	90 - 110	
75 As	51.42	ppb	0.70	50.00	90 - 110	
82 Se	50.88	ppb	0.86	50.00	90 - 110	
107 Ag	58.68	ppb	0.26	50.00	90 - 110	Fail
111 Cd	49.51	ppb	0.67	50.00	90 - 110	
121 Sb	50.31	ppb	0.89	50.00	90 - 110	
138 Ba	47.80	ppb	0.91	50.00	90 - 110	
202 Hg	1.94	ppb	0.72	2.00	90 - 110	
205 Tl	46.89	ppb	0.37	50.00	90 - 110	
208 Pb	48.43	ppb	0.06	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3039307	2.46	3186132	95.4	30 - 140	
45 Sc	3756634	1.91	4244239	88.5	30 - 140	
72 Ge	724043	2.15	891206	81.2	30 - 140	
115 In	4563291	1.75	5438300	83.9	30 - 140	
159 Tb	5412317	2.11	6240441	86.7	30 - 140	
209 Bi	3109068	1.47	3529962	88.1	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040628A.B\002CALB.D\002CALB.D#

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040628A.B\037CCV1.D\037CCV1.D#
Date Acquired: Jun 28 2004 12:27 pm
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.C
Last Cal Update: Jun 28 2004 02:04 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	49.47	ppb	2.46	50.00	90 - 110	
52 Cr	45.89	ppb	0.57	50.00	90 - 110	
60 Ni	50.05	ppb	0.86	50.00	90 - 110	
63 Cu	48.32	ppb	1.57	50.00	90 - 110	
66 Zn	53.78	ppb	1.58	50.00	90 - 110	
75 As	50.95	ppb	0.52	50.00	90 - 110	
82 Se	49.97	ppb	1.33	50.00	90 - 110	
107 Ag	58.61	ppb	0.41	50.00	90 - 110	Fail
111 Cd	49.78	ppb	1.24	50.00	90 - 110	
121 Sb	50.35	ppb	0.45	50.00	90 - 110	
138 Ba	47.89	ppb	0.84	50.00	90 - 110	
202 Hg	1.95	ppb	0.90	2.00	90 - 110	
205 Tl	46.24	ppb	0.91	50.00	90 - 110	
208 Pb	48.08	ppb	0.36	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	2961180	3.22	3186132	92.9	30 - 140	
45 Sc	3740448	2.35	4244239	88.1	30 - 140	
72 Ge	716749	1.77	891206	80.4	30 - 140	
115 In	4548107	2.55	5438300	83.6	30 - 140	
159 Tb	5383781	2.83	6240441	86.3	30 - 140	
209 Bi	3092963	1.00	3529962	87.6	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040628A.B\002CALB.D\002CALB.D#

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040628A.B\050CCV1.D\050CCV1.D#
Date Acquired: Jun 28 2004 01:30 pm
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.C
Last Cal Update: Jun 28 2004 02:04 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	51.96	ppb	0.98	50.00	90 - 110	
52 Cr	45.30	ppb	0.65	50.00	90 - 110	
60 Ni	49.64	ppb	2.93	50.00	90 - 110	
63 Cu	46.95	ppb	2.00	50.00	90 - 110	
66 Zn	53.83	ppb	0.11	50.00	90 - 110	
75 As	51.10	ppb	0.23	50.00	90 - 110	
82 Se	50.89	ppb	1.19	50.00	90 - 110	
107 Ag	58.68	ppb	0.35	50.00	90 - 110	Fail
111 Cd	50.04	ppb	0.47	50.00	90 - 110	
121 Sb	50.00	ppb	0.68	50.00	90 - 110	
138 Ba	48.29	ppb	0.45	50.00	90 - 110	
202 Hg	1.89	ppb	3.04	2.00	90 - 110	
205 Tl	45.80	ppb	0.57	50.00	90 - 110	
208 Pb	47.91	ppb	0.32	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3423395	2.55	3186132	107.4	30 - 140	
45 Sc	3826748	3.35	4244239	90.2	30 - 140	
72 Ge	711356	1.49	891206	79.8	30 - 140	
115 In	4449948	1.63	5438300	81.8	30 - 140	
159 Tb	5253979	2.11	6240441	84.2	30 - 140	
209 Bi	3048232	1.16	3529962	86.4	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040628A.B\002CALB.D\002CALB.D#

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\040628A.B\051_CCB.D\051_CCB.D#
Date Acquired: Jun 28 2004 01:35 pm
Operator:
Sample Name: CCB
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.C
Last Cal Update: Jun 28 2004 02:04 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	High Limit	Flag
9 Be	0.07	ppb	13.32	2.50	
52 Cr	0.12	ppb	26.55	2.50	
60 Ni	0.06	ppb	86.49	2.50	
63 Cu	0.35	ppb	20.91	2.50	
66 Zn	0.29	ppb	54.82	25.00	
75 As	-0.05	ppb	371.59	0.50	
82 Se	0.21	ppb	35.85	2.50	
107 Ag	0.12	ppb	9.39	2.50	
111 Cd	0.08	ppb	75.30	2.50	
121 Sb	0.34	ppb	1.74	2.50	
138 Ba	-0.12	ppb	62.71	2.50	
202 Hg	0.01	ppb	25.38	0.10	
205 Tl	0.19	ppb	9.73	2.50	
208 Pb	0.04	ppb	30.25	2.50	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3424571	2.16	3186132	107.5	30 - 140	
45 Sc	3840786	1.85	4244239	90.5	30 - 140	
72 Ge	727875	1.37	891206	81.7	30 - 140	
115 In	4544987	2.26	5438300	83.6	30 - 140	
159 Tb	5309207	1.99	6240441	85.1	30 - 140	
209 Bi	3119119	1.38	3529962	88.4	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040628A.B\002CALB.D\002CALB.D#

Data File List

Directory : C:\ICPCHEM\1\DATA\040629A.B

Line	File Name	Sample Name	Misc Info	Acquired Date
1	001CALB.D	Blank		2004/06/29 09:25
2	002CALB.D	Blank		2004/06/29 09:30
3	003CALS.D	5 ppb / 500 PPB/0.2 HG	0.025 ML #446; 0.010ML A097-	2004/06/29 09:35
4	004CALS.D	40 ppb / 5000 ppb/1 HG	0.2 ML #446; 0.05 ML A097-50	2004/06/29 09:40
5	005CALS.D	100 ppb / 10000 PPB/ 4 HG	0.5 ML #97; O.2 ML # A097-50	2004/06/29 09:45
6	006ICV1.D	ICV-50 PPB ; 2 PPB HG	0.25 ML #444; 0.1 ML #A098-5	2004/06/29 09:50
7	007ICV1.D	ICV-50 PPB ; 2 PPB HG	0.25 ML #444; 0.1 ML #A098-5	2004/06/29 09:56
8	008_ICB.D	icb		2004/06/29 10:01
9	009SMPL.D	1 PPB CHECK		2004/06/29 10:06
10	010ICSA.D	ICSA STD	2.5 ML #448 - 25 ML	2004/06/29 10:11
11	011SMPL.D	rinse		2004/06/29 10:17
12	012ICSB.D	ICSB STD	2.5 ML #448, 0.05 ML #449 -	2004/06/29 10:24
13	013SMPL.D	RINSE		2004/06/29 10:29
14	014AREF.D	04062306-01	BATCH 1131	2004/06/29 10:34
15	015DUP1.D	04062306-01	BATCH 1131	2004/06/29 10:40
16	016LFM1.D	04062306-01	BATCH 1131	2004/06/29 10:45
17	017__PB.D	PB	BATCH 1120	2004/06/29 10:50
18	018_LCS.D	LCS	BATCH 1120	2004/06/29 10:55
19	019AREF.D	04062305-01	BATCH 1120	2004/06/29 11:01
20	020DUP1.D	04062305-01	BATCH 1120	2004/06/29 11:06
21	021SMPL.D	RINSE		2004/06/29 11:11
22	022CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/29 11:16
23	023CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/29 11:22
24	024_CCB.D	CCB		2004/06/29 11:27
25	025_CCB.D	CCB		2004/06/29 11:32
26	026LFM1.D	04062305-01	BATCH 1120	2004/06/29 11:37
27	027PDS1.D	04062305-01	BATCH 1120	2004/06/29 11:43
28	028SMPL.D	04062135-01	BATCH 1120	2004/06/29 11:48
29	029SMPL.D	04062135-02	BATCH 1120	2004/06/29 11:53
30	030SMPL.D	04062314-02	BATCH 1120	2004/06/29 11:59
31	031SMPL.D	04062422-01	BATCH 1143	2004/06/29 12:04
32	032SMPL.D	04062423-01	BATCH 1143	2004/06/29 12:09
33	033SMPL.D	04062431-02	BATCH 1143	2004/06/29 12:15
34	034SMPL.D	04062811-02	BATCH 1156	2004/06/29 12:20
35	035SMPL.D	04062811-04	BATCH 1156	2004/06/29 12:25
36	036SMPL.D	RINSE		2004/06/29 12:31
37	037CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/29 12:36
38	038_CCB.D	CCB		2004/06/29 12:41
39	039SMPL.D	04062812-02	BATCH 1156	2004/06/29 12:46
40	040AREF.D	04062812-04	BATCH 1156	2004/06/29 12:51
41	041DUP1.D	04062812-04	BATCH 1156	2004/06/29 12:57
42	042LFM1.D	04062812-04	BATCH 1156	2004/06/29 13:02
43	043SMPL.D	04062812-01	BATCH 1143	2004/06/29 13:07
44	044SMPL.D	04062812-03	BATCH 1143	2004/06/29 13:12
45	045__PB.D	PB	BATCH 1143	2004/06/29 13:18
46	046_LCS.D	LCS	BATCH 1143	2004/06/29 13:23
47	047SMPL.D	04062803-01	BATCH 1143	2004/06/29 13:28
48	048AREF.D	04062409-02	BATCH 1143	2004/06/29 13:34
49	049SMPL.D	RINSE		2004/06/29 13:39
50	050CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/29 13:44
51	051_CCB.D	CCB		2004/06/29 13:49
52	052DUP1.D	04062409-02	BATCH 1143	2004/06/29 13:54
53	053LFM1.D	04062409-02	BATCH 1143	2004/06/29 14:00
54	054PDS1.D	04062409-02	BATCH 1143	2004/06/29 14:05
55	055DIL1.D	04062409-02	BATCH 1143	2004/06/29 14:11
56	056SMPL.D	04062409-04	BATCH 1143	2004/06/29 14:16
57	057SMPL.D	04062409-06	BATCH 1143	2004/06/29 14:21
58	058SMPL.D	04062409-08	BATCH 1143	2004/06/29 14:26
59	059SMPL.D	04062421-04	BATCH 1143	2004/06/29 14:32
60	060SMPL.D	04062535-01	BATCH 1143	2004/06/29 14:37
61	061SMPL.D	04062410-02	BATCH 1143	2004/06/29 14:43

Data File List

Directory : C:\ICPCHEM\1\DATA\040629A.B

Line	File Name	Sample Name	Misc Info	Acquired Date
62	062SMPL.D	RINSE		2004/06/29 14:48
63	063CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/29 14:53
64	064_CCB.D	CCB		2004/06/29 14:58
65	065SMPL.D	04062517-03	BATCH 1143	2004/06/29 15:03
66	066SMPL.D	04062811-01	BATCH 1143	2004/06/29 15:09
67	067SMPL.D	04062811-03	BATCH 1143	2004/06/29 15:14
68	068SMPL.D	04062510-01 1.364 500D	BATCH 1143	2004/06/29 15:19
69	069SMPL.D	RINSE		2004/06/29 15:24
70	070CCV1.D	CCV	0.25 ML #444; 0.1 ML #A099	2004/06/29 15:30
71	071_CCB.D	CCB		2004/06/29 15:35
72	072ICSA.D	ICSA		2004/06/29 15:40
73	073SMPL.D	R		2004/06/29 15:46
74	074ICSB.D	ICSAB		2004/06/29 15:51
75	075SMPL.D	R		2004/06/29 15:56
76	076SMPL.D	LRC 5 PPM		2004/06/29 16:01
77	077SMPL.D	RINSE		2004/06/29 16:06
78	078SMPL.D	RINSE		2004/06/29 16:11
79	079SMPL.D	RINSE		2004/06/29 16:17
80	080SMPL.D	RINSE		2004/06/29 16:22
81	081SMPL.D	RINSE		2004/06/29 16:27
82	082SMPL.D	RINSE		2004/06/29 16:32

ICV QC Report

Data File:	C:\ICPCHEM\1\DATA\040629A.B\006ICV1.D\006ICV1.D#
Date Acquired:	Jun 29 2004 09:50 am
Acq. Method:	6020B.M
Operator:	
Sample Name:	ICV-50 PPB ; 2 PPB HG
Misc Info:	0.25 ML #444; 0.1 ML #A098-50 ML
Vial Number:	1105
Current Method:	C:\ICPCHEM\1\DATA\040629A.B\6020B.M
Calibration File:	C:\ICPCHEM\1\DATA\040629A.B\6020B.C
Last Cal. Update:	Jun 29 2004 10:25 am
Sample Type:	ICV1
Dilution Factor:	1.00

QC Elements

Element	Raw Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	49.91	ppb	0.53	50.00	90 - 110	
52 Cr	49.25	ppb	4.74	50.00	90 - 110	
60 Ni	49.98	ppb	0.68	50.00	90 - 110	
63 Cu	47.27	ppb	0.31	50.00	90 - 110	
66 Zn	51.64	ppb	0.62	50.00	90 - 110	
75 As	49.27	ppb	0.35	50.00	90 - 110	
82 Se	48.67	ppb	1.06	50.00	90 - 110	
107 Ag	59.24	ppb	0.78	50.00	90 - 110	Fail
111 Cd	49.29	ppb	2.47	50.00	90 - 110	
121 Sb	48.46	ppb	0.72	50.00	90 - 110	
202 Hg	1.90	ppb	1.77	2.00	90 - 110	
205 Tl	49.73	ppb	0.60	50.00	90 - 110	
208 Pb	48.74	ppb	0.55	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5665624	1.84	5604609	101.1	30 - 140	
45 Sc	4684194	1.50	4731721	99.0	30 - 140	
72 Ge	807095	1.65	827376	97.5	30 - 140	
115 In	4897412	2.05	4989906	98.1	30 - 140	
159 Tb	5546756	1.88	5610032	98.9	30 - 140	
209 Bi	3218190	2.14	3342404	96.3	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040629A.B\002CALB.D\002CALB.D#

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040629A.B\037CCV1.D\037CCV1.D#
Date Acquired: Jun 29 2004 12:36 pm
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040629A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040629A.B\6020B.C
Last Cal Update: Jun 29 2004 10:25 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	48.76	ppb	2.32	50.00	90 - 110	
52 Cr	45.67	ppb	1.70	50.00	90 - 110	
60 Ni	49.60	ppb	1.09	50.00	90 - 110	
63 Cu	47.32	ppb	0.38	50.00	90 - 110	
66 Zn	50.89	ppb	1.46	50.00	90 - 110	
75 As	47.89	ppb	0.72	50.00	90 - 110	
82 Se	48.02	ppb	2.14	50.00	90 - 110	
107 Ag	58.87	ppb	1.06	50.00	90 - 110	Fail
111 Cd	48.25	ppb	0.77	50.00	90 - 110	
121 Sb	47.89	ppb	0.81	50.00	90 - 110	
202 Hg	1.86	ppb	1.79	2.00	90 - 110	
205 Tl	47.55	ppb	1.27	50.00	90 - 110	
208 Pb	47.77	ppb	0.08	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5437549	1.67	5604609	97.0	30 - 140	
45 Sc	4566377	0.88	4731721	96.5	30 - 140	
72 Ge	765516	1.95	827376	92.5	30 - 140	
115 In	4521713	1.90	4989906	90.6	30 - 140	
159 Tb	5028281	2.27	5610032	89.6	30 - 140	
209 Bi	2919563	1.97	3342404	87.3	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040629A.B\002CALB.D\002CALB.D#

PB QC Report

Data File:	C:\ICPCHEM\1\DATA\040629A.B\045__PB.D\045__PB.D#
Date Acquired:	Jun 29 2004 01:18 pm
Operator:	
Sample Name:	PB
Misc Info:	BATCH 1143
Vial Number:	2212
Current Method:	C:\ICPCHEM\1\DATA\040629A.B\6020B.M
Calibration File:	C:\ICPCHEM\1\DATA\040629A.B\6020B.C
Last Cal Update:	Jun 29 2004 10:25 am
Sample Type:	PB
Total Dil Factor:	1.00

QC Elements

Element	Conc	Units	RSD(%)	High Limit	Flag
9 Be	0.00	ppb	151.54	2.50	
52 Cr	-0.19	ppb	22.09	2.50	
60 Ni	0.73	ppb	5.73	2.50	
63 Cu	-0.35	ppb	9.33	2.50	
66 Zn	-0.51	ppb	23.69	2.50	
75 As	-0.07	ppb	43.96	2.50	
82 Se	0.12	ppb	23.78	2.50	
107 Ag	-0.68	ppb	1.53	2.50	
111 Cd	0.02	ppb	205.97	2.50	
121 Sb	0.36	ppb	8.93	2.50	
202 Hg	0.00	ppb	50.58	1.00	
205 Tl	-0.01	ppb	61.26	2.50	
208 Pb	-0.04	ppb	28.73	2.50	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5553224	2.31	5604609	99.1	30 - 140	
45 Sc	4642693	1.91	4731721	98.1	30 - 140	
72 Ge	769971	2.39	827376	93.1	30 - 140	
115 In	4614284	2.04	4989906	92.5	30 - 140	
159 Tb	5024047	3.13	5610032	89.6	30 - 140	
209 Bi	2984696	2.84	3342404	89.3	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040629A.B\002CALB.D\002CALB.D#

Traceability:

HNO3 #82; HCL #X13037; Au #174; IS #168

LCS QC Report

Data File:	C:\ICPCHEM\1\DATA\040629A.B\046_LCS.D\046_LCS.D#
Date Acquired:	Jun 29 2004 01:23 pm
Acq. Method:	6020B.M
Operator:	
Sample Name:	LCS
Misc Info:	BATCH 1143
Vial Number:	2301
Current Method:	C:\ICPCHEM\1\DATA\040629A.B\6020B.M
Calibration File:	C:\ICPCHEM\1\DATA\040629A.B\6020B.C
Last Cal. Update:	Jun 29 2004 10:25 am
Sample Type:	LCS
Prep Dil. Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Analyte Elements

Element	Raw Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	47.95	ppb	1.72	50.00	75 - 125	
52 Cr	47.53	ppb	4.52	50.00	75 - 125	
60 Ni	50.84	ppb	0.42	50.00	75 - 125	
63 Cu	47.34	ppb	0.58	50.00	75 - 125	
66 Zn	47.62	ppb	0.52	50.00	75 - 125	
75 As	46.53	ppb	0.61	50.00	75 - 125	
82 Se	43.52	ppb	1.87	50.00	75 - 125	
107 Ag	55.49	ppb	0.81	50.00	75 - 125	
111 Cd	46.51	ppb	1.03	50.00	75 - 125	
121 Sb	46.12	ppb	0.84	50.00	75 - 125	
202 Hg	1.56	ppb	0.64	2.00	75 - 125	
205 Tl	48.87	ppb	0.51	50.00	75 - 125	
208 Pb	47.29	ppb	0.63	50.00	75 - 125	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5517324	2.31	5604609	0.0	30 - 140	
45 Sc	4565289	2.66	4731721	0.0	30 - 140	
72 Ge	763584	1.75	827376	0.0	30 - 140	
115 In	4639675	1.10	4989906	0.0	30 - 140	
159 Tb	5060514	2.35	5610032	0.0	30 - 140	
209 Bi	2978948	1.19	3342404	0.0	30 - 140	

ISTD Ref File :

All Reference Sample QC Report

Data File:	C:\ICPCHEM\1\DATA\040629A.B\048AREF.D\048AREF.D#
Date Acquired:	Jun 29 2004 01:34 pm
Acq. Method:	6020B.M
Operator:	Lisa Miller
Sample Name:	04062409-02
Misc Info:	BATCH 1143
Vial Number:	2303
Current Method:	C:\ICPCHEM\1\DATA\040629A.B\6020B.M
Calibration File:	C:\ICPCHEM\1\DATA\040629A.B\6020B.C
Last Cal. Update:	Jun 29 2004 10:25 am
Sample Type:	AllRef
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	0.06	0.06	ppb	12.62	8000.00	
52 Cr	2.69	2.69	ppb	1.65	40000.00	
60 Ni	-1.01	-1.01	ppb	3.08	8000.00	
63 Cu	10.10	10.10	ppb	0.55	8000.00	
66 Zn	17.51	17.51	ppb	1.47	8000.00	
75 As	5.06	5.06	ppb	2.28	8000.00	
82 Se	2.92	2.92	ppb	5.93	8000.00	
107 Ag	-0.72	-0.72	ppb	0.66	8000.00	
111 Cd	0.08	0.08	ppb	80.39	8000.00	
121 Sb	0.12	0.12	ppb	20.85	8000.00	
202 Hg	0.01	0.01	ppb	25.39	8.00	
205 Tl	0.00	0.00	ppb	284.06	8000.00	
208 Pb	0.51	0.51	ppb	2.33	40000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5214029	1.57	5604609	93.0	30 - 140	
45 Sc	4281835	2.30	4731721	90.5	30 - 140	
72 Ge	731712	1.82	827376	88.4	30 - 140	
115 In	4121592	1.08	4989906	82.6	30 - 140	
159 Tb	4677633	1.11	5610032	83.4	30 - 140	
209 Bi	2489228	2.10	3342404	74.5	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040629A.B\002CALB.D\002CALB.D#

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040629A.B\050CCV1.D\050CCV1.D#
Date Acquired: Jun 29 2004 01:44 pm
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040629A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040629A.B\6020B.C
Last Cal Update: Jun 29 2004 10:25 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	47.95	ppb	1.98	50.00	90 - 110	
52 Cr	46.51	ppb	2.62	50.00	90 - 110	
60 Ni	49.59	ppb	0.78	50.00	90 - 110	
63 Cu	47.29	ppb	0.47	50.00	90 - 110	
66 Zn	50.94	ppb	0.64	50.00	90 - 110	
75 As	48.17	ppb	0.61	50.00	90 - 110	
82 Se	48.74	ppb	1.15	50.00	90 - 110	
107 Ag	58.35	ppb	0.49	50.00	90 - 110	Fail
111 Cd	48.31	ppb	0.89	50.00	90 - 110	
121 Sb	48.16	ppb	0.67	50.00	90 - 110	
202 Hg	1.82	ppb	0.87	2.00	90 - 110	
205 Tl	47.54	ppb	0.97	50.00	90 - 110	
208 Pb	47.66	ppb	0.40	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5540992	0.58	5604609	98.9	30 - 140	
45 Sc	4591653	1.93	4731721	97.0	30 - 140	
72 Ge	780311	1.69	827376	94.3	30 - 140	
115 In	4587234	2.13	4989906	91.9	30 - 140	
159 Tb	5106748	1.75	5610032	91.0	30 - 140	
209 Bi	2952847	2.20	3342404	88.3	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040629A.B\002CALB.D\002CALB.D#

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\040629A.B\051_CCB.D\051_CCB.D#
Date Acquired: Jun 29 2004 01:49 pm
Operator:
Sample Name: CCB
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\DATA\040629A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040629A.B\6020B.C
Last Cal Update: Jun 29 2004 10:25 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	High Limit	Flag
9 Be	0.07	ppb	8.91	2.50	
52 Cr	0.03	ppb	70.91	2.50	
60 Ni	0.12	ppb	34.96	2.50	
63 Cu	0.37	ppb	6.35	2.50	
66 Zn	0.18	ppb	24.09	2.50	
75 As	-0.01	ppb	569.72	2.50	
82 Se	0.19	ppb	21.75	2.50	
107 Ag	-0.50	ppb	3.58	2.50	
111 Cd	0.08	ppb	26.70	2.50	
121 Sb	0.09	ppb	6.89	2.50	
202 Hg	0.01	ppb	7.99	1.00	
205 Tl	0.42	ppb	4.63	2.50	
208 Pb	0.08	ppb	5.79	2.50	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5607861	3.37	5604609	100.1	30 - 140	
45 Sc	4688223	2.09	4731721	99.1	30 - 140	
72 Ge	793401	1.25	827376	95.9	30 - 140	
115 In	4709885	1.73	4989906	94.4	30 - 140	
159 Tb	5164437	2.24	5610032	92.1	30 - 140	
209 Bi	3040012	1.56	3342404	91.0	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040629A.B\002CALB.D\002CALB.D#

Duplicate QC Report

Data File:	C:\ICPCHEM\1\DATA\040629A.B\052DUP1.D\052DUP1.D#
Date Acquired:	Jun 29 2004 01:54 pm
Acq. Method:	6020B.M
Operator:	
Sample Name:	04062409-02
Misc Info:	BATCH 1143
Vial Number:	2304
Current Method:	C:\ICPCHEM\1\DATA\040629A.B\6020B.M
Calibration File:	C:\ICPCHEM\1\DATA\040629A.B\6020B.C
Last Cal. Update:	Jun 29 2004 10:25 am
Sample Type:	Dup1
Dilution Factor:	1.00

Duplicate Ref File: C:\ICPCHEM\1\DATA\040629A.B\048AREF.D\048AREF.D#

QC Elements

Element	Raw Conc	Units	RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	0.06	ppb	21.37	0.06	4.95	20	<PQL
52 Cr	2.41	ppb	0.52	2.69	11.29	20	<PQL
60 Ni	-0.99	ppb	4.38	-1.01	-2.03	20	<PQL
63 Cu	10.09	ppb	1.22	10.10	0.10	20	
66 Zn	17.23	ppb	1.43	17.51	1.61	20	
75 As	5.05	ppb	1.27	5.06	0.30	20	
82 Se	2.71	ppb	4.44	2.92	7.61	20	<PQL
107 Ag	-0.75	ppb	0.85	-0.72	-4.49	20	<PQL
111 Cd	0.05	ppb	64.33	0.08	50.42	20	<PQL
121 Sb	0.07	ppb	12.76	0.12	52.38	20	<PQL
202 Hg	0.01	ppb	6.62	0.01	11.84	20	<PQL
205 Tl	0.09	ppb	11.29	0.00	192.35	20	<PQL
208 Pb	0.50	ppb	5.16	0.51	2.85	20	<PQL

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5185936	1.31	5604609	92.5	30 - 140	
45 Sc	4343914	1.98	4731721	91.8	30 - 140	
72 Ge	726881	1.81	827376	87.9	30 - 140	
115 In	4129189	1.50	4989906	82.8	30 - 140	
159 Tb	4702616	1.96	5610032	83.8	30 - 140	
209 Bi	2478018	1.14	3342404	74.1	30 - 140	

ISTD Ref. File : C:\ICPCHEM\1\DATA\040629A.B\002CALB.D\002CALB.D#

LFM Sample QC Report

Data File: C:\ICPCHEM\1\DATA\040629A.B\053LFM1.D\053LFM1.D#
Date Acquired: Jun 29 2004 02:00 pm
Acq. Method: 6020B.M
Operator:
Sample Name: 04062409-02
Misc Info: BATCH 1143
Vial Number: 2305
Current Method: C:\ICPCHEM\1\DATA\040629A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040629A.B\6020B.C
Last Cal. Update: Jun 29 2004 10:25 am
Sample Type: LFM1
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: C:\ICPCHEM\1\DATA\040629A.B\048AREF.D\048AREF.D#

QC Elements

Element	Raw Conc	Units	Ref Conc	RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	49.34	ppb	0.06	3.35	50.00	98.6	75 - 125	
52 Cr	50.84	ppb	2.69	0.22	50.00	96.3	75 - 125	
60 Ni	49.21	ppb	-1.01	0.19	50.00	100.4	75 - 125	
63 Cu	56.42	ppb	10.10	0.77	50.00	92.6	75 - 125	
66 Zn	62.29	ppb	17.51	0.87	50.00	89.6	75 - 125	
75 As	54.68	ppb	5.06	0.90	50.00	99.2	75 - 125	
82 Se	51.36	ppb	2.92	1.21	50.00	96.9	75 - 125	
107 Ag	60.13	ppb	-0.72	0.83	50.00	121.7	75 - 125	
111 Cd	48.98	ppb	0.08	0.55	50.00	97.8	75 - 125	
121 Sb	51.91	ppb	0.12	0.61	50.00	103.6	75 - 125	
202 Hg	2.06	ppb	0.01	0.83	2.00	102.4	75 - 125	
205 Tl	55.30	ppb	0.00	0.15	50.00	110.6	75 - 125	
208 Pb	54.86	ppb	0.51	0.47	50.00	108.7	75 - 125	

ISTD Elements

Element	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	5216611	2.42	5604609	93.1	30 - 140	
45 Sc	4332210	2.49	4731721	91.6	30 - 140	
72 Ge	713307	1.38	827376	86.2	30 - 140	
115 In	4043505	1.55	4989906	81.0	30 - 140	
159 Tb	4626034	1.24	5610032	82.5	30 - 140	
209 Bi	2456475	1.82	3342404	73.5	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040629A.B\002CALB.D\002CALB.D#

PDS Sample QC Report

Data File: C:\ICPCHEM\1\DATA\040629A.B\054PDS1.D\054PDS1.D#
Date Acquired: Jun 29 2004 02:05 pm
Acq. Method: 6020B.M
Operator:
Sample Name: 04062409-02
Misc Info: BATCH 1143
Vial Number: 2306
Current Method: C:\ICPCHEM\1\DATA\040629A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040629A.B\6020B.C
Last Cal. Update: Jun 29 2004 10:25 am
Sample Type: PDS1
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: C:\ICPCHEM\1\DATA\040629A.B\048AREF.D\048AREF.D#

QC Elements

Element	Raw Conc	Units	Ref Conc	RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	45.75	ppb	0.06	0.44	50.00	91.4	75 - 125	
52 Cr	44.40	ppb	2.69	0.27	50.00	83.4	75 - 125	
60 Ni	43.83	ppb	-1.01	0.87	50.00	89.7	75 - 125	
63 Cu	51.85	ppb	10.10	1.10	50.00	83.5	75 - 125	
66 Zn	57.26	ppb	17.51	0.40	50.00	79.5	75 - 125	
75 As	49.62	ppb	5.06	0.06	50.00	89.1	75 - 125	
82 Se	46.35	ppb	2.92	1.06	50.00	86.9	75 - 125	
107 Ag	43.43	ppb	-0.72	1.03	50.00	88.3	75 - 125	
111 Cd	43.62	ppb	0.08	0.48	50.00	87.1	75 - 125	
121 Sb	45.84	ppb	0.12	0.77	50.00	91.4	75 - 125	
202 Hg	1.93	ppb	0.01	1.56	2.00	95.9	75 - 125	
205 Tl	49.84	ppb	0.00	1.50	50.00	99.7	75 - 125	
208 Pb	49.51	ppb	0.51	1.00	50.00	98.0	75 - 125	

ISTD Elements

Element	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	5017382	3.50	5604609	89.5	30 - 140	
45 Sc	4190770	1.23	4731721	88.6	30 - 140	
72 Ge	658385	1.27	827376	79.6	30 - 140	
115 In	3708773	1.37	4989906	74.3	30 - 140	
159 Tb	4243096	1.63	5610032	75.6	30 - 140	
209 Bi	2252773	0.40	3342404	67.4	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040629A.B\002CALB.D\002CALB.D#

Dilution QC Report

Data File: C:\ICPCHEM\1\DATA\040629A.B\055DIL1.D\055DIL1.D#
Date Acquired: Jun 29 2004 02:11 pm
Acq. Method: 6020B.M
Operator:
Sample Name: 04062409-02
Misc Info: BATCH 1143
Vial Number: 2307
Current Method: C:\ICPCHEM\1\DATA\040629A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040629A.B\6020B.C
Last Cal. Update: Jun 29 2004 10:25 am
Sample Type: Dil1
Dilution Factor: 5.00

Dilution Ref File: C:\ICPCHEM\1\DATA\040629A.B\048AREF.D\048AREF.D#

QC elements

Element	Raw Conc	Units	RSD(%)	*Ref conc*	Actual(%)	QC Range(%)	Flag
9 Be	0.07	ppb	22.56	0.06	607.38	90 - 110	<100 PB
52 Cr	0.37	ppb	10.29	2.69	68.54	90 - 110	<100 PB
60 Ni	-0.11	ppb	59.30	-1.01	54.99	90 - 110	<100 PB
63 Cu	2.28	ppb	4.24	10.10	112.82	90 - 110	<100 PB
66 Zn	4.33	ppb	1.86	17.51	123.64	90 - 110	<100 PB
75 As	1.16	ppb	6.94	5.06	114.85	90 - 110	<100 PB
82 Se	0.95	ppb	5.85	2.92	162.09	90 - 110	<100 PB
107 Ag	-0.69	ppb	1.91	-0.72	479.21	90 - 110	<100 PB
111 Cd	0.15	ppb	28.50	0.08	878.62	90 - 110	<100 PB
121 Sb	0.17	ppb	15.17	0.12	696.46	90 - 110	<100 PB
202 Hg	0.01	ppb	14.83	0.01	462.51	90 - 110	<100 PB
205 Tl	0.43	ppb	3.24	0.00	123845.27	90 - 110	<100 PB
208 Pb	0.18	ppb	9.24	0.51	177.28	90 - 110	<100 PB

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040629A.B\063CCV1.D\063CCV1.D#
Date Acquired: Jun 29 2004 02:53 pm
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040629A.B\6020B.M
Calibration File: C:\ICPCHEM\1\DATA\040629A.B\6020B.C
Last Cal Update: Jun 29 2004 10:25 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	49.20	ppb	1.38	50.00	90 - 110	
52 Cr	45.17	ppb	0.68	50.00	90 - 110	
60 Ni	49.02	ppb	0.67	50.00	90 - 110	
63 Cu	47.78	ppb	0.62	50.00	90 - 110	
66 Zn	50.82	ppb	0.63	50.00	90 - 110	
75 As	48.55	ppb	0.10	50.00	90 - 110	
82 Se	49.70	ppb	0.84	50.00	90 - 110	
107 Ag	57.92	ppb	0.59	50.00	90 - 110	Fail
111 Cd	47.19	ppb	1.36	50.00	90 - 110	
121 Sb	47.31	ppb	0.66	50.00	90 - 110	
202 Hg	1.81	ppb	0.50	2.00	90 - 110	
205 Tl	46.72	ppb	1.50	50.00	90 - 110	
208 Pb	47.68	ppb	0.57	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	4903914	1.26	5604609	87.5	30 - 140	
45 Sc	4080213	1.75	4731721	86.2	30 - 140	
72 Ge	677101	2.34	827376	81.8	30 - 140	
115 In	3998480	2.40	4989906	80.1	30 - 140	
159 Tb	4353394	1.29	5610032	77.6	30 - 140	
209 Bi	2501092	1.03	3342404	74.8	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040629A.B\002CALB.D\002CALB.D#

All Reference Sample QC Report

Data File:	C:\ICPCHEM\1\DATA\040628A.B\101AREF.D\101AREF.D#
Date Acquired:	Jun 28 2004 05:41 pm
Acq. Method:	PPRCRA.M
Operator:	Lisa Miller
Sample Name:	04062409-09
Misc Info:	BATCH 1130
Vial Number:	2204
Current Method:	C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040628A.B\PPRCRA.C
Last Cal. Update:	Jun 28 2004 02:04 pm
Sample Type:	AllRef
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	4.96	4.96	ppb	5.21	8000.00	
52 Cr	17.29 ✓	17.29	ppb	1.73	40000.00	
60 Ni	87.31 ✓	87.31	ppb	3.10	8000.00	
63 Cu	2.98	2.98	ppb	9.90	8000.00	
66 Zn	347.10 ✓	347.10	ppb	1.04	8000.00	
75 As	-0.43	-0.43	ppb	17.57	8000.00	
82 Se	15.43 ✓	15.43	ppb	4.76	8000.00	
107 Ag	-0.05	-0.05	ppb	6.43	8000.00	
111 Cd	5.31 ✓	5.31	ppb	1.21	8000.00	
121 Sb	0.14	0.14	ppb	9.29	8000.00	
138 Ba	8.07	8.07	ppb	0.92	8000.00	
202 Hg	0.04	0.04	ppb	5.04	8.00	
205 Tl	0.11	0.11	ppb	10.02	8000.00	
208 Pb	17.57 ✓	17.57	ppb	2.48	40000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	2927307	9.20	3186132	91.9	30 - 140	
45 Sc	3801265	6.03	4244239	89.6	30 - 140	
72 Ge	687516	2.85	891206	77.1	30 - 140	
115 In	4239302	2.40	5438300	78.0	30 - 140	
159 Tb	5366286	2.31	6240441	86.0	30 - 140	
209 Bi	2849495	4.59	3529962	80.7	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040628A.B\002CALB.D\002CALB.D#

PHASE SEPARATION SCIENCE, INC.

Analytical Chemistry Environmental Science

LABORATORY RESULTS

DATE RECEIVED: June 29, 2004

PROJECT: Martin State Airport-Quarterly Sampling

Project #: N7339-0677D

CERTIFICATE OF ANALYSIS #: *04062901*

PREPARED FOR:

Tetra Tech, Inc.
10670 White Rock Rd., Ste. 100
Rancho Cordova, CA 95670

July 8, 2004

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PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062901 Page 1 of 31
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: TB-062504 / 04062901-01						
Volatile Organic Compounds						
Benzene	ND	ug/L	EPA 8260B	1		7/3/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
Bromoform	ND	ug/L	EPA 8260B	1		7/3/2004
Bromomethane	ND	ug/L	EPA 8260B	1		7/3/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	1		7/3/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Chloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
Chloroform	ND	ug/L	EPA 8260B	1		7/3/2004
Chloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		7/3/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		7/3/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		7/3/2004
Dibromomethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloroethene	ND	ug/L	EPA 8260B	1		7/3/2004
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260B	1		7/3/2004
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004

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CERTIFICATE OF ANALYSIS
No. 04062901 Page 2 of 31
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: TB-062504 / 04062901-01						
Volatile Organic Compounds						
Ethylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		7/3/2004
Methylene chloride	ND	ug/L	EPA 8260B	1		7/3/2004
Naphthalene	ND	ug/L	EPA 8260B	1		7/3/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Styrene	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	1		7/3/2004
Toluene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
Trichloroethene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Vinyl chloride	ND	ug/L	EPA 8260B	1		7/3/2004
m&p-Xylene	ND	ug/L	EPA 8260B	3		7/3/2004
o-Xylene	ND	ug/L	EPA 8260B	3		7/3/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		7/3/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		7/3/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		7/3/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		7/3/2004
Acetone	ND	ug/L	EPA 8260B	10		7/3/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		7/3/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		7/3/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		7/3/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		7/3/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project:	Martin State Airport-Quarterly Sampling		
Site Location:	Martin State Airport		
Project Number:	N7339-0677D	Date Sampled:	6/25/2004
Matrix:	Ground Water	Date Received:	6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: TB-062504 / 04062901-01						

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Matt Oldue
Quality Assurance Chemist

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CERTIFICATE OF ANALYSIS
No. 04062901 Page 4 of 31
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-11I-062504 / 04062901-02						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Beryllium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Cadmium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Chromium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Copper	ND	ug/L	EPA 6020	20	7/2/2004	7/8/2004
Lead	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Mercury	2.5	ug/L	EPA 6020	1	7/2/2004	7/8/2004
Nickel	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Selenium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Zinc	ND	ug/L	EPA 6020	50	7/2/2004	7/8/2004
Volatile Organic Compounds						
Benzene	ND	ug/L	EPA 8260B	1		7/3/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
Bromoform	ND	ug/L	EPA 8260B	1		7/3/2004
Bromomethane	ND	ug/L	EPA 8260B	1		7/3/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	1		7/3/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Chloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
Chloroform	ND	ug/L	EPA 8260B	1		7/3/2004
Chloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		7/3/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		7/3/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		7/3/2004

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CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-11I-062504 / 04062901-02						
Volatile Organic Compounds						
Dibromomethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloroethene	ND	ug/L	EPA 8260B	1		7/3/2004
cis-1,2-Dichloroethene	4	ug/L	EPA 8260B	1		7/3/2004
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004
Ethylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		7/3/2004
Methylene chloride	ND	ug/L	EPA 8260B	1		7/3/2004
Naphthalene	ND	ug/L	EPA 8260B	1		7/3/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Styrene	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	1		7/3/2004
Toluene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
Trichloroethene	2	ug/L	EPA 8260B	1		7/3/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004

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No. 04062901 Page 6 of 31
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-11I-062504 / 04062901-02						
Volatile Organic Compounds						
Vinyl chloride	ND	ug/L	EPA 8260B	1		7/3/2004
m&p-Xylene	ND	ug/L	EPA 8260B	3		7/3/2004
o-Xylene	ND	ug/L	EPA 8260B	3		7/3/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		7/3/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		7/3/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		7/3/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		7/3/2004
Acetone	ND	ug/L	EPA 8260B	10		7/3/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		7/3/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		7/3/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		7/3/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		7/3/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Quality Assurance Chemist

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Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-11I-062504 (Dissolved) / 04062901-03						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Beryllium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Cadmium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Chromium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Copper	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Lead	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/5/2004
Nickel	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Selenium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Zinc	ND	ug/L	EPA 6020	50	7/2/2004	7/5/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Matt Oelke
Quality Assurance Chemist

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No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-11S-062504 / 04062901-04						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Beryllium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Cadmium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Chromium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Copper	ND	ug/L	EPA 6020	20	7/2/2004	7/8/2004
Lead	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/8/2004
Nickel	**28**	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Selenium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Zinc	**140**	ug/L	EPA 6020	50	7/2/2004	7/8/2004
Volatile Organic Compounds						
Benzene	**22**	ug/L	EPA 8260B	1		7/3/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
Bromoform	ND	ug/L	EPA 8260B	1		7/3/2004
Bromomethane	ND	ug/L	EPA 8260B	1		7/3/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Carbon tetrachloride	**190**	ug/L	EPA 8260B	1		7/3/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Chloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
Chloroform	**1,700**	ug/L	EPA 8260B	100		7/7/2004
Chloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		7/3/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		7/3/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		7/3/2004

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Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-11S-062504 / 04062901-04						
Volatile Organic Compounds						
Dibromomethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloroethene	**84**	ug/L	EPA 8260B	1		7/3/2004
cis-1,2-Dichloroethene	**E 31,000**	ug/L	EPA 8260B	100		7/7/2004
trans-1,2-Dichloroethene	**190**	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004
Ethylbenzene	**16**	ug/L	EPA 8260B	1		7/3/2004
Isopropylbenzene	**2**	ug/L	EPA 8260B	1		7/3/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		7/3/2004
Methylene chloride	**b 23**	ug/L	EPA 8260B	1		7/3/2004
Naphthalene	**6**	ug/L	EPA 8260B	1		7/3/2004
n-Propylbenzene	**2**	ug/L	EPA 8260B	1		7/3/2004
Styrene	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,2,2-Tetrachloroethane	**16**	ug/L	EPA 8260B	1		7/3/2004
Tetrachloroethene	**14**	ug/L	EPA 8260B	1		7/3/2004
Toluene	**900**	ug/L	EPA 8260B	100		7/7/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,2-Trichloroethane	**72**	ug/L	EPA 8260B	1		7/3/2004
Trichloroethene	**E 31,000**	ug/L	EPA 8260B	100		7/7/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,4-Trimethylbenzene	**26**	ug/L	EPA 8260B	1		7/3/2004
1,3,5-Trimethylbenzene	**7**	ug/L	EPA 8260B	1		7/3/2004

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Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-11S-062504 / 04062901-04						
Volatile Organic Compounds						
Vinyl chloride	1,500	ug/L	EPA 8260B	100		7/7/2004
m&p-Xylene	49	ug/L	EPA 8260B	3		7/3/2004
o-Xylene	41	ug/L	EPA 8260B	3		7/3/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		7/3/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		7/3/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		7/3/2004
4-Methyl-2-Pentanone (MIBK)	j 3	ug/L	EPA 8260B	10		7/3/2004
Acetone	15	ug/L	EPA 8260B	10		7/3/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		7/3/2004
Carbon disulfide	2	ug/L	EPA 8260B	1		7/3/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		7/3/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		7/3/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004

Reviewed By: Matt Cohen
Quality Assurance Chemist

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.
E - estimated value, exceeds calibration range.
j - estimated value, less than quantitation limit.

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No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-11S-062504 (Dissolved) / 04062901-05						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Beryllium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Cadmium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Chromium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Copper	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Lead	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/5/2004
Nickel	**24**	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Selenium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Zinc	**120**	ug/L	EPA 6020	50	7/2/2004	7/5/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Matt Cline
Quality Assurance Chemist

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July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: MW-3-062504 / 04062901-06						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Beryllium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Cadmium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Chromium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Copper	ND	ug/L	EPA 6020	20	7/2/2004	7/8/2004
Lead	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/8/2004
Nickel	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Selenium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Zinc	83	ug/L	EPA 6020	50	7/2/2004	7/8/2004
Volatile Organic Compounds						
Benzene	ND	ug/L	EPA 8260B	1		7/7/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		7/7/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		7/7/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		7/7/2004
Bromoform	ND	ug/L	EPA 8260B	1		7/7/2004
Bromomethane	ND	ug/L	EPA 8260B	1		7/7/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		7/7/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		7/7/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		7/7/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	1		7/7/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		7/7/2004
Chloroethane	ND	ug/L	EPA 8260B	1		7/7/2004
Chloroform	ND	ug/L	EPA 8260B	1		7/7/2004
Chloromethane	ND	ug/L	EPA 8260B	1		7/7/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		7/7/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		7/7/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	1		7/7/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		7/7/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		7/7/2004

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Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: MW-3-062504 / 04062901-06						
Volatile Organic Compounds						
Dibromomethane	ND	ug/L	EPA 8260B	1		7/7/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/7/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/7/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/7/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		7/7/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		7/7/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		7/7/2004
1,1-Dichloroethene	ND	ug/L	EPA 8260B	1		7/7/2004
cis-1,2-Dichloroethene	**140**	ug/L	EPA 8260B	1		7/7/2004
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260B	1		7/7/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		7/7/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		7/7/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		7/7/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		7/7/2004
Ethylbenzene	ND	ug/L	EPA 8260B	1		7/7/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		7/7/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		7/7/2004
Methylene chloride	ND	ug/L	EPA 8260B	1		7/7/2004
Naphthalene	ND	ug/L	EPA 8260B	1		7/7/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		7/7/2004
Styrene	ND	ug/L	EPA 8260B	1		7/7/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		7/7/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		7/7/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	1		7/7/2004
Toluene	ND	ug/L	EPA 8260B	1		7/7/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		7/7/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	1		7/7/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		7/7/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	1		7/7/2004
Trichloroethene	**130**	ug/L	EPA 8260B	1		7/7/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		7/7/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		7/7/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		7/7/2004

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Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: MW-3-062504 / 04062901-06						
Volatile Organic Compounds						
Vinyl chloride	4	ug/L	EPA 8260B	1		7/7/2004
m&p-Xylene	ND	ug/L	EPA 8260B	3		7/7/2004
o-Xylene	ND	ug/L	EPA 8260B	3		7/7/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		7/7/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		7/7/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		7/7/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		7/7/2004
Acetone	ND	ug/L	EPA 8260B	10		7/7/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		7/7/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		7/7/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		7/7/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		7/7/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		7/7/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		7/7/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Matt Colee
Quality Assurance Chemist

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062901 Page 15 of 31
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: MW-3-062504 (Dissolved) / 04062901-07						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Beryllium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Cadmium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Chromium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Copper	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Lead	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/5/2004
Nickel	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Selenium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/5/2004
Zinc	75	ug/L	EPA 6020	50	7/2/2004	7/5/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Matt Colee
Quality Assurance Chemist

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-10I-062504 / 04062901-08						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Arsenic	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Beryllium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Cadmium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Chromium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Copper	ND	ug/L	EPA 6020	20	7/2/2004	7/8/2004
Lead	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Mercury	ND	ug/L	EPA 6020	1	7/2/2004	7/8/2004
Nickel	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Selenium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Silver	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Thallium	ND	ug/L	EPA 6020	5	7/2/2004	7/8/2004
Zinc	ND	ug/L	EPA 6020	50	7/2/2004	7/8/2004
Volatile Organic Compounds						
Benzene	ND	ug/L	EPA 8260B	1		7/3/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
Bromoform	ND	ug/L	EPA 8260B	1		7/3/2004
Bromomethane	ND	ug/L	EPA 8260B	1		7/3/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Carbon tetrachloride	**390**	ug/L	EPA 8260B	10		7/7/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Chloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
Chloroform	**13**	ug/L	EPA 8260B	1		7/3/2004
Chloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		7/3/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		7/3/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		7/3/2004

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CERTIFICATE OF ANALYSIS
No. 04062901
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-10I-062504 / 04062901-08						
Volatile Organic Compounds						
Dibromomethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloroethene	ND	ug/L	EPA 8260B	1		7/3/2004
cis-1,2-Dichloroethene	**24**	ug/L	EPA 8260B	1		7/3/2004
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004
Ethylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		7/3/2004
Methylene chloride	**b 2**	ug/L	EPA 8260B	1		7/3/2004
Naphthalene	ND	ug/L	EPA 8260B	1		7/3/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
Styrene	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	1		7/3/2004
Toluene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		7/3/2004
1,1,2-Trichloroethane	**3**	ug/L	EPA 8260B	1		7/3/2004
Trichloroethene	**730**	ug/L	EPA 8260B	10		7/7/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		7/3/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		7/3/2004

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CERTIFICATE OF ANALYSIS
No. 04062901 Page 18 of 31
Tetra Tech, Inc.
July 8, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/25/2004
Date Received: 6/29/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID: DMW-10I-062504 / 04062901-08						
Volatile Organic Compounds						
Vinyl chloride	ND	ug/L	EPA 8260B	1		7/3/2004
m&p-Xylene	ND	ug/L	EPA 8260B	3		7/3/2004
o-Xylene	ND	ug/L	EPA 8260B	3		7/3/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		7/3/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		7/3/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		7/3/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		7/3/2004
Acetone	ND	ug/L	EPA 8260B	10		7/3/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		7/3/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		7/3/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		7/3/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		7/3/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		7/3/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.

Reviewed By: Matt Cline
Quality Assurance Chemist

ICV QC Report

Data File:	C:\ICPCHEM\1\DATA\040618A.B\006ICV1.D\006ICV1.D#
Date Acquired:	Jun 18 2004 10:58 am
Acq. Method:	PPRCRA.M
Operator:	
Sample Name:	ICV-50 PPB ; 2 PPB HG
Misc Info:	0.25 ML #444; 0.1 ML #A098-50 ML
Vial Number:	1105
Current Method:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal. Update:	Jun 18 2004 10:55 am
Sample Type:	ICV1
Dilution Factor:	1.00

QC Elements

Element	Raw Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	51.63	ppb	3.20	50.00	90 - 110	
52 Cr	50.61	ppb	1.89	50.00	90 - 110	
60 Ni	49.38	ppb	0.39	50.00	90 - 110	
63 Cu	47.40	ppb	0.82	50.00	90 - 110	
66 Zn	50.45	ppb	1.00	50.00	90 - 110	
75 As	50.54	ppb	1.82	50.00	90 - 110	
82 Se	51.28	ppb	3.07	50.00	90 - 110	
107 Ag	49.77	ppb	0.70	50.00	90 - 110	
111 Cd	50.07	ppb	0.40	50.00	90 - 110	
121 Sb	49.28	ppb	0.55	50.00	90 - 110	
202 Hg	1.99	ppb	1.71	2.00	90 - 110	
205 Tl	48.06	ppb	1.97	50.00	90 - 110	
208 Pb	49.12	ppb	1.74	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5300504	2.31	5448311	97.3	30 - 140	
45 Sc	5266181	1.37	5330943	98.8	30 - 140	
72 Ge	929201	1.90	940734	98.8	30 - 140	
115 In	5699890	0.25	5786497	98.5	30 - 140	
159 Tb	6554735	1.99	6622862	99.0	30 - 140	
209 Bi	3492133	3.19	3536119	98.8	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

PB QC Report

Data File:	C:\ICPCHEM\1\DATA\040618A.B\025__PB.D\025__PB.D#
Date Acquired:	Jun 18 2004 12:29 pm
Operator:	
Sample Name:	PB
Misc Info:	BATCH 1081
Vial Number:	2110
Current Method:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal Update:	Jun 18 2004 10:55 am
Sample Type:	PB
Total Dil Factor:	1.00

QC Elements

Element	Conc	Units	RSD(%)	High Limit	Flag
9 Be	-0.01	ppb	43.48	2.50	
52 Cr	0.35	ppb	11.24	2.50	
60 Ni	-0.11	ppb	64.95	2.50	
63 Cu	-0.30	ppb	60.00	2.50	
66 Zn	0.20	ppb	25.89	25.00	
75 As	-0.03	ppb	205.93	0.50	
82 Se	-0.05	ppb	22.33	2.50	
107 Ag	-0.02	ppb	5.38	2.50	
111 Cd	0.00	ppb	2664.40	2.50	
121 Sb	0.04	ppb	44.73	2.50	
202 Hg	0.00	ppb	228.89	0.04	
205 Tl	-0.16	ppb	13.36	2.50	
208 Pb	0.02	ppb	39.26	2.50	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5968446	1.56	5448311	109.5	30 - 140	
45 Sc	5484526	2.18	5330943	102.9	30 - 140	
72 Ge	883267	0.47	940734	93.9	30 - 140	
115 In	5183132	1.83	5786497	89.6	30 - 140	
159 Tb	5747393	1.52	6622862	86.8	30 - 140	
209 Bi	3187110	1.61	3536119	90.1	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

Traceability:

HNO3 #82; HCL #X13037; Au #174; IS #168

LCS QC Report

Data File:	C:\ICPCHEM\1\DATA\040618A.B\059_LCS.D\059_LCS.D#
Date Acquired:	Jun 18 2004 03:13 pm
Acq. Method:	PPRCRA.M
Operator:	
Sample Name:	LCS RR
Misc Info:	BATCH 1081
Vial Number:	2312
Current Method:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal. Update:	Jun 18 2004 10:55 am
Sample Type:	LCS
Prep Dil. Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Analyte Elements

Element	Raw Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	43.06	ppb	3.01	40.00	75 - 125	
52 Cr	39.55	ppb	5.91	40.00	75 - 125	
60 Ni	39.40	ppb	0.24	40.00	75 - 125	
63 Cu	35.33	ppb	1.00	40.00	75 - 125	
66 Zn	42.91	ppb	4.28	40.00	75 - 125	
75 As	42.85	ppb	4.06	40.00	75 - 125	
82 Se	40.12	ppb	2.21	40.00	75 - 125	
107 Ag	42.51	ppb	2.92	40.00	75 - 125	
111 Cd	41.16	ppb	1.26	40.00	75 - 125	
121 Sb	39.27	ppb	1.43	40.00	75 - 125	
202 Hg	4.01	ppb	1.33	4.00	75 - 125	
205 Tl	40.60	ppb	1.94	40.00	75 - 125	
208 Pb	40.55	ppb	0.48	40.00	75 - 125	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5671935	1.00	5448311	0.0	30 - 140	
45 Sc	4846256	1.25	5330943	0.0	30 - 140	
72 Ge	717981	5.29	940734	0.0	30 - 140	
115 In	3967925	0.82	5786497	0.0	30 - 140	
159 Tb	4457554	2.94	6622862	0.0	30 - 140	
209 Bi	2535743	2.34	3536119	0.0	30 - 140	

ISTD Ref File :

All Reference Sample QC Report

Data File:	C:\ICPCHEM\1\DATA\040618A.B\013AREF.D\013AREF.D#
Date Acquired:	Jun 18 2004 11:31 am
Acq. Method:	PPRCRA.M
Operator:	Lisa Miller
Sample Name:	04061717-03
Misc Info:	BATCH 1069
Vial Number:	2101
Current Method:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal. Update:	Jun 18 2004 10:55 am
Sample Type:	AllRef
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	1.82	1.82	ppb	2.14	8000.00	
52 Cr	2.15	2.15	ppb	5.46	40000.00	
60 Ni	41.17	41.17	ppb	2.91	8000.00	
63 Cu	-2.33	-2.33	ppb	4.58	8000.00	
66 Zn	151.00	151.00	ppb	3.33	8000.00	
75 As	0.43	0.43	ppb	3.84	8000.00	
82 Se	0.70	0.70	ppb	4.89	8000.00	
107 Ag	-0.02	-0.02	ppb	17.25	8000.00	
111 Cd	15.89	15.89	ppb	1.94	8000.00	
121 Sb	-0.05	-0.05	ppb	15.14	8000.00	
202 Hg	0.02	0.02	ppb	12.95	8.00	
205 Tl	0.04	0.04	ppb	24.80	8000.00	
208 Pb	2.44	2.44	ppb	3.09	40000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5466434	3.06	5448311	100.3	30 - 140	
45 Sc	5208191	3.35	5330943	97.7	30 - 140	
72 Ge	911999	2.54	940734	96.9	30 - 140	
115 In	5587405	1.28	5786497	96.6	30 - 140	
159 Tb	6557939	1.61	6622862	99.0	30 - 140	
209 Bi	3440808	4.19	3536119	97.3	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

Duplicate QC Report

Data File:	C:\ICPCHEM\1\DATA\040618A.B\014DUP1.D\014DUP1.D#
Date Acquired:	Jun 18 2004 11:36 am
Acq. Method:	PPRCRA.M
Operator:	
Sample Name:	04061717-03
Misc Info:	BATCH 1069
Vial Number:	2102
Current Method:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal. Update:	Jun 18 2004 10:55 am
Sample Type:	Dupl
Dilution Factor:	1.00

Duplicate Ref File: C:\ICPCHEM\1\DATA\040618A.B\013AREF.D\013AREF.D#

QC Elements

Element	Raw Conc	Units	RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	1.81	ppb	0.85	1.82	0.50	20	<PQL
52 Cr	2.24	ppb	3.12	2.15	3.97	20	<PQL
60 Ni	41.34	ppb	3.48	41.17	0.41	20	
63 Cu	-2.38	ppb	1.07	-2.33	-2.29	20	<PQL
66 Zn	151.70	ppb	1.50	151.00	0.46	20	
75 As	0.44	ppb	5.01	0.43	2.20	20	<PQL
82 Se	0.66	ppb	7.47	0.70	5.91	20	<PQL
107 Ag	-0.02	ppb	2.34	-0.02	-23.38	20	<PQL
111 Cd	15.50	ppb	0.42	15.89	2.48	20	
121 Sb	-0.05	ppb	12.05	-0.05	-2.43	20	<PQL
202 Hg	0.02	ppb	25.76	0.02	26.67	20	<PQL
205 Tl	0.02	ppb	70.40	0.04	57.25	20	<PQL
208 Pb	2.44	ppb	6.29	2.44	0.20	20	<PQL

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5398341	2.09	5448311	99.1	30 - 140	
45 Sc	5147861	0.90	5330943	96.6	30 - 140	
72 Ge	908306	1.14	940734	96.6	30 - 140	
115 In	5561144	1.38	5786497	96.1	30 - 140	
159 Tb	6501948	3.12	6622862	98.2	30 - 140	
209 Bi	3440355	7.04	3536119	97.3	30 - 140	

ISTD Ref. File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

LFM Sample QC Report

Data File: C:\ICPCHEM\1\DATA\040618A.B\015LFM1.D\015LFM1.D#
Date Acquired: Jun 18 2004 11:41 am
Acq. Method: PPRCRA.M
Operator:
Sample Name: 04061717-03
Misc Info: BATCH 1069
Vial Number: 2103
Current Method: C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal. Update: Jun 18 2004 10:55 am
Sample Type: LFM1
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: C:\ICPCHEM\1\DATA\040618A.B\013AREF.D\013AREF.D#

QC Elements

Element	Raw Conc	Units	Ref Conc	RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	45.61	ppb	1.82	5.64	40.00	109.5	75 - 125	
52 Cr	40.91	ppb	2.15	4.38	40.00	96.9	75 - 125	
60 Ni	79.57	ppb	41.17	3.13	40.00	96.0	75 - 125	
63 Cu	35.12	ppb	-2.33	5.74	40.00	93.6	75 - 125	
66 Zn	187.80	ppb	151.00	0.65	40.00	92.0	75 - 125	
75 As	45.01	ppb	0.43	1.87	40.00	111.5	75 - 125	
82 Se	48.90	ppb	0.70	0.88	40.00	120.5	75 - 125	
107 Ag	32.04	ppb	-0.02	1.49	40.00	80.1	75 - 125	
111 Cd	56.56	ppb	15.89	2.04	40.00	101.7	75 - 125	
121 Sb	37.37	ppb	-0.05	2.69	40.00	93.5	75 - 125	
202 Hg	1.55	ppb	0.02	3.62	2.00	76.3	75 - 125	
205 Tl	41.28	ppb	0.04	0.59	40.00	103.1	75 - 125	
208 Pb	42.19	ppb	2.44	0.75	40.00	99.4	75 - 125	

ISTD Elements

Element	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	5245426	2.41	5448311	96.3	30 - 140	
45 Sc	5091487	2.75	5330943	95.5	30 - 140	
72 Ge	896257	1.46	940734	95.3	30 - 140	
115 In	5471189	2.03	5786497	94.6	30 - 140	
159 Tb	6436305	2.13	6622862	97.2	30 - 140	
209 Bi	3435308	1.28	3536119	97.1	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040618A.B\021CCV1.D\021CCV1.D#
Date Acquired: Jun 18 2004 12:09 pm
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal Update: Jun 18 2004 10:55 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	53.25	ppb	2.91	50.00	90 - 110	
52 Cr	50.16	ppb	2.62	50.00	90 - 110	
60 Ni	48.44	ppb	3.32	50.00	90 - 110	
63 Cu	47.21	ppb	1.57	50.00	90 - 110	
66 Zn	50.13	ppb	1.54	50.00	90 - 110	
75 As	51.13	ppb	1.02	50.00	90 - 110	
82 Se	50.79	ppb	3.37	50.00	90 - 110	
107 Ag	51.51	ppb	1.14	50.00	90 - 110	
111 Cd	50.46	ppb	1.27	50.00	90 - 110	
121 Sb	49.65	ppb	0.91	50.00	90 - 110	
202 Hg	1.96	ppb	1.23	2.00	90 - 110	
205 Tl	45.72	ppb	1.01	50.00	90 - 110	
208 Pb	48.37	ppb	2.40	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5435044	5.26	5448311	99.8	30 - 140	
45 Sc	5103485	2.66	5330943	95.7	30 - 140	
72 Ge	870245	1.21	940734	92.5	30 - 140	
115 In	4950170	1.20	5786497	85.5	30 - 140	
159 Tb	5572725	3.80	6622862	84.1	30 - 140	
209 Bi	3035232	4.22	3536119	85.8	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

All Reference Sample QC Report

Data File:	C:\ICPCHEM\1\DATA\040618A.B\028AREF.D\028AREF.D#
Date Acquired:	Jun 18 2004 12:43 pm
Acq. Method:	PPRCRA.M
Operator:	Lisa Miller
Sample Name:	04061717-12
Misc Info:	BATCH 1081
Vial Number:	2201
Current Method:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal. Update:	Jun 18 2004 10:55 am
Sample Type:	AllRef
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	8.25	8.25	ppb	2.06	8000.00	
52 Cr	33.10	33.10	ppb	2.25	40000.00	
60 Ni	88.48	88.48	ppb	1.52	8000.00	
63 Cu	15.37	15.37	ppb	1.65	8000.00	
66 Zn	492.30	492.30	ppb	0.27	8000.00	
75 As	0.93	0.93	ppb	20.78	8000.00	
82 Se	26.03	26.03	ppb	2.32	8000.00	
107 Ag	0.20	0.20	ppb	5.94	8000.00	
111 Cd	55.11	55.11	ppb	1.01	8000.00	
121 Sb	0.34	0.34	ppb	7.89	8000.00	
202 Hg	0.04	0.04	ppb	9.65	8.00	
205 Tl	-0.13	-0.13	ppb	6.59	8000.00	
208 Pb	16.00	16.00	ppb	1.14	40000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5645658	0.56	5448311	103.6	30 - 140	
45 Sc	5204595	0.91	5330943	97.6	30 - 140	
72 Ge	881206	1.65	940734	93.7	30 - 140	
115 In	4734541	2.29	5786497	81.8	30 - 140	
159 Tb	6099251	0.64	6622862	92.1	30 - 140	
209 Bi	2821572	0.90	3536119	79.8	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

Duplicate QC Report

Data File:	C:\ICPCHEM\1\DATA\040618A.B\029DUP1.D\029DUP1.D#
Date Acquired:	Jun 18 2004 12:48 pm
Acq. Method:	PPRCRA.M
Operator:	
Sample Name:	04061717-12 DUP
Misc Info:	BATCH 1081
Vial Number:	2202
Current Method:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal. Update:	Jun 18 2004 10:55 am
Sample Type:	Dup1
Dilution Factor:	1.00

Duplicate Ref File: C:\ICPCHEM\1\DATA\040618A.B\028AREF.D\028AREF.D#

QC Elements

Element	Raw Conc	Units	RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	8.59	ppb	2.09	8.25	4.00	20	
52 Cr	35.38	ppb	3.55	33.10	6.66	20	
60 Ni	91.65	ppb	2.96	88.48	3.52	20	
63 Cu	16.33	ppb	2.64	15.37	6.06	20	
66 Zn	503.50	ppb	1.65	492.30	2.25	20	
75 As	0.81	ppb	24.14	0.93	14.13	20	<PQL
82 Se	27.11	ppb	5.84	26.03	4.06	20	
107 Ag	0.24	ppb	10.33	0.20	18.93	20	<PQL
111 Cd	56.60	ppb	1.33	55.11	2.67	20	
121 Sb	0.36	ppb	3.45	0.34	5.77	20	<PQL
202 Hg	0.04	ppb	9.09	0.04	1.68	20	<PQL
205 Tl	-0.12	ppb	13.02	-0.13	-8.53	20	<PQL
208 Pb	16.90	ppb	0.18	16.00	5.47	20	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	5360825	2.57	5448311	98.4	30 - 140	
45 Sc	5032549	1.90	5330943	94.4	30 - 140	
72 Ge	851867	3.10	940734	90.6	30 - 140	
115 In	4599146	0.66	5786497	79.5	30 - 140	
159 Tb	5942228	1.64	6622862	89.7	30 - 140	
209 Bi	2738132	1.25	3536119	77.4	30 - 140	

ISTD Ref. File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

LFM Sample QC Report

Data File: C:\ICPCHEM\1\DATA\040618A.B\030LFM1.D\030LFM1.D#
Date Acquired: Jun 18 2004 12:53 pm
Acq. Method: PPRCRA.M
Operator:
Sample Name: 04061717-12 LFM
Misc Info: BATCH 1081
Vial Number: 2203
Current Method: C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal. Update: Jun 18 2004 10:55 am
Sample Type: LFM1
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: C:\ICPCHEM\1\DATA\040618A.B\028AREF.D\028AREF.D#

QC Elements

Element	Raw Conc	Units	Ref Conc	RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	55.93	ppb	8.25	2.65	50.00	95.4	75 - 125	
52 Cr	83.58	ppb	33.10	0.27	50.00	101.0	75 - 125	
60 Ni	135.80	ppb	88.48	1.33	50.00	94.6	75 - 125	
63 Cu	55.48	ppb	15.37	0.77	50.00	80.2	75 - 125	
66 Zn	543.70	ppb	492.30	1.15	50.00	102.8	75 - 125	
75 As	46.55	ppb	0.93	0.65	50.00	91.2	75 - 125	
82 Se	71.51	ppb	26.03	1.77	50.00	91.0	75 - 125	
107 Ag	53.27	ppb	0.20	1.56	50.00	106.1	75 - 125	
111 Cd	100.70	ppb	55.11	0.70	50.00	91.2	75 - 125	
121 Sb	45.58	ppb	0.34	0.40	50.00	90.5	75 - 125	
202 Hg	1.86	ppb	0.04	1.37	2.00	90.8	75 - 125	
205 Tl	43.18	ppb	-0.13	0.99	50.00	86.6	75 - 125	
208 Pb	62.98	ppb	16.00	1.17	50.00	94.0	75 - 125	

ISTD Elements

Element	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	5605004	2.23	5448311	102.9	30 - 140	
45 Sc	5024242	1.12	5330943	94.2	30 - 140	
72 Ge	853557	1.04	940734	90.7	30 - 140	
115 In	4664701	0.43	5786497	80.6	30 - 140	
159 Tb	6050582	1.45	6622862	91.4	30 - 140	
209 Bi	2779980	2.05	3536119	78.6	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

Dilution QC Report

Data File: C:\ICPCHEM\1\DATA\040618A.B\032DIL1.D\032DIL1.D#
Date Acquired: Jun 18 2004 01:02 pm
Acq. Method: PPRCRA.M
Operator:
Sample Name: 04061717-12 DIL
Misc Info: BATCH 1081
Vial Number: 2205
Current Method: C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal. Update: Jun 18 2004 10:55 am
Sample Type: Dil1
Dilution Factor: 5.00

Dilution Ref File: C:\ICPCHEM\1\DATA\040618A.B\028AREF.D\028AREF.D#

QC elements

Element	Raw Conc	Units	RSD(%)	*Ref conc*	Actual(%)	QC Range(%)	Flag
9 Be	1.72	ppb	1.39	8.25	104.26	90 - 110	<100 PB
52 Cr	6.90	ppb	2.79	33.10	104.23	90 - 110	<100 PB
60 Ni	18.13	ppb	1.32	88.48	102.45	90 - 110	
63 Cu	2.70	ppb	6.71	15.37	87.93	90 - 110	<100 PB
66 Zn	102.70	ppb	0.22	492.30	104.31	90 - 110	<100 PB
75 As	0.09	ppb	66.43	0.93	50.34	90 - 110	<100 PB
82 Se	5.49	ppb	7.83	26.03	105.40	90 - 110	<100 PB
107 Ag	0.13	ppb	7.81	0.20	320.56	90 - 110	<100 PB
111 Cd	11.21	ppb	1.78	55.11	101.71	90 - 110	
121 Sb	0.62	ppb	8.35	0.34	901.49	90 - 110	<100 PB
202 Hg	0.03	ppb	1.68	0.04	375.38	90 - 110	<100 PB
205 Tl	0.28	ppb	8.94	-0.13	-1056.26	90 - 110	<100 PB
208 Pb	3.51	ppb	1.45	16.00	109.66	90 - 110	<100 PB

CCV QC Report

Data File:	C:\ICPCHEM\1\DATA\040618A.B\034CCV1.D\034CCV1.D#
Date Acquired:	Jun 18 2004 01:12 pm
Operator:	
Sample Name:	CCV
Misc Info:	0.25 ML #444; 0.1 ML #A099
Vial Number:	1105
Current Method:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal Update:	Jun 18 2004 10:55 am
Sample Type:	CCV1
Total Dil Factor:	1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	50.08	ppb	3.47	50.00	90 - 110	
52 Cr	49.29	ppb	1.36	50.00	90 - 110	
60 Ni	46.56	ppb	1.03	50.00	90 - 110	
63 Cu	44.99	ppb	2.19	50.00	90 - 110	Fail
66 Zn	48.97	ppb	1.00	50.00	90 - 110	
75 As	48.79	ppb	1.64	50.00	90 - 110	
82 Se	47.41	ppb	1.35	50.00	90 - 110	
107 Ag	49.38	ppb	2.18	50.00	90 - 110	
111 Cd	50.09	ppb	0.82	50.00	90 - 110	
121 Sb	49.41	ppb	1.05	50.00	90 - 110	
202 Hg	1.90	ppb	1.00	2.00	90 - 110	
205 Tl	41.48	ppb	3.47	50.00	90 - 110	Fail
208 Pb	48.29	ppb	0.33	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	6283019	2.71	5448311	115.3	30 - 140	
45 Sc	5345675	0.66	5330943	100.3	30 - 140	
72 Ge	889045	0.82	940734	94.5	30 - 140	
115 In	4950061	0.77	5786497	85.5	30 - 140	
159 Tb	5580341	1.27	6622862	84.3	30 - 140	
209 Bi	3079579	1.82	3536119	87.1	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040618A.B\035CCV1.D\035CCV1.D#
Date Acquired: Jun 18 2004 01:16 pm
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal Update: Jun 18 2004 10:55 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	50.72	ppb	4.68	50.00	90 - 110	
52 Cr	50.05	ppb	0.68	50.00	90 - 110	
60 Ni	47.05	ppb	2.42	50.00	90 - 110	
63 Cu	45.41	ppb	1.53	50.00	90 - 110	
66 Zn	49.03	ppb	3.24	50.00	90 - 110	
75 As	49.95	ppb	1.40	50.00	90 - 110	
82 Se	48.21	ppb	3.31	50.00	90 - 110	
107 Ag	49.89	ppb	5.38	50.00	90 - 110	
111 Cd	50.38	ppb	2.78	50.00	90 - 110	
121 Sb	49.48	ppb	4.18	50.00	90 - 110	
202 Hg	1.93	ppb	2.05	2.00	90 - 110	
205 Tl	43.86	ppb	4.03	50.00	90 - 110	Fail
208 Pb	48.48	ppb	1.96	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	6206504	2.74	5448311	113.9	30 - 140	
45 Sc	5368391	2.26	5330943	100.7	30 - 140	
72 Ge	887255	2.24	940734	94.3	30 - 140	
115 In	4918552	3.24	5786497	85.0	30 - 140	
159 Tb	5460912	1.65	6622862	82.5	30 - 140	
209 Bi	3007270	1.72	3536119	85.0	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

CCV QC Report

Data File:	C:\ICPCHEM\1\DATA\040618A.B\048CCV1.D\048CCV1.D#
Date Acquired:	Jun 18 2004 02:19 pm
Operator:	
Sample Name:	CCV
Misc Info:	0.25 ML #444; 0.1 ML #A099
Vial Number:	1105
Current Method:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File:	C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal Update:	Jun 18 2004 10:55 am
Sample Type:	CCV1
Total Dil Factor:	1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	47.03	ppb	1.42	50.00	90 - 110	
52 Cr	47.32	ppb	0.15	50.00	90 - 110	
60 Ni	44.53	ppb	1.67	50.00	90 - 110	Fail
63 Cu	41.27	ppb	2.86	50.00	90 - 110	Fail
66 Zn	52.24	ppb	2.04	50.00	90 - 110	
75 As	52.01	ppb	3.02	50.00	90 - 110	
82 Se	50.81	ppb	8.71	50.00	90 - 110	
107 Ag	49.20	ppb	2.39	50.00	90 - 110	
111 Cd	47.68	ppb	1.15	50.00	90 - 110	
121 Sb	47.32	ppb	1.89	50.00	90 - 110	
202 Hg	1.81	ppb	1.11	2.00	90 - 110	
205 Tl	39.36	ppb	3.92	50.00	90 - 110	Fail
208 Pb	46.86	ppb	0.11	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	6135181	6.78	5448311	112.6	30 - 140	
45 Sc	4775702	8.69	5330943	89.6	30 - 140	
72 Ge	663255	4.61	940734	70.5	30 - 140	
115 In	3880639	2.85	5786497	67.1	30 - 140	
159 Tb	4304266	2.65	6622862	65.0	30 - 140	
209 Bi	2474336	3.09	3536119	70.0	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\040618A.B\048CCV1.D\048CCV1.D#
Date Acquired: Jun 18 2004 02:19 pm
Operator:
Sample Name: CCV
Misc Info: 0.25 ML #444; 0.1 ML #A099
Vial Number: 1105
Current Method: C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.M
Calibration File: C:\ICPCHEM\1\DATA\040618A.B\PPRCRA.C
Last Cal Update: Jun 18 2004 10:55 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc	Units	RSD(%)	Expected	QC Range(%)	Flag
9 Be	47.03	ppb	1.42	50.00	90 - 110	
52 Cr	47.32	ppb	0.15	50.00	90 - 110	
60 Ni	44.53	ppb	1.67	50.00	90 - 110	Fail
63 Cu	41.27	ppb	2.86	50.00	90 - 110	Fail
66 Zn	52.24	ppb	2.04	50.00	90 - 110	
75 As	52.01	ppb	3.02	50.00	90 - 110	
82 Se	50.81	ppb	8.71	50.00	90 - 110	
107 Ag	49.20	ppb	2.39	50.00	90 - 110	
111 Cd	47.68	ppb	1.15	50.00	90 - 110	
121 Sb	47.32	ppb	1.89	50.00	90 - 110	
138 Ba	49.07	ppb	1.42	50.00	90 - 110	
202 Hg	1.81	ppb	1.11	2.00	90 - 110	
205 Tl	39.36	ppb	3.92	50.00	90 - 110	Fail
208 Pb	46.86	ppb	0.11	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	6135181	6.78	5448311	112.6	30 - 140	
45 Sc	4775702	8.69	5330943	89.6	30 - 140	
72 Ge	663255	4.61	940734	70.5	30 - 140	
115 In	3880639	2.85	5786497	67.1	30 - 140	
159 Tb	4304266	2.65	6622862	65.0	30 - 140	
209 Bi	2474336	3.09	3536119	70.0	30 - 140	

ISTD Ref File : C:\ICPCHEM\1\DATA\040618A.B\002CALB.D\002CALB.D#

PHASE SEPARATION SCIENCE, INC.

Analytical Chemistry Environmental Science

LABORATORY RESULTS

DATE RECEIVED: June 21, 2004

PROJECT: Martin State Airport-Quarterly Sampling

Project #: N7339-0677D

CERTIFICATE OF ANALYSIS #: *04062118*

PREPARED FOR:

Tetra Tech, Inc.
10670 White Rock Rd., Ste. 100
Rancho Cordova, CA 95670

June 28, 2004

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PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062118 Page 1 of 31
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID TB061804 / 04062118-01						
Volatile Organic Compounds						
Benzene	ND	ug/L	EPA 8260B	1		6/24/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
Bromoform	ND	ug/L	EPA 8260B	1		6/24/2004
Bromomethane	ND	ug/L	EPA 8260B	1		6/24/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	1		6/24/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Chloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Chloroform	ND	ug/L	EPA 8260B	1		6/24/2004
Chloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/24/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/24/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		6/24/2004
Dibromomethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloroethene	ND	ug/L	EPA 8260B	1		6/24/2004
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260B	1		6/24/2004
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004

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CERTIFICATE OF ANALYSIS
No. 04062118
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID TB061804 / 04062118-01						
Volatile Organic Compounds						
Ethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		6/24/2004
Methylene chloride	ND	ug/L	EPA 8260B	1		6/24/2004
Naphthalene	ND	ug/L	EPA 8260B	1		6/24/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Styrene	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	1		6/24/2004
Toluene	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Trichloroethene	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Vinyl chloride	ND	ug/L	EPA 8260B	1		6/24/2004
m&p-Xylene	ND	ug/L	EPA 8260B	1		6/24/2004
o-Xylene	ND	ug/L	EPA 8260B	3		6/24/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	3		6/24/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	1		6/24/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		6/24/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		6/24/2004
Acetone	ND	ug/L	EPA 8260B	10		6/24/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	10		6/24/2004
Carbon disulfide	ND	ug/L	EPA 8260B	5		6/24/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		6/24/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		6/24/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004
	ND	ug/L	EPA 8260B	1		6/24/2004

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CERTIFICATE OF ANALYSIS
No. 04062118 Page 3 of 31
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID TB061804 / 04062118-01						

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By
Quality Assurance Chemist

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June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-3S-061804 / 04062118-02						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	**27**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	**40**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	ND	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	**9.1**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	ND	ug/L	EPA 6020	50	6/24/2004	6/28/2004
Volatile Organic Compounds						
Benzene	ND	ug/L	EPA 8260B	100		6/24/2004
Bromobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
Bromochloromethane	ND	ug/L	EPA 8260B	100		6/24/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	100		6/24/2004
Bromoform	ND	ug/L	EPA 8260B	100		6/24/2004
Bromomethane	ND	ug/L	EPA 8260B	100		6/24/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	100		6/24/2004
Chlorobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
Chloroethane	ND	ug/L	EPA 8260B	100		6/24/2004
Chloroform	ND	ug/L	EPA 8260B	100		6/24/2004
Chloromethane	ND	ug/L	EPA 8260B	100		6/24/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	100		6/24/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	100		6/24/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	100		6/24/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	100		6/24/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	100		6/24/2004

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Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-3S-061804 / 04062118-02						
Volatile Organic Compounds						
Dibromomethane	ND	ug/L	EPA 8260B	100		6/24/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	100		6/24/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	100		6/24/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	100		6/24/2004
1,1-Dichloroethene	ND	ug/L	EPA 8260B	100		6/24/2004
cis-1,2-Dichloroethene	**1,900**	ug/L	EPA 8260B	100		6/24/2004
trans-1,2-Dichloroethene	**310**	ug/L	EPA 8260B	100		6/24/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	100		6/24/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	100		6/24/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	100		6/24/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	100		6/24/2004
Ethylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	100		6/24/2004
Methylene chloride	**b 470**	ug/L	EPA 8260B	100		6/24/2004
Naphthalene	ND	ug/L	EPA 8260B	100		6/24/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
Styrene	ND	ug/L	EPA 8260B	100		6/24/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	100		6/24/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	100		6/24/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	100		6/24/2004
Toluene	ND	ug/L	EPA 8260B	100		6/24/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	100		6/24/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	100		6/24/2004
Trichloroethene	ND	ug/L	EPA 8260B	100		6/24/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	100		6/24/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004

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No. 04062118 Page 6 of 31
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-3S-061804 / 04062118-02						
Volatile Organic Compounds						
Vinyl chloride	3,500	ug/L	EPA 8260B	100		6/24/2004
m&p-Xylene	ND	ug/L	EPA 8260B	300		6/24/2004
o-Xylene	ND	ug/L	EPA 8260B	300		6/24/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	100		6/24/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	1000		6/24/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	1000		6/24/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	1000		6/24/2004
Acetone	ND	ug/L	EPA 8260B	1000		6/24/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	500		6/24/2004
Carbon disulfide	ND	ug/L	EPA 8260B	100		6/24/2004
Vinyl acetate	ND	ug/L	EPA 8260B	100		6/24/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	100		6/24/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	100		6/24/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	100		6/24/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.

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Quality Assurance Chemist

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No. 04062118 Page 7 of 31
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-3S-061804 (Dissolved) / 04062118-03						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	**28**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	**5.0**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	**36**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	ND	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	**9.0**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	ND	ug/L	EPA 6020	50	6/24/2004	6/28/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

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Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-3I-061804 / 04062118-04						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	**270**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	**28**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	**49**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	ND	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	**77**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	**7.9**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	**380**	ug/L	EPA 6020	50	6/24/2004	6/28/2004
Volatile Organic Compounds						
Benzene	**49**	ug/L	EPA 8260B	1		6/24/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
Bromoform	ND	ug/L	EPA 8260B	1		6/24/2004
Bromomethane	ND	ug/L	EPA 8260B	1		6/24/2004
n-Butylbenzene	**3**	ug/L	EPA 8260B	1		6/24/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	1		6/24/2004
Chlorobenzene	**9**	ug/L	EPA 8260B	1		6/24/2004
Chloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Chloroform	**120**	ug/L	EPA 8260B	1		6/24/2004
Chloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/24/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/24/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		6/24/2004

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No. 04062118 Page 9 of 31
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-3I-061804 / 04062118-04						
Volatile Organic Compounds						
Dibromomethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichlorobenzene	4	ug/L	EPA 8260B	1		6/24/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichloroethane	180	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloroethene	48	ug/L	EPA 8260B	1		6/24/2004
cis-1,2-Dichloroethene	14,000	ug/L	EPA 8260B	400		6/26/2004
trans-1,2-Dichloroethene	58	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004
Ethylbenzene	22	ug/L	EPA 8260B	1		6/24/2004
Isopropylbenzene	3	ug/L	EPA 8260B	1		6/24/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		6/24/2004
Methylene chloride	ND	ug/L	EPA 8260B	1		6/24/2004
Naphthalene	7	ug/L	EPA 8260B	1		6/24/2004
n-Propylbenzene	4	ug/L	EPA 8260B	1		6/24/2004
Styrene	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Tetrachloroethene	35	ug/L	EPA 8260B	1		6/24/2004
Toluene	160	ug/L	EPA 8260B	1		6/24/2004
1,2,3-Trichlorobenzene	130	ug/L	EPA 8260B	1		6/24/2004
1,2,4-Trichlorobenzene	510	ug/L	EPA 8260B	400		6/26/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,2-Trichloroethane	9	ug/L	EPA 8260B	1		6/24/2004
Trichloroethene	13,000	ug/L	EPA 8260B	400		6/26/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,4-Trimethylbenzene	13	ug/L	EPA 8260B	1		6/24/2004
1,3,5-Trimethylbenzene	13	ug/L	EPA 8260B	1		6/24/2004

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062118
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-3I-061804 / 04062118-04						
Volatile Organic Compounds						
Vinyl chloride	2,200	ug/L	EPA 8260B	400		6/26/2004
m&p-Xylene	76	ug/L	EPA 8260B	3		6/24/2004
o-Xylene	29	ug/L	EPA 8260B	3		6/24/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		6/24/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		6/24/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		6/24/2004
4-Methyl-2-Pentanone (MIBK)	30	ug/L	EPA 8260B	10		6/24/2004
Acetone	ND	ug/L	EPA 8260B	10		6/24/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		6/24/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		6/24/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		6/24/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		6/24/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By
Quality Assurance Chemist

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CERTIFICATE OF ANALYSIS
No. 04062118
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-3I-061804 (Dissolved) / 04062118-05						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	**250**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	**8.8**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	**45**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	ND	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	**77**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	**7.1**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	**430**	ug/L	EPA 6020	50	6/24/2004	6/28/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By
Matt Miller
Quality Assurance Chemist

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CERTIFICATE OF ANALYSIS
No. 04062118
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-2S-061804 / 04062118-06						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	**210**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	**89**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	**12**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	ND	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	**97**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	**17**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	**390**	ug/L	EPA 6020	50	6/24/2004	6/28/2004
Volatile Organic Compounds						
Benzene	**4**	ug/L	EPA 8260B	1		6/24/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
Bromoform	ND	ug/L	EPA 8260B	1		6/24/2004
Bromomethane	ND	ug/L	EPA 8260B	1		6/24/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Carbon tetrachloride	**2**	ug/L	EPA 8260B	1		6/24/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Chloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Chloroform	**7**	ug/L	EPA 8260B	1		6/24/2004
Chloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/24/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/24/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		6/24/2004

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CERTIFICATE OF ANALYSIS
No. 04062118 Page 13 of 31
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-2S-061804 / 04062118-06						
Volatile Organic Compounds						
Dibromomethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichloroethane	**16**	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloroethene	**6**	ug/L	EPA 8260B	1		6/24/2004
cis-1,2-Dichloroethene	**590**	ug/L	EPA 8260B	20		6/26/2004
trans-1,2-Dichloroethene	**5**	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004
Ethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		6/24/2004
Methylene chloride	**b 11**	ug/L	EPA 8260B	1		6/24/2004
Naphthalene	ND	ug/L	EPA 8260B	1		6/24/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Styrene	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Tetrachloroethene	**3**	ug/L	EPA 8260B	1		6/24/2004
Toluene	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,4-Trichlorobenzene	**15**	ug/L	EPA 8260B	1		6/24/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,2-Trichloroethane	**j 1.0**	ug/L	EPA 8260B	1		6/24/2004
Trichloroethene	**2,400**	ug/L	EPA 8260B	20		6/26/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004

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CERTIFICATE OF ANALYSIS
No. 04062118
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-2S-061804 / 04062118-06						
Volatile Organic Compounds						
Vinyl chloride	120	ug/L	EPA 8260B	1		6/24/2004
m&p-Xylene	ND	ug/L	EPA 8260B	3		6/24/2004
o-Xylene	j 1	ug/L	EPA 8260B	3		6/24/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		6/24/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		6/24/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		6/24/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		6/24/2004
Acetone	ND	ug/L	EPA 8260B	10		6/24/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		6/24/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		6/24/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		6/24/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		6/24/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.
j - estimated value, less than quantitation limit.

Reviewed By Matt Cohen
Quality Assurance Chemist

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June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-2S-061804 (Dissolved) / 04062118-07						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	**200**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	**5.9**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	**69**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	**11**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	ND	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	**96**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	**16**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	**410**	ug/L	EPA 6020	50	6/24/2004	6/28/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By
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Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-4D-061804 / 04062118-08						
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	**17**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	**8.6**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	**60**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	**5.1**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	ND	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	**96**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	**29**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	**300**	ug/L	EPA 6020	50	6/24/2004	6/28/2004
Volatile Organic Compounds						
Benzene	**1**	ug/L	EPA 8260B	1		6/24/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
Bromoform	ND	ug/L	EPA 8260B	1		6/24/2004
Bromomethane	ND	ug/L	EPA 8260B	1		6/24/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Carbon tetrachloride	**1**	ug/L	EPA 8260B	1		6/24/2004
Chlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Chloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Chloroform	**2**	ug/L	EPA 8260B	1		6/24/2004
Chloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/24/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/24/2004
Dibromochloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		6/24/2004

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June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-4D-061804 / 04062118-08						
Volatile Organic Compounds						
Dibromomethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloroethane	**6**	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichloroethane	**8**	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloroethene	**11**	ug/L	EPA 8260B	1		6/24/2004
cis-1,2-Dichloroethene	**250**	ug/L	EPA 8260B	100		6/26/2004
trans-1,2-Dichloroethene	**6**	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004
Ethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		6/24/2004
Methylene chloride	**b 12**	ug/L	EPA 8260B	1		6/24/2004
Naphthalene	ND	ug/L	EPA 8260B	1		6/24/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Styrene	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Tetrachloroethene	**3**	ug/L	EPA 8260B	1		6/24/2004
Toluene	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,4-Trichlorobenzene	**3**	ug/L	EPA 8260B	1		6/24/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Trichloroethene	**4,900**	ug/L	EPA 8260B	100		6/26/2004
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,4-Trimethylbenzene	**2**	ug/L	EPA 8260B	1		6/24/2004
1,3,5-Trimethylbenzene	**2**	ug/L	EPA 8260B	1		6/24/2004

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062118
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-4D-061804 / 04062118-08						
Volatile Organic Compounds						
Vinyl chloride	**16**	ug/L	EPA 8260B	1		6/24/2004
m&p-Xylene	ND	ug/L	EPA 8260B	3		6/24/2004
o-Xylene	**j 2**	ug/L	EPA 8260B	3		6/24/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		6/24/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		6/24/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		6/24/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		6/24/2004
Acetone	ND	ug/L	EPA 8260B	10		6/24/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		6/24/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		6/24/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		6/24/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		6/24/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.
j - estimated value, less than quantitation limit.

Reviewed By Matt Colee
Quality Assurance Chemist

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CERTIFICATE OF ANALYSIS
No. 04062118 Page 19 of 31
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/18/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-4D-061804 (Dissolved) / 04062118-09						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	17	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	5.2	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	59	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	5.4	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	ND	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	97	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	27	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	320	ug/L	EPA 6020	50	6/24/2004	6/28/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By Matt Oline
Quality Assurance Chemist

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CERTIFICATE OF ANALYSIS
No. 04062118
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-7S-062104 / 04062118-10						
Nitrate Nitrogen						
Nitrate	8.8	mg/L	EPA 300.0	0.2		6/22/2004
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	6.7	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	13	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	68	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	8.0	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	ND	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	89	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	39	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	250	ug/L	EPA 6020	50	6/24/2004	6/28/2004
Total Sulfate						
Sulfate	1,930	mg/L	EPA 300.0	1		6/24/2004
Volatile Organic Compounds						
Benzene	ND	ug/L	EPA 8260B	100		6/24/2004
Bromobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
Bromochloromethane	ND	ug/L	EPA 8260B	100		6/24/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	100		6/24/2004
Bromoform	ND	ug/L	EPA 8260B	100		6/24/2004
Bromomethane	ND	ug/L	EPA 8260B	100		6/24/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	100		6/24/2004
Chlorobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
Chloroethane	ND	ug/L	EPA 8260B	100		6/24/2004
Chloroform	ND	ug/L	EPA 8260B	100		6/24/2004
Chloromethane	ND	ug/L	EPA 8260B	100		6/24/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	100		6/24/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	100		6/24/2004

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Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-7S-062104 / 04062118-10						
Volatile Organic Compounds						
Dibromochloromethane	ND	ug/L	EPA 8260B	100		6/24/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	100		6/24/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	100		6/24/2004
Dibromomethane	ND	ug/L	EPA 8260B	100		6/24/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	100		6/24/2004
1,1-Dichloroethane	**810**	ug/L	EPA 8260B	100		6/24/2004
1,2-Dichloroethane	**150**	ug/L	EPA 8260B	100		6/24/2004
1,1-Dichloroethene	ND	ug/L	EPA 8260B	100		6/24/2004
cis-1,2-Dichloroethene	**26,000**	ug/L	EPA 8260B	1000		6/26/2004
trans-1,2-Dichloroethene	**470**	ug/L	EPA 8260B	100		6/24/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	100		6/24/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	100		6/24/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	100		6/24/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	100		6/24/2004
Ethylbenzene	**170**	ug/L	EPA 8260B	100		6/24/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	100		6/24/2004
Methylene chloride	**b 940**	ug/L	EPA 8260B	100		6/24/2004
Naphthalene	ND	ug/L	EPA 8260B	100		6/24/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
Styrene	ND	ug/L	EPA 8260B	100		6/24/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	100		6/24/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	100		6/24/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	100		6/24/2004
Toluene	**3,100**	ug/L	EPA 8260B	100		6/24/2004
1,2,3-Trichlorobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	100		6/24/2004
1,1,1-Trichloroethane	ND	ug/L	EPA 8260B	100		6/24/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	100		6/24/2004
Trichloroethene	**36,000**	ug/L	EPA 8260B	1000		6/26/2004

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CERTIFICATE OF ANALYSIS
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Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-7S-062104 / 04062118-10						
Volatile Organic Compounds						
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	100		6/24/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	100		6/24/2004
Vinyl chloride	**180**	ug/L	EPA 8260B	100		6/24/2004
m&p-Xylene	**350**	ug/L	EPA 8260B	300		6/24/2004
o-Xylene	**j 150**	ug/L	EPA 8260B	300		6/24/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	100		6/24/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	1000		6/24/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	1000		6/24/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	1000		6/24/2004
Acetone	ND	ug/L	EPA 8260B	1000		6/24/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	500		6/24/2004
Carbon disulfide	ND	ug/L	EPA 8260B	100		6/24/2004
Vinyl acetate	ND	ug/L	EPA 8260B	100		6/24/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	100		6/24/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	100		6/24/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	100		6/24/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.
j - estimated value, less than quantitation limit.

Reviewed By Matt Cline
Quality Assurance Chemist

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CERTIFICATE OF ANALYSIS
No. 04062118 Page 23 of 31
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-7S-062104 (Dissolved) / 04062118-11						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	**6.9**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	**13**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	**10**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	**66**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	**7.1**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	ND	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	**90**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	**36**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	**250**	ug/L	EPA 6020	50	6/24/2004	6/28/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By
Quality Assurance Chemist

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Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-1B-062104 / 04062118-12						
Nitrate Nitrogen						
Nitrate	ND	mg/L	EPA 300.0	0.2		6/22/2004
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	**210**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	**120**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	**220**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	**12**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	**5.2**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	**7.2**	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	**36**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	**5.7**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	**170**	ug/L	EPA 6020	50	6/24/2004	6/28/2004
Total Sulfate						
Sulfate	**93**	mg/L	EPA 300.0	1		6/22/2004
Volatile Organic Compounds						
Benzene	**41**	ug/L	EPA 8260B	1		6/24/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
Bromoform	ND	ug/L	EPA 8260B	1		6/24/2004
Bromomethane	ND	ug/L	EPA 8260B	1		6/24/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Carbon tetrachloride	ND	ug/L	EPA 8260B	1		6/24/2004
Chlorobenzene	**8**	ug/L	EPA 8260B	1		6/24/2004
Chloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Chloroform	**3**	ug/L	EPA 8260B	1		6/24/2004
Chloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/24/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/24/2004

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Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-1B-062104 / 04062118-12						
Volatile Organic Compounds						
Dibromochloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		6/24/2004
Dibromomethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloroethene	ND	ug/L	EPA 8260B	1		6/24/2004
cis-1,2-Dichloroethene	**4,600**	ug/L	EPA 8260B	100		6/26/2004
trans-1,2-Dichloroethene	**11**	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004
Ethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Isopropylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		6/24/2004
Methylene chloride	ND	ug/L	EPA 8260B	1		6/24/2004
Naphthalene	ND	ug/L	EPA 8260B	1		6/24/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Styrene	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	1		6/24/2004
Toluene	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,3-Trichlorobenzene	**6**	ug/L	EPA 8260B	1		6/24/2004
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,1-Trichloroethane	**3**	ug/L	EPA 8260B	1		6/24/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Trichloroethene	ND	ug/L	EPA 8260B	1		6/24/2004
	190	ug/L	EPA 8260B	1		6/24/2004

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062118 Page 26 of 31
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-1B-062104 / 04062118-12						
Volatile Organic Compounds						
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Vinyl chloride	**6,200**	ug/L	EPA 8260B	100		6/26/2004
m&p-Xylene	**j 3**	ug/L	EPA 8260B	3		6/24/2004
o-Xylene	**7**	ug/L	EPA 8260B	3		6/24/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		6/24/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		6/24/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		6/24/2004
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 8260B	10		6/24/2004
Acetone	ND	ug/L	EPA 8260B	10		6/24/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		6/24/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		6/24/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		6/24/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		6/24/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
j - estimated value, less than quantitation limit.

Reviewed By Matt Cohee
Quality Assurance Chemist

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CERTIFICATE OF ANALYSIS
No. 04062118 Page 27 of 31
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-1B-062104 (Dissolved) / 04062118-13						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	**18**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	**110**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	**19**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	**9.9**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	ND	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	**35**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	**160**	ug/L	EPA 6020	50	6/24/2004	6/28/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By
Quality Assurance Chemist

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062118
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-1A-062104 / 04062118-14						
Nitrate Nitrogen						
Nitrate	0.3	mg/L	EPA 300.0	0.2		6/22/2004
Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	8.0	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	970	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	420	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	16	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	2.0	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	110	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	5.3	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	330	ug/L	EPA 6020	50	6/24/2004	6/28/2004
Total Sulfate						
Sulfate	409	mg/L	EPA 300.0	1		6/24/2004
Volatile Organic Compounds						
Benzene	29	ug/L	EPA 8260B	1		6/24/2004
Bromobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Bromochloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
Bromodichloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
Bromoform	ND	ug/L	EPA 8260B	1		6/24/2004
Bromomethane	ND	ug/L	EPA 8260B	1		6/24/2004
n-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
sec-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
tert-Butylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Carbon tetrachloride	1	ug/L	EPA 8260B	1		6/24/2004
Chlorobenzene	7	ug/L	EPA 8260B	1		6/24/2004
Chloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Chloroform	6	ug/L	EPA 8260B	1		6/24/2004
Chloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
2-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/24/2004
4-Chlorotoluene	ND	ug/L	EPA 8260B	1		6/24/2004

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CERTIFICATE OF ANALYSIS
No. 04062118
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-1A-062104 / 04062118-14						
Volatile Organic Compounds						
Dibromochloromethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dibromo-3-chloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dibromoethane	ND	ug/L	EPA 8260B	1		6/24/2004
Dibromomethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichlorobenzene	**1**	ug/L	EPA 8260B	1		6/24/2004
1,3-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,4-Dichlorobenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Dichlorodifluoromethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2-Dichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloroethene	**38**	ug/L	EPA 8260B	1		6/24/2004
cis-1,2-Dichloroethene	**14**	ug/L	EPA 8260B	1		6/24/2004
trans-1,2-Dichloroethene	**8,000**	ug/L	EPA 8260B	100		6/26/2004
1,2-Dichloropropane	**43**	ug/L	EPA 8260B	1		6/24/2004
1,3-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
2,2-Dichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004
Ethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Isopropylbenzene	**j 1.0**	ug/L	EPA 8260B	1		6/24/2004
p-Isopropyltoluene	ND	ug/L	EPA 8260B	1		6/24/2004
Methylene chloride	ND	ug/L	EPA 8260B	1		6/24/2004
Naphthalene	**b 120**	ug/L	EPA 8260B	1		6/24/2004
n-Propylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Styrene	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Tetrachloroethene	ND	ug/L	EPA 8260B	1		6/24/2004
Toluene	**4**	ug/L	EPA 8260B	1		6/24/2004
1,2,3-Trichlorobenzene	**110**	ug/L	EPA 8260B	1		6/24/2004
1,2,4-Trichlorobenzene	**2**	ug/L	EPA 8260B	1		6/24/2004
1,1,1-Trichloroethane	**13**	ug/L	EPA 8260B	1		6/24/2004
1,1,2-Trichloroethane	ND	ug/L	EPA 8260B	1		6/24/2004
Trichloroethene	**2**	ug/L	EPA 8260B	1		6/24/2004
	4,900	ug/L	EPA 8260B	100		6/26/2004

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062118 Page 30 of 31
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-1A-062104 / 04062118-14						
Volatile Organic Compounds						
1,2,3-Trichloropropane	ND	ug/L	EPA 8260B	1		6/24/2004
1,2,4-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
1,3,5-Trimethylbenzene	ND	ug/L	EPA 8260B	1		6/24/2004
Vinyl chloride	**5,900**	ug/L	EPA 8260B	100		6/26/2004
m&p-Xylene	**5**	ug/L	EPA 8260B	3		6/24/2004
o-Xylene	**7**	ug/L	EPA 8260B	3		6/24/2004
Methyl-t-butyl ether	ND	ug/L	EPA 8260B	1		6/24/2004
2-Butanone (MEK)	ND	ug/L	EPA 8260B	10		6/24/2004
2-Hexanone (MBK)	ND	ug/L	EPA 8260B	10		6/24/2004
4-Methyl-2-Pentanone (MIBK)	**j 4**	ug/L	EPA 8260B	10		6/24/2004
Acetone	ND	ug/L	EPA 8260B	10		6/24/2004
Trichlorofluoromethane	ND	ug/L	EPA 8260B	5		6/24/2004
Carbon disulfide	ND	ug/L	EPA 8260B	1		6/24/2004
Vinyl acetate	ND	ug/L	EPA 8260B	1		6/24/2004
2-Chloroethylvinyl ether	ND	ug/L	EPA 8260B	1		6/24/2004
Cis-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004
Trans-1,3-Dichloropropene	ND	ug/L	EPA 8260B	1		6/24/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.
b - found in blank / suspected lab artifact.
j - estimated value, less than quantitation limit.

Reviewed By Matt Calvert
Quality Assurance Chemist

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062118 Page 31 of 31
Tetra Tech, Inc.
June 28, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D
Matrix: Ground Water

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Prepared	Analyzed
Sample ID DMW-1A-062104 (Dissolved) / 04062118-15						
Dissolved Priority Pollutant Metals						
Antimony	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Arsenic	**6.3**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Beryllium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Cadmium	**1000**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Chromium	**220**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Copper	**15**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Lead	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Mercury	ND	ug/L	EPA 6020	1	6/24/2004	6/28/2004
Nickel	**110**	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Selenium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Silver	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Thallium	ND	ug/L	EPA 6020	5	6/24/2004	6/28/2004
Zinc	**350**	ug/L	EPA 6020	50	6/24/2004	6/28/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By
Quality Assurance Chemist

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

CERTIFICATE OF ANALYSIS
No. 04062118 Page 1 of 1
Tetra Tech, Inc.
July 9, 2004

Project: Martin State Airport-Quarterly Sampling
Site Location: Martin State Airport
Project Number: N7339-0677D

Date Sampled: 6/21/2004
Date Received: 6/21/2004

	Result	Unit	Method	PQL	Analyzed
Sample ID: DMW-7S-062104 / 04062118-10 / Ground Water					
Ferric Iron					
Iron (Fe3+)	1.1	mg/L	Mod_7199	1	6/22/2004
Sample ID: DMW-1B-062104 / 04062118-12 / Ground Water					
Ferric Iron					
Iron (Fe3+)	ND	mg/L	Mod_7199	1	6/22/2004
Sample ID: DMW-1A-062104 / 04062118-14 / Ground Water					
Ferric Iron					
Iron (Fe3+)	ND	mg/L	Mod_7199	1	6/22/2004

Notes/Comments:
PQL - Practical Quantitation Limit
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: Matt Colice
Quality Assurance Chemist

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

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email: info@phaseonline.com

(1)

CLIENT: Tetra Tech PHONE NO.: (916) 276-7846

PROJECT MGR: Nisha Bansal FAX NO.: ( )

EMAIL: Nisha.bansal@TetraTech.com

PROJECT NAME: Martin State Airport - Quarterly Sampling

SITE LOCATION: Martin State Airport

PROJECT NO.: N7359-0677D P.O. NO.:

PSS Project #: 0406 2718

PAGE 1 OF 1

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Volatile Organic Compounds (8260B)	Total Priority Pollutant Metals (6020)	Dissolved Priority Pollutant Metals (6020)	Ethanol/Ethanol	Nitrate & Sulfate	Ferric Iron				REMARKS
	Preservatives Used						HCL	HNO3	HNO3	ICE	ICE	ICE				
	TB0618 04	6/18/04	0000	GW	2	G	X									
	DMW-3S-0618 04		0742		5	G	X	X	X							
	DMW-3I-0618 04		1058		5	G	X	X	X							
	DMW-2S 0618 04		1155		5	G	X	X	X							
	DMW-4D-0618 04		1438		5	G	X	X	X							
	DMW-7S-0621 04	6/21/04	0924		10	G	X	X	X	X	X	X				
	DMW-1B-0621 04		1114		10	G	X	X	X	X	X	X				
	DMW-1A-0621 04		1224		10	G	X	X	X	X	X	X				

(3) Analysis Required

(5)

Collected / Relinquished By: (1)	Date	Time	Received By:
[signature]	6/21	2:35	[signature]
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Collected / Relinquished By: (4)	Date	Time	Received By:

(4)

Requested Turnaround Time

☐ 5-Day (Std.) ☐ 3-Day ☐ 2-Day
☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required:

Special Instructions:

Sample Condition Upon Receipt:

Custody Seal:

Shipping Carrier:

Shipping Ticket No.:

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The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if colleciton becomes necessary.

Lab Proj #: P0406398
Report Date: 07/06/04
Client Proj Name: Martin State Airport
Client Proj #: 04062118

Client Name: Phase Separation Science
Contact: Bryan Ridgell
Address: 6630 Baltimore National P
Baltimore, MD 21228

Lab Sample #: P0406398-01

Sample Description	Matrix	Sampled Date/Time	Received
DMW-7S-062104 ✓	Water	21 Jun. 04	22 Jun. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
WetChem						
Ferric Iron	1.1	1	mg/L	Mod.7199	md	6/22/04 16:05

N - NELAC certified analysis

Lab Proj #: P0406398
Report Date: 07/06/04
Client Proj Name: Martin State Airport
Client Proj #: 04062118

Client Name: Phase Separation Science
Contact: Bryan Ridgell
Address: 6630 Baltimore National P
Baltimore, MD 21228

Lab Sample #: P0406398-02

Sample Description	Matrix	Sampled Date/Time	Received
DMW-1B-062104	Water	21 Jun. 04	22 Jun. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
WetChem						
Ferric Iron	<1.0	1.0	mg/L	Mod.7199	md	6/22/04 17:12

Ⓝ - NELAC certified analysis

Lab Proj #: P0406398
Report Date: 07/06/04
Client Proj Name: Martin State Airport
Client Proj #: 04062118

Client Name: Phase Separation Science
Contact: Bryan Ridgell
Address: 6630 Baltimore National P
Baltimore, MD 21228

Lab Sample #: P0406398-03

Sample Description	Matrix	Sampled Date/Time	Received
DMW-1A-062104	Water	21 Jun. 04	22 Jun. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
WetChem						
Ferric Iron	<1.0	1.0	mg/L	Mod.7199	md	6/22/04 17:28

N - NELAC certified analysis

ENVIRO-CHEM
LABORATORIES, INC.

100 Lakefront Drive, Hunt Valley, Maryland 21030 (410) 785-9739

FINAL REPORT OF ANALYSES

Phase Separation Science, Inc.
6630 Baltimore Nat. Pike
Baltimore, MD 21228-
Attn: Mr. John Richardson

PROJECT NAME: 04062118
REPORT DATE: 06/25/2004

SAMPLE NUMBER- 32237 SAMPLE ID- 04062118-10
DATE SAMPLED- 06/21/04
DATE RECEIVED- 06/22/04 SAMPLER- NOT SPECIFIED
TIME RECEIVED- 1135 DELIVERED BY- Courier

SAMPLE MATRIX- WA
TIME SAMPLED- 0924
RECEIVED BY- SES

ANALYSIS	METHOD	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
NITRATE	EPA 300.0	06/22/04	SES	8.8	mg/L as N	0.2
SULFATE	EPA 300.0	06/24/04	CHK	1930	mg/L	1.0

LABORATORY DIRECTOR

ENVIRO-CHEM
LABORATORIES, INC.

100 Lakefront Drive, Hunt Valley, Maryland 21030 (410) 785-9739

FINAL REPORT OF ANALYSES

Phase Separation Science, Inc.
6630 Baltimore Nat. Pike
Baltimore, MD 21228-
Attn: Mr. John Richardson

PROJECT NAME: 04062118
REPORT DATE: 06/25/2004

SAMPLE NUMBER- 32238 SAMPLE ID- 04062118-12
DATE SAMPLED- 06/21/04
DATE RECEIVED- 06/22/04 SAMPLER- NOT SPECIFIED
TIME RECEIVED- 1135 DELIVERED BY- Courier

SAMPLE MATRIX- WA
TIME SAMPLED- 1114
RECEIVED BY- SES

ANALYSIS	METHOD	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
NITRATE	EPA 300.0	06/22/04	SES	<0.2	mg/L as N	0.2
SULFATE	EPA 300.0	06/22/04	SES	92.5	mg/L	1.0

LABORATORY DIRECTOR Stephen E Shelly

ENVIRO-CHEM
LABORATORIES, INC.

100 Lakefront Drive, Hunt Valley, Maryland 21030 (410) 785-9739

FINAL REPORT OF ANALYSES

Phase Separation Science, Inc.
6630 Baltimore Nat. Pike
Baltimore, MD 21228-
Attn: Mr. John Richardson

PROJECT NAME: 04062118
REPORT DATE: 06/25/2004

SAMPLE NUMBER- 32239 SAMPLE ID- 04062118-14
DATE SAMPLED- 06/21/04
DATE RECEIVED- 06/22/04 SAMPLER- NOT SPECIFIED
TIME RECEIVED- 1135 DELIVERED BY- Courier

SAMPLE MATRIX- WA
TIME SAMPLED- 1224
RECEIVED BY- SES

ANALYSIS	METHOD	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
NITRATE	EPA 300.0	06/22/04	SES	0.3	mg/L as N	0.2
SULFATE	EPA 300.0	06/24/04	CHK	409	mg/L	1.0

LABORATORY DIRECTOR

0700410

MARYLAND SPECTRAL SERVICES, INC.

1500 CATON CENTER DRIVE, BALTIMORE, MD 21227

(410) 247-7600

LABORATORY RESULTS

RESULTS OF ANALYSIS OF

MARTIN STATE AIRPORT-QUARTERLY SAMPLING WATER SAMPLES

COLLECTED 21 JUNE 2004

Prepared For

PHASE SEPARATION SCIENCE, INC.

BALTIMORE, MD

14 July 2004

SAMPLE DATA SUMMARY PACKAGE

Table of Contents

1. Narrative

2. Chain-of-Custody Records

3. Results of Analyses

4. Chromatograms of Samples and Method Blanks

1. Narrative

NARRATIVE

Laboratory Name: Maryland Spectral Services, Inc. (MSS)

Date Samples Delivered to MSS Laboratory: 22 June 2004

Client: Phase Separation Science, Inc.

Project: Martin State Airport-Quarterly Sampling; 04062118

Results for the following samples are included in this data package:

Client ID	MSS ID	Matrix	Analysis
04062118-10 DMW-7S-062104	040622-15	Water	Ethane, Ethene
04062118-12 DMW-1B-062104	040622-16	Water	Ethane, Ethene
04062118-14 DMW-1A-062104	040622-17	Water	Ethane, Ethene

The samples were analyzed for ethane (C_2H_6) and ethene (C_2H_4) using Method 6211B of *Standard Methods* (1989) for the sample preparation and calculation steps and replacing the combustible-gas indicator with capillary gas chromatography and a flame ionization detector (FID) as in U.S. EPA Method 8015.

The samples were received in nominal 40-mL septum-sealed vials with no headspace. Prior to analysis, the vials were allowed to reach room temperature. Approximately half of the liquid was removed from each vial. The vials were shaken for 15 min and then allowed to stand for one hour.

An aliquot of the headspace vapor was removed from each vial with a gas-tight syringe. Fifty microliters of the headspace vapor, or of a dilution thereof, was injected directly into a Hewlett Packard 5890 gas chromatograph equipped with an FID. A RTx-200 capillary column (60 m x 0.53 mm i.d., 5.0-um film thickness) was used for the separation. The GC oven temperature was maintained at 45 C.

The GC detector response was calibrated by analysis of three levels of methane, ethane, and ethene prepared from a certified mixture in nitrogen obtained from Scott Specialty Gases.

Samples with high concentrations were diluted to keep the analyte response within the calibration range.

See the appendix to this narrative for a discussion of the values for the Henry's law constants used in the conversion of the headspace concentrations to aqueous concentrations.

The results of the analyses are presented in Section 3 and are reported as milligrams per liter (parts per million).

Prior to the analysis of the samples, a method blank consisting of laboratory helium was analyzed. The method blank results are present on the sample data tables in Section 3.

Chromatograms of sample and method blank analyses are provided in Section 4 and are labeled for the target compounds.

NARRATIVE (continued)

RELEASE OF THE DATA CONTAINED IN THIS HARDCOPY DATA PACKAGE HAS BEEN AUTHORIZED BY THE LABORATORY MANAGER OR HIS DESIGNEE, AS VERIFIED BY THE FOLLOWING SIGNATURE:

Michael M. Robison DATE: 14 July 2004

Michael M. Robison 14 July 2004

APPENDIX - Henry's Law Constants

The calculation of the original aqueous phase concentration from the headspace concentration require Henry's law constant, but Method 6211B only provides the constant for methane. The Henry's law constants for ethane and ethene were derived from values given by Lide & Frederikse (1995) and Wilhelm et al. (1997) as collected in Sander (1999). The values for 25 C were converted to 20 C using the temperature dependence constants given with the values. (A value for methane at 20 C calculated by the same process differed from the value in Method 6211B by less than 4%.) The following values were used in the calculations:

Analyte	Henry's Law Constant (kPa)	Reference
Ethane	2.59×10^6	Lide & Frederikse (1995)
Ethene	1.08×10^6	Wilhelm et al. (1997)

For T = 20 C and P = 100 kPa, the concentration in the original aqueous sample is given by:

$$C_o = C_v \cdot MW \cdot [0.4103 \times 10^{-4} (V_v/V_a) + 5.541/H] \cdot D$$

where

C_o = analyte concentration in original aqueous sample (mg/L)
C_v = analyte concentration in headspace vapor phase (uL/L)
MW = molecular weight of analyte
V_v = volume of headspace vapor phase (mL)
V_a = volume of headspace aqueous phase (mL)
H = Henry's law constant (kPa)
D = dilution factor

References

American Public Health Association, American Water Works Association, Water Pollution Control Federation. 1989. Method 6211B: Methane/Combustible-gas indicator method. In *Standard Methods for the Examination of Water and Wastewater*, 17th ed. APHA, Washington, D.C.

Lide, D.R. and H.P.R. Frederikse, Eds. 1995. *CRC Handbook of Chemistry and Physics*, 76th ed. CRC Press, Inc., Boca Raton, Florida.

NARRATIVE (continued)

Sander, R. 1999. Compilation of Henry's Law Constants for Inorganic and Organic Species of Potential Importance in Environmental Chemistry, ver. 3. http://www.mpch-mainz.mpg.de/~sander/res/henry.html (accessed June 2000).

Wilhelm, E., R. Battino, and R.J. Wilcock. 1977. Low-pressure solubility of gases in liquid water. *Chem. Rev.* 77:219-262.

2. Chain-of-Custody Records

339

OFFICES:
6630 BALTIMORE NAT'L PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

Chain of Custody

COC- ID	3356	**Phone Number**	410-247-7600
Date Shipped	06/21/04	**Fax Number**	410-247-7602
Organization	MSS	**Shipped Via**	Dial Courier
Address	1500 Caton Center Drive Baltimore, MD 21227	**Airbill Number**	
		Due Date	06/28/04 5:00:00 PM

Lab Number: 04062118
Project: Martin State Airport-Quarterly Sampling

Sample Number	Description	Analysis		Method	No. of Cont.	Date Sampled
04062118-10	DMW-7S-062104	Ethane	04-0622-15	211B/EPA8015M	1	06/21/04 9:24:00 AM
		Ethene		211B/EPA8015M	1	06/21/04 9:24:00 AM
04062118-12	DMW-1B-062104	Ethane	04-0622-16	211B/EPA8015M	1	06/21/04 11:14:00 AM
		Ethene		211B/EPA8015M	1	06/21/04 11:14:00 AM
04062118-14	DMW-1A-062104	Ethane	04-0622-17	211B/EPA8015M	1	06/21/04 12:24:00 PM
		Ethene		211B/EPA8015M	1	06/21/04 12:24:00 PM

Relinquished By / Date / Time

6/22 10:40

Accepted By / Date / Time

6-22-04 1101 AM

3. Results of Analyses

MARYLAND SPECTRAL SERVICES, INC.
1500 Caton Center Drive, Baltimore MD 21227

HYDROCARBONS BY METHODS SM6211B/EPA 8015 (HEADSPACE/GC/FID)

CLIENT SAMPLE ID:	DMW-7S MARTIN STATE	DMW-1B MARTIN STATE	DMW-1A MARTIN STATE	WBLK0622
LAB SAMPLE ID:	04062215	04062216	04062217	
SAMPLE DATE:	65-21-04	06/21/04	06/21/04	
RECEIVED DATE:	06/22/04	06/22/04	06/22/04	
ANALYSIS DATE:	06/22/04	06/22/04	06/22/04	06/22/04
INSTRUMENT ID:	GC-G	GC-G	GC-G	GC-G
MATRIX:	WATER	WATER	WATER	WATER
UNITS:	mg/L	mg/L	mg/L	mg/L
DILUTION FACTOR:	1.0	1.0	1.0	1.0
ANALYTE				
Ethene	0.012 U	0.317	0.178	0.012 U
Ethane	0.012 U	0.072	0.023	0.012 U

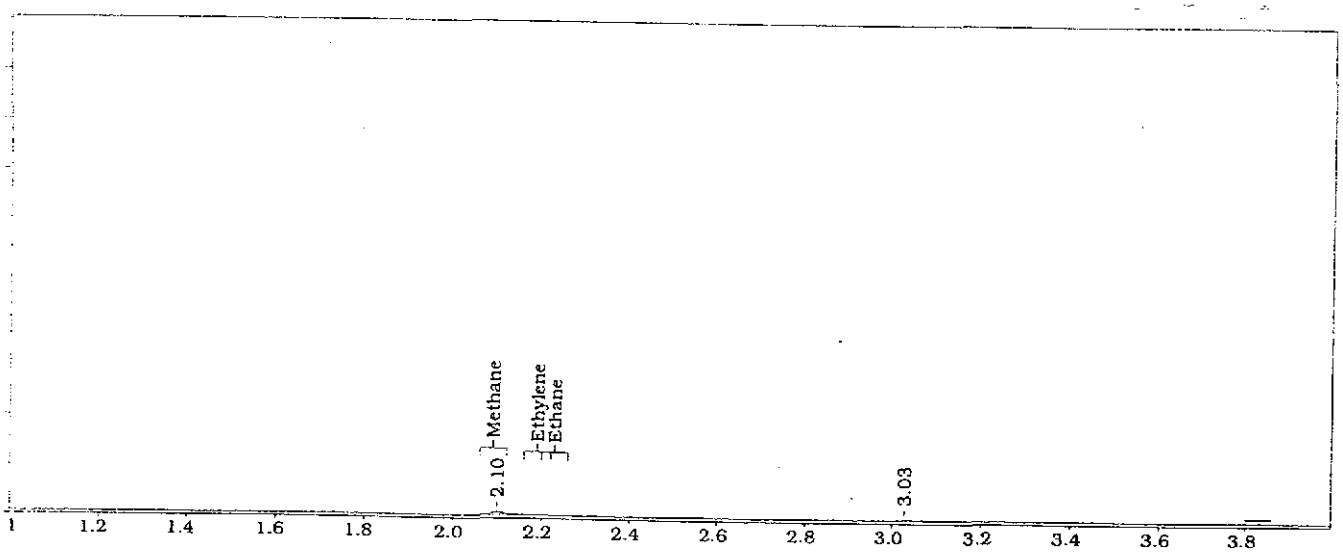
E - Analyte response exceeds the calibration range
mg/L - Milligrams per Liter (parts per million)
U - Less than reported quantitaion limit

4. Chromatograms of Samples and Method Blanks

File=C:\DIRECT\DATAG1\0622G.05R Date printed=06-22-2004 Time= 14:50:00

Sample Name=METHOD BLANK

1.0 to 4.0 min. Low Y=2.691 High Y=62.691 mv Span=60.0



********** MARYLAND SPECTRAL SERVICES, INC. **********

SAMPLE NAME:---- METHOD BLANK-----
ANALYSIS DATE: Jun 22, 2004 10:06:03
OPERATOR: CMK
INSTRUMENT ID: GC-G--FID

METHOD FILE: C:\DIRECT\DATAG1\C1C2.MET
CALIBRATION FILE: C:\DIRECT\DATAG1\C1-C2.CAL 22
RAW DATA FILE NAME:C:\DIRECT\DATAG1\0622G.05R
RUN TIME 5

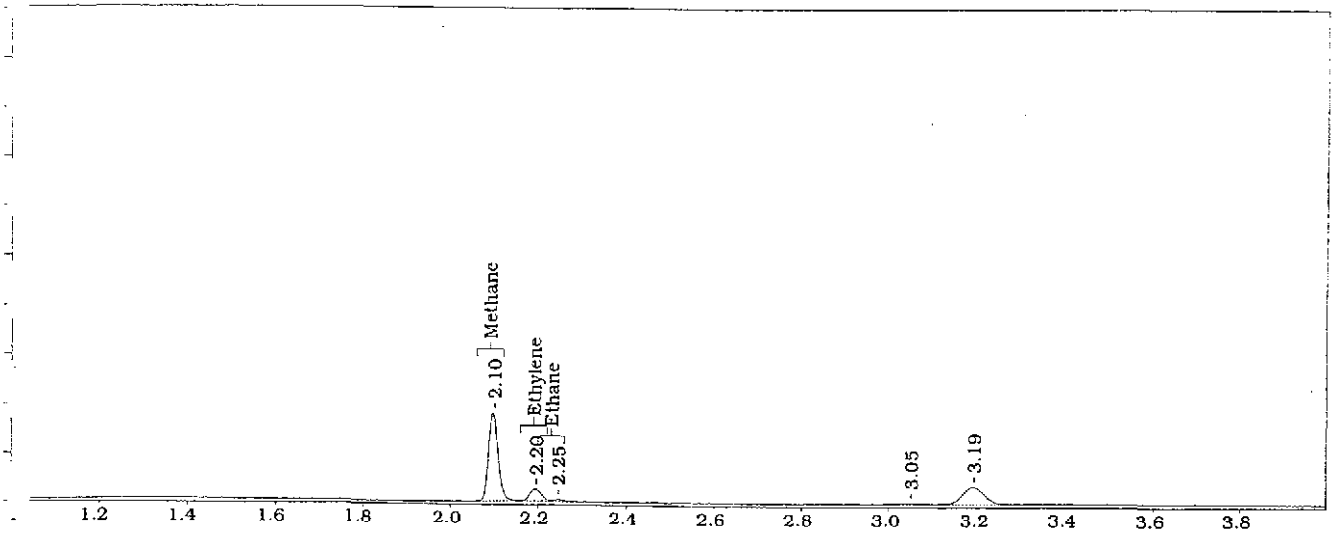
DILUTION FACTOR 1 RTX-1 60 X .53MMID X 5.0UM FILM
AMOUNT INJECTED 1 HYDROCARBONS BY METHOD EPA 8015M

********* PEAKS DETECTED IN THIS CHROMATOGRAM **********

Peak #	Ret Time (min)	Peak Name	Amount PPM V/V	Peak Area	Peak Height
1	2.101	Methane	4.3288	741	353
2	3.027		0.0000	941	138
3	4.830		0.0000	763	105

File name: C:\DIRECT\DATAG1\0622G.05R
Total area for this analysis = 2445.187

le=C:\DIRECT\DATAG1\0622G.08R Date printed=06-22-2004 Time= 14:53:47
Sample Name=040622-15
) to 4.0 min. Low Y=2.722 High Y=62.722 mv Span=60.0



********** MARYLAND SPECTRAL SERVICES, INC. **********

SAMPLE NAME:---- 040622-15-----
ANALYSIS DATE: Jun 22, 2004 10:40:03
OPERATOR: CMK
INSTRUMENT ID: GC-G--FID

METHOD FILE: C:\DIRECT\DATAG1\C1C2.MET
CALIBRATION FILE: C:\DIRECT\DATAG1\C1-C2.CAL 22
RAW DATA FILE NAME:C:\DIRECT\DATAG1\0622G.08R
RUN TIME 5

DILUTION FACTOR 1 RTX-1 60 X .53MMID X 5.0UM FILM
AMOUNT INJECTED 1 HYDROCARBONS BY METHOD EPA 8015M

********* PEAKS DETECTED IN THIS CHROMATOGRAM **********

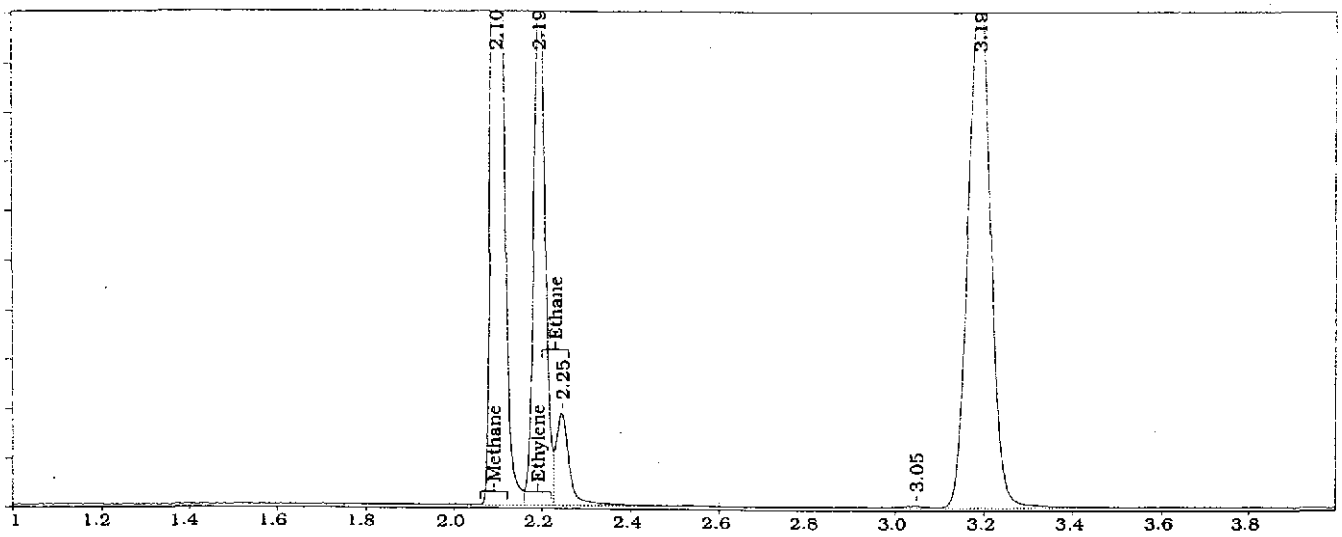
Peak #	Ret Time (min)	Peak Name	Amount PPM V/V	Peak Area	Peak Height
1	2.099	Methane	94.5872	16199	10766
2	2.195	Ethylene	8.2108	2672	1479
3	2.247	Ethane	1.4773	475	277
4	3.051		0.0000	693	183
5	3.193		0.0000	7560	2181
6	4.877		0.0000	953	126

le name: C:\DIRECT\DATAG1\0622G.08R
Total area for this analysis = 28551.84

File=C:\DIRECT\DATAG1\0622G.09R Date printed=06-22-2004 Time= 14:54:23

Sample Name=040622-16

1.0 to 4.0 min. Low Y=2.714 High Y=62.714 mv Span=60.0



********** MARYLAND SPECTRAL SERVICES, INC. **********

SAMPLE NAME:---- 040622-16-----
ANALYSIS DATE: Jun 22, 2004 11:00:27
OPERATOR: CMK
INSTRUMENT ID: GC-G--FID

METHOD FILE: C:\DIRECT\DATAG1\C1C2.MET
CALIBRATION FILE: C:\DIRECT\DATAG1\C1-C2.CAL 22
RAW DATA FILE NAME:C:\DIRECT\DATAG1\0622G.09R
RUN TIME 5

DILUTION FACTOR 1 RTX-1 60 X .53MMID X 5.0UM FILM
AMOUNT INJECTED 1 HYDROCARBONS BY METHOD EPA 8015M

********* PEAKS DETECTED IN THIS CHROMATOGRAM **********

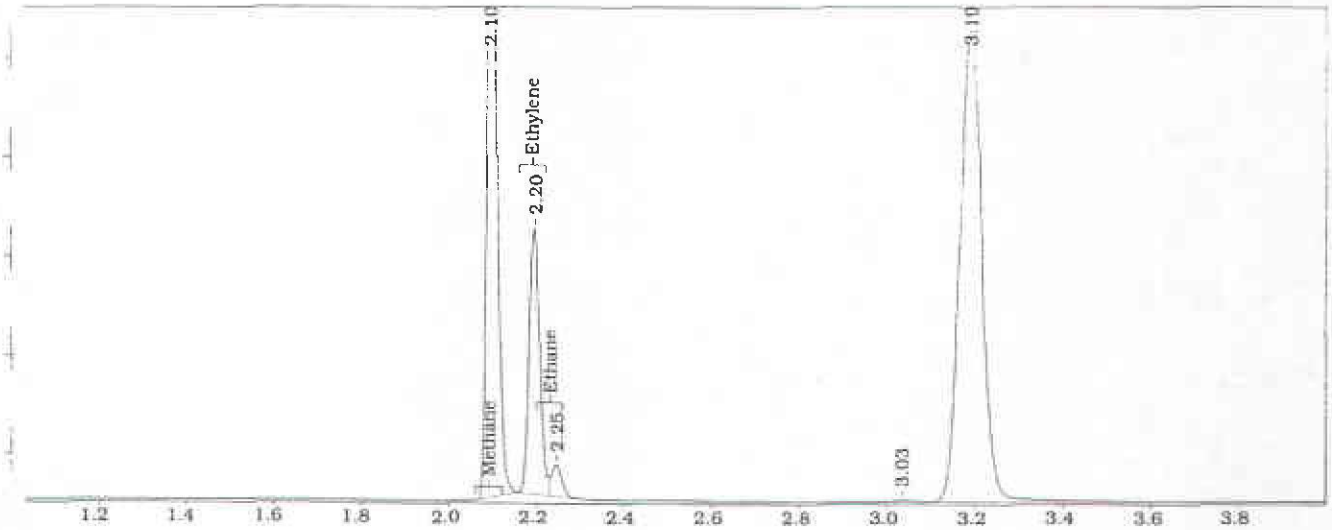
Peak #	Ret Time (min)	Peak Name	Amount PPM V/V	Peak Area	Peak Height
1	0.801		0.0000	938	101
2	2.098	Methane	1427.3838	244455	154249
3	2.194	Ethylene	347.9156	113239	63639
4	2.245	Ethane	73.3986	23601	11278
5	3.047		0.0000	887	248
6	3.189		0.0000	220266	63353

File name: C:\DIRECT\DATAG1\0622G.09R
Total area for this analysis = 603386.1

le=C:\DIRECT\DATAG1\0622G.10R Date printed=06-22-2004 Time= 14:55:57

Sample Name=040622-17

0 to 4.0 min. Low Y=2.729 High Y=62.729 mv Span=60.0



********** MARYLAND SPECTRAL SERVICES, INC. **********

SAMPLE NAME:---- 040622-17-----
ANALYSIS DATE: Jun 22, 2004 11:21:28
OPERATOR: CMK
INSTRUMENT ID: GC-G--FID

METHOD FILE: C:\DIRECT\DATAG1\C1C2.MET
CALIBRATION FILE: C:\DIRECT\DATAG1\C1-C2.CAL 22
RAW DATA FILE NAME:C:\DIRECT\DATAG1\0622G.10R
RUN TIME 5

DILUTION FACTOR 1 RTX-1 60 X .53MMID X 5.0UM FILM
AMOUNT INJECTED 1 HYDROCARBONS BY METHOD EPA 8015M

********* PEAKS DETECTED IN THIS CHROMATOGRAM **********

Peak #	Ret Time (min)	Peak Name	Amount PPM V/V	Peak Area	Peak Height
1	2.098	Methane	722.0941	123666	80990
2	2.195	Ethylene	167.1574	54406	32430
3	2.246	Ethane	20.0305	6441	3878
4	3.032		0.0000	580	153
5	3.191		0.0000	197215	56828
6	4.847		0.0000	764	92

ile name: C:\DIRECT\DATAG1\0622G.10R
Total area for this analysis = 383071.4

PHASE SEPARATION SCIENCE, INC.

Analytical Chemistry Environmental Science

QA/QC SUMMARY DATA

Volatile Organic Compounds

- *Surrogate Summary*
- *Method Blank Summary*
- *Continuing Calibration Verification Summary*
- *LCS Summary*
- *MS/MSD Summary*
- *BFB Tune Summary*

6630 Baltimore National Pike Baltimore, MD 21228 (800) 932-9047 (410) 747-8770 FAX (410) 788-8723

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PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

VOLATILE ORGANIC COMPOUNDS
SYSTEM MONITORING COMPOUND RECOVERY
(SURROGATES)

ANALYSIS: GC/MS Volatiles **LAB CODE:** SURR

METHOD: EPA 8260 **MATRIX:** Water

Date/Time Analyzed	Sample ID / Lab ID	SMC-1 (DBF) #	SMC-2 (TOL) #	SMC-3 (BFB) #	Total Out
	Upper Limit	113	110	113	
	Lower Limit	84	83	67	
06/24/04 10:42:00 AM	Calibration Verification	101	101	103	
06/24/04 12:00:00 PM	Method Blank	102	104	113	
06/24/04 10:26:00 PM	LCS / LCS 25ppb	104	101	106	
06/24/04 03:21:00 PM	TB061804 / 04062118-01	104	100	110	
06/24/04 08:15:00 PM	DMW-3S-061804 / 04062118-02	104	99	110	
06/24/04 03:47:00 PM	DMW-3I-061804 / 04062118-04	106	101	102	
06/24/04 04:13:00 PM	DMW-2S-061804 / 04062118-06	105	103	113	
06/24/04 04:39:00 PM	DMW-4D-061804 / 04062118-08	107	104	109	
06/24/04 08:44:00 PM	DMW-7S-062104 / 04062118-10	104	101	111	
06/24/04 05:04:00 PM	DMW-1B-062104 / 04062118-12	105	101	112	
06/24/04 05:30:00 PM	DMW-1A-062104 / 04062118-14	106	102	112	

	Water Control Limits	Soil Control Limits
SMC-1 (DBF): Dibromofluoromethane	84-113	74-131
SMC-2 (TOL): Toluene d-8	83-110	82-115
SMC-3 (BFB): Bromofluorobenzene	67-113	59-157

Column used to flag recovery values
* = Values outside QC limits
D: Surrogate diluted out

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PHASE SEPARATION SCIENCE, INC.

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SCIENCE

VOLATILE ORGANICS COMPOUNDS
SAMPLE SPIKE AND SAMPLE SPIKE DUPLICATE SUMMARY

DATE ANALYZED:	**06/22/04**	**BATCH NUMBER:**	**VOC040624**
METHOD:	**EPA 8260**	**LAB FILE IDs:**	**04062424.D** **04062425.D**
MATRIX:	**Water**		

Client Sample ID: 04062409-08 MS

SAMPLE SPIKE COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPIKE CONC (ug/L)	SPIKE REC (%)	QC LIMITS (%)
1,1-Dichloroethene	25	0	23	90	61-145
Benzene	25	0	24	95	76-127
Trichloroethene	25	148	173	100	71-120
Toluene	25	ND	24	97	76-125
Chlorobenzene	25	1.1	25	94	75-130

Client Sample ID: 04062409-08 MSD

SAMPLE SPIKE DUP COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPK DUP CONC (ug/L)	SPIKE DUP REC (%)	RPD (%)	QC RPD (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	21	84	7.2	14	61-145
Benzene	25	ND	23	94	1.4	11	76-127
Trichloroethene	25	148	166	70 *	4.4	14	71-120
Toluene	25	ND	24	97	0.2	13	76-125
Chlorobenzene	25	1.1	24	92	2.5	13	75-130

* - Values outside of QC Limits

Calculation: spike or spike dup %Recovery
*=[(spike conc - original sample conc)/(spike added)]*100*
Calculation: spike/spike dup Relative Percent Difference
*=absolute value [(spike dup conc - spike conc)/((spike dup conc + spike conc)/2))]*100*
Note: QC limits are based on CLP OLM04.2

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062424.D
Acq On : 24 Jun 2004 9:10 pm
Sample : 04062409-08 MS 25ppb
Misc : IS/Surr 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 25 11:49 2004

Vial: 24
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.38	168	115451	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.11	114	171926	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.52	117	132349	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.72	152	59947	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	4.34	113	92792	52.87 ug/L	0.00
Spiked Amount 50.000			Recovery = 105.74%		
33) Toluene d-8 SS#2	6.75	98	186361	49.92 ug/L	0.00
Spiked Amount 50.000			Recovery = 99.84%		
50) 4-Bromofluorobenzene SS#3	10.10	95	95735	53.12 ug/L	0.00
Spiked Amount 50.000			Recovery = 106.24%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.56	85	43746	22.03 ug/L	100
3) Chloromethane	1.68	50	14154	24.24 ug/L	99
4) VINYL CHLORIDE	1.77	62	22553	32.70 ug/L	99
5) Bromomethane	2.00	94	28736	20.79 ug/L	98
6) Chloroethane	2.01	64	8365	23.55 ug/L	72
7) Trichlorofluoromethane	2.12	101	42891m	24.64 ug/L	
8) Acetone	2.51	43	8573	25.09 ug/L	94
9) 1,1-DICHLOROETHENE	2.57	96	29918	22.60 ug/L #	86
10) 1,1,2-Trichlorotrifluoroet	2.54	101	34108	21.91 ug/L #	82
11) Carbon Disulfide	2.78	76	61931	23.27 ug/L	97
12) Methyl Acetate	2.75	74	1523	18.07 ug/L #	58
13) Methylene chloride	2.86	84	24953m	21.63 ug/L	
14) trans-1,2-Dichloroethene	3.08	96	33755	27.54 ug/L	95
15) Methyl-t-Butyl Ether	3.08	73	46590	23.83 ug/L	100
16) 1,1-Dichloroethane	3.41	63	33827	23.97 ug/L	100
17) cis-1,2-Dichloroethene	3.92	96	168427	148.97 ug/L	96
18) 2-Butanone (MEK)	3.91	43	7148	26.44 ug/L #	34
19) CHLOROFORM	4.19	83	69617	24.60 ug/L	99
21) 1,1,1-Trichloroethane	4.40	97	78724	24.86 ug/L #	2
22) Cyclohexane	4.47	56	18446	23.57 ug/L	96
24) Carbon tetrachloride	4.56	117	62451	25.49 ug/L	98
25) Benzene	4.75	78	59688	23.75 ug/L	98
26) 1,2-Dichloroethane	4.75	62	63914	26.02 ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062424.D
Acq On : 24 Jun 2004 9:10 pm
Sample : 04062409-08 MS 25ppb
Misc : IS/Surr 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 25 11:49 2004

Vial: 24
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) Trichloroethene	5.40	95	279673	173.15 ug/L	96
28) 1,2-DICHLOROPROPANE	5.62	63	13203	25.27 ug/L	98
29) Methylcyclohexane	5.62	83	22061	23.11 ug/L	95
30) Bromodichloromethane	5.92	83	56953	24.80 ug/L	97
31) cis-1,3-Dichloropropene	6.42	75	28347	22.35 ug/L	97
32) 4-Methyl-2-Pentanone (MIBK	6.61	43	15665	25.48 ug/L	98
34) TOLUENE	6.82	92	50618	24.24 ug/L	99
35) trans-1,3-Dichloropropene	7.07	75	31196	22.12 ug/L	99
36) 1,1,2-Trichloroethane	7.29	83	15960	25.60 ug/L	97
37) Tetrachloroethene	7.50	166	27240	23.10 ug/L	97
38) 2-Hexanone (MBK)	7.61	43	8872	22.67 ug/L	99
40) Dibromochloromethane	7.79	129	28918	24.48 ug/L	96
41) 1,2-Dibromoethane	7.92	107	27404	24.68 ug/L	99
42) Chlorobenzene	8.57	112	62004	24.67 ug/L	93
43) ETHYLBENZENE	8.72	91	109063	25.03 ug/L	100
44) m&p-Xylene	8.88	106	73346	48.71 ug/L	99
45) o-Xylene	9.40	106	35888	23.63 ug/L	98
46) Styrene	9.42	104	59208	23.57 ug/L	93
47) Bromoform	9.64	173	27269	25.03 ug/L	99
49) Isopropylbenzene	9.91	105	92963	24.67 ug/L	99
51) 1,1,2,2-Tetrachloroethane	10.31	83	19459	28.57 ug/L	98
52) 1,3-Dichlorobenzene	11.63	146	35081	23.31 ug/L	96
53) 1,4-Dichlorobenzene	11.75	146	34989	22.63 ug/L	94
54) 1,2-Dichlorobenzene	12.28	146	34033	22.72 ug/L	97
55) 1,2-Dibromo-3-chloropropan	13.39	75	4977	27.27 ug/L	92
56) 1,2,4-Trichlorobenzene	14.60	180	21533	24.42 ug/L	97
57) Naphthalene	14.94	128	408	Not Detected	

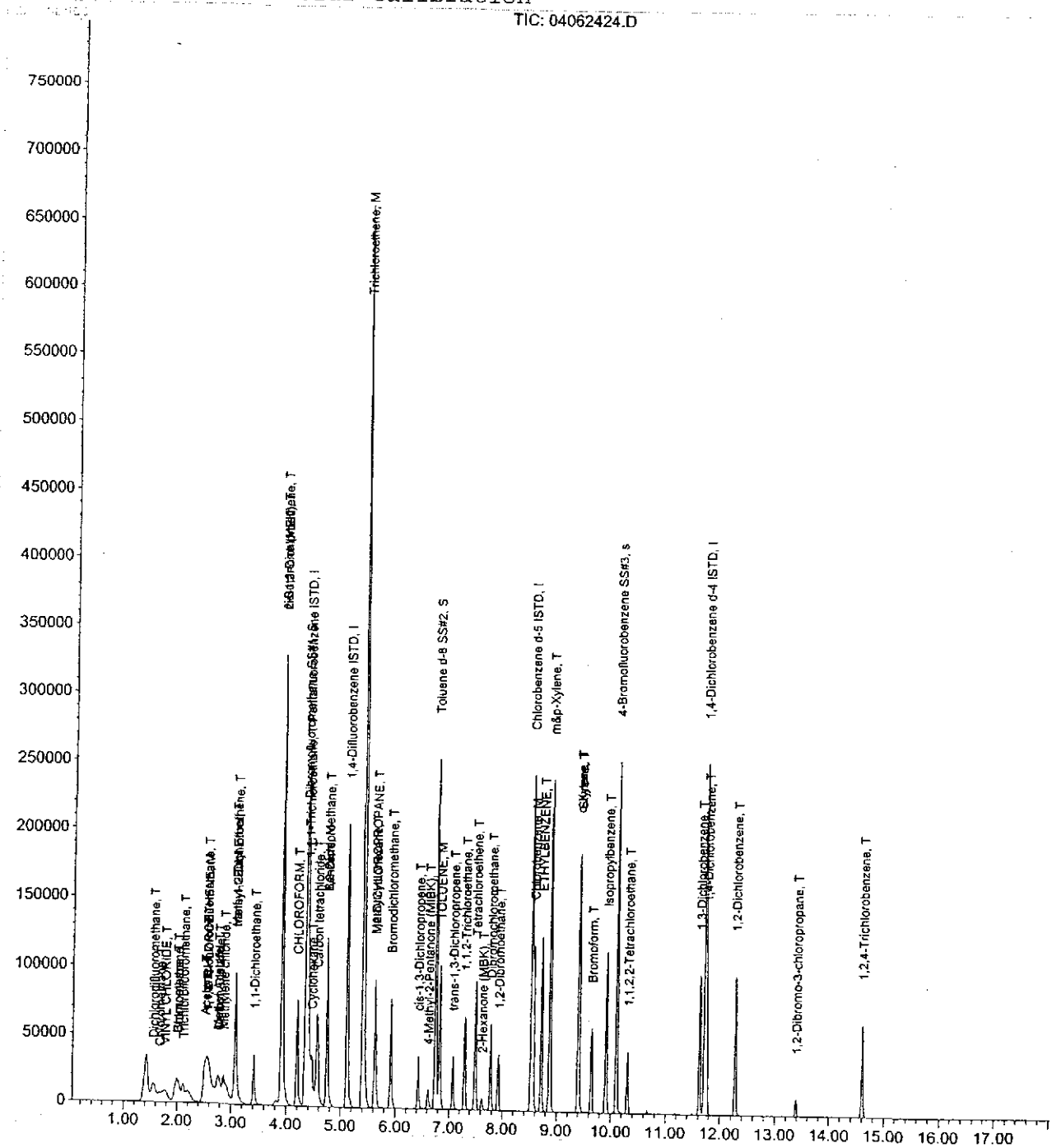
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040624\04062424.D
Acq On : 24 Jun 2004 9:10 pm
Sample : 04062409-08 MS 25ppb
Misc : IS/Surr 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 25 11:49 2004

Vial: 24
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062425.D
Acq On : 24 Jun 2004 9:35 pm
Sample : 04062409-08 MSD 25ppb
Misc : IS/Surr 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 25 11:50 2004

Vial: 25
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.37	168	113991	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.11	114	168993	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.53	117	136162	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.72	152	60522	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	4.34	113	91223	52.64 ug/L	0.00
Spiked Amount 50.000			Recovery = 105.28%		
33) Toluene d-8 SS#2	6.75	98	186728	50.88 ug/L	0.00
Spiked Amount 50.000			Recovery = 101.76%		
50) 4-Bromofluorobenzene SS#3	10.10	95	96128	52.83 ug/L	0.00
Spiked Amount 50.000			Recovery = 105.66%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.56	85	38332	19.55 ug/L	100
3) Chloromethane	1.67	50	12621	21.90 ug/L	95
4) VINYL CHLORIDE	1.78	62	21299	31.28 ug/L	99
5) Bromomethane	1.99	94	29043	21.28 ug/L	96
6) Chloroethane	2.02	64	8370	23.87 ug/L	92
7) Trichlorofluoromethane	2.11	101	41990m	24.43 ug/L	
8) Acetone	2.51	43	9332	27.66 ug/L	96
9) 1,1-DICHLOROETHENE	2.57	96	27478m	21.02 ug/L	
10) 1,1,2-Trichlorotrifluoroet	2.55	101	33089m	21.52 ug/L	
11) Carbon Disulfide	2.79	76	58089	22.11 ug/L	98
12) Methyl Acetate	2.76	74	1618	19.44 ug/L	87
13) Methylene chloride	2.87	84	24232	21.27 ug/L #	74
14) trans-1,2-Dichloroethene	3.08	96	32169	26.58 ug/L	98
15) Methyl-t-Butyl Ether	3.08	73	47293	24.50 ug/L	100
16) 1,1-Dichloroethane	3.41	63	32414	23.26 ug/L	99
17) cis-1,2-Dichloroethene	3.91	96	161090	144.31 ug/L	95
18) 2-Butanone (MEK)	3.91	43	7043	26.39 ug/L #	28
19) CHLOROFORM	4.19	83	65074	23.29 ug/L	99
21) 1,1,1-Trichloroethane	4.40	97	74993	23.99 ug/L #	1
22) Cyclohexane	4.47	56	16380	21.20 ug/L	95
24) Carbon tetrachloride	4.56	117	60438	25.10 ug/L	99
25) Benzene	4.74	78	57880	23.43 ug/L	98
26) 1,2-Dichloroethane	4.74	62	62538	25.91 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062425.D
Acq On : 24 Jun 2004 9:35 pm
Sample : 04062409-08 MSD 25ppb
Misc : IS/Surr 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 25 11:50 2004

Vial: 25
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) Trichloroethene	5.40	95	263059	165.69 ug/L	95
28) 1,2-DICHLOROPROPANE	5.62	63	13057	25.42 ug/L	98
29) Methylcyclohexane	5.62	83	20640	21.99 ug/L	93
30) Bromodichloromethane	5.92	83	53433	23.67 ug/L	98
31) cis-1,3-Dichloropropene	6.43	75	27271	21.88 ug/L	100
32) 4-Methyl-2-Pentanone (MIBK	6.61	43	15684	25.96 ug/L	99
34) TOLUENE	6.82	92	49664	24.19 ug/L	97
35) trans-1,3-Dichloropropene	7.08	75	31732	22.89 ug/L	97
36) 1,1,2-Trichloroethane	7.29	83	15476	25.26 ug/L	98
37) Tetrachloroethene	7.50	166	26105	22.53 ug/L	98
38) 2-Hexanone (MBK)	7.62	43	10179	26.46 ug/L	96
40) Dibromochloromethane	7.78	129	28782	23.68 ug/L	99
41) 1,2-Dibromoethane	7.92	107	28317	24.79 ug/L	96
42) Chlorobenzene	8.56	112	62203	24.05 ug/L	95
43) ETHYLBENZENE	8.72	91	105284	23.48 ug/L	99
44) m&p-Xylene	8.88	106	71379	46.07 ug/L	100
45) o-Xylene	9.40	106	35778	22.90 ug/L	99
46) Styrene	9.42	104	58345	22.58 ug/L	93
47) Bromoform	9.64	173	27833	24.84 ug/L	100
49) Isopropylbenzene	9.91	105	89624	23.56 ug/L	100
51) 1,1,2,2-Tetrachloroethane	10.31	83	19169	27.88 ug/L	97
52) 1,3-Dichlorobenzene	11.63	146	34846	22.94 ug/L	98
53) 1,4-Dichlorobenzene	11.75	146	34867	22.33 ug/L	93
54) 1,2-Dichlorobenzene	12.28	146	34361	22.72 ug/L	97
55) 1,2-Dibromo-3-chloropropan	13.39	75	4931	26.76 ug/L	96
56) 1,2,4-Trichlorobenzene	14.61	180	22171	24.91 ug/L	98
57) Naphthalene	14.95	128	235	Not Detected	

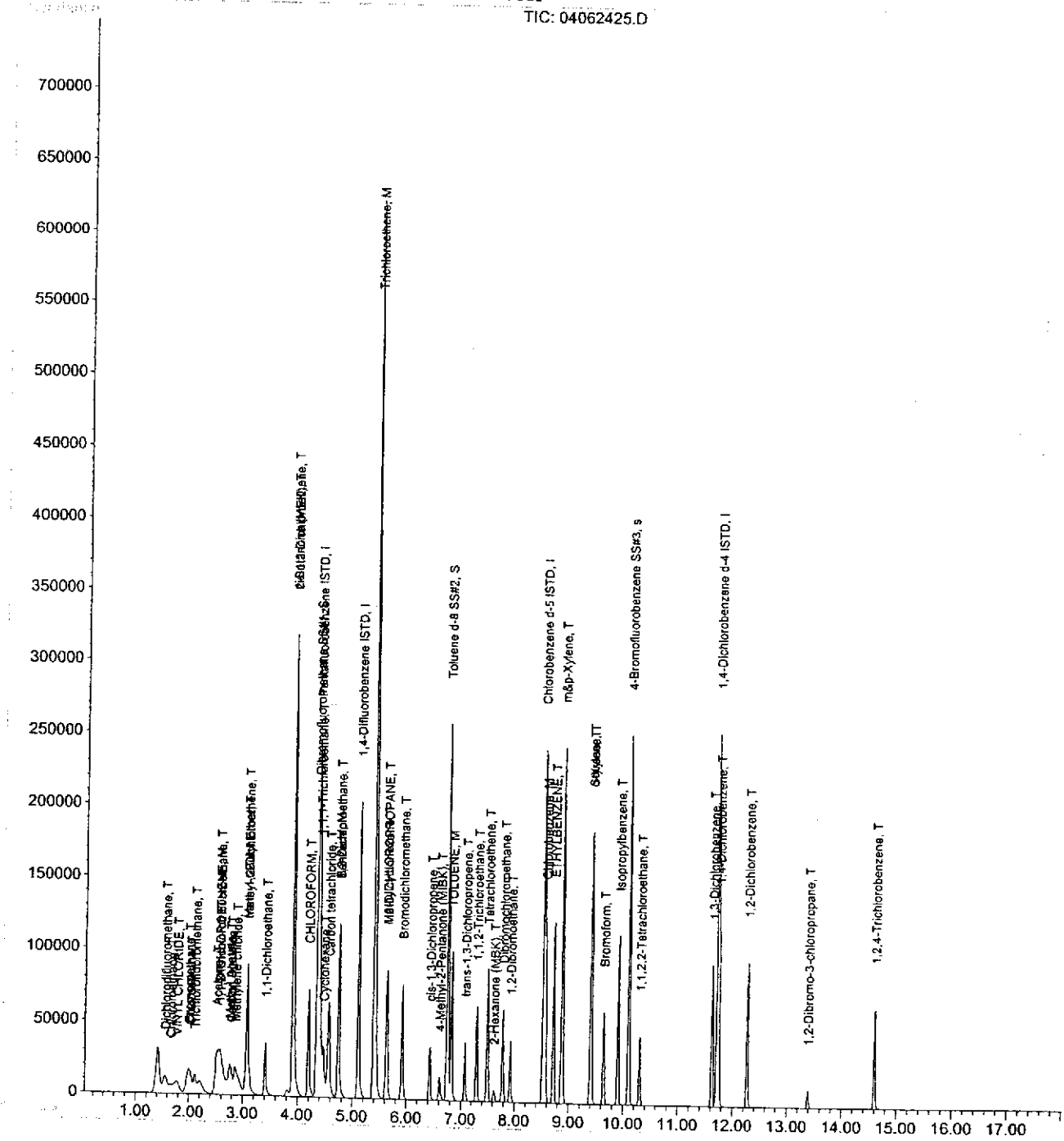
#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040624\04062425.D
Acq On : 24 Jun 2004 9:35 pm
Sample : 04062409-08 MSD 25ppb
Misc : IS/Surr 1uL #432, MS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 25 11:50 2004

Vial: 25
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration



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PHASE SEPARATION SCIENCE, INC.

VOLATILE ORGANICS COMPOUNDS
LCS AND LCS DUPLICATE SUMMARY

DATE ANALYZED: 06/24/04 **BATCH NUMBER:** VOC040624

METHOD: EPA 8260 **LAB FILE IDs:** 04062427.D 04062428.D

MATRIX: Water

Client Sample ID: LCS 25ppb

SAMPLE SPIKE COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPIKE CONC (ug/L)	SPIKE REC (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	21	85	61-145
Benzene	25	ND	24	95	76-127
Trichloroethene	25	ND	24	95	71-120
Toluene	25	ND	24	95	76-125
Chlorobenzene	25	ND	23	90	75-130

Client Sample ID: LCS-DUP 25ppb

SAMPLE SPIKE DUP COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC (ug/L)	SPK DUP CONC (ug/L)	SPIKE DUP REC (%)	RPD (%)	QC RPD (%)	QC LIMITS (%)
1,1-Dichloroethene	25	ND	20	80	6.2	14	61-145
Benzene	25	ND	23	93	1.3	11	76-127
Trichloroethene	25	ND	23	92	2.9	14	71-120
Toluene	25	ND	24	95	0.3	13	76-125
Chlorobenzene	25	ND	23	91	1.3	13	75-130

* - Values outside of QC Limits

Calculation: spike or spike dup %Recovery
*=[(spike conc - original sample conc)/(spike added)]*100*
Calculation: spike/spike dup Relative Percent Difference
*=absolute value [(spike dup conc - spike conc)/((spike dup conc + spike conc)/2))]*100*
Note: QC limits are based on CLP OLM04.2

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062427.D
Acq On : 24 Jun 2004 10:26 pm
Sample : LCS 25ppb
Misc : IS/Surr 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 25 11:47 2004

Vial: 27
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.37	168	113800	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.11	114	168095	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.53	117	132950	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.72	152	59426	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	4.35	113	89593	51.78 ug/L	0.00
Spiked Amount 50.000			Recovery	= 103.56%	
33) Toluene d-8 SS#2	6.75	98	185057	50.70 ug/L	0.00
Spiked Amount 50.000			Recovery	= 101.40%	
50) 4-Bromofluorobenzene SS#3	10.10	95	94894	53.11 ug/L	0.00
Spiked Amount 50.000			Recovery	= 106.22%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.56	85	43172	22.06 ug/L	100
3) Chloromethane	1.68	50	14394	25.01 ug/L	95
4) VINYL CHLORIDE	1.78	62	13696	20.15 ug/L	96
5) Bromomethane	1.97	94	28864	21.18 ug/L	99
6) Chloroethane	2.03	64	8506	24.30 ug/L #	58
7) Trichlorofluoromethane	2.11	101	39421m	22.98 ug/L	
8) Acetone	2.51	43	8098	24.04 ug/L	98
9) 1,1-DICHLOROETHENE	2.57	96	27650m	21.19 ug/L	
10) 1,1,2-Trichlorotrifluoroet	2.56	101	34705m	22.61 ug/L	
11) Carbon Disulfide	2.79	76	59514	22.69 ug/L	89
12) Methyl Acetate	2.74	74	1957	23.55 ug/L	90
13) Methylene chloride	2.85	84	24497m	21.54 ug/L	
14) trans-1,2-Dichloroethene	3.07	96	26644	22.05 ug/L	93
15) Methyl-t-Butyl Ether	3.07	73	44851	23.28 ug/L	100
16) 1,1-Dichloroethane	3.41	63	31986	22.99 ug/L	99
17) cis-1,2-Dichloroethene	3.91	96	26522	23.80 ug/L	95
18) 2-Butanone (MEK)	3.90	43	6421	24.10 ug/L	98
19) CHLOROFORM	4.20	83	66678	23.91 ug/L	100
21) 1,1,1-Trichloroethane	4.40	97	74529	23.88 ug/L #	1
22) Cyclohexane	4.46	56	17526	22.72 ug/L	93
24) Carbon tetrachloride	4.57	117	60178	25.12 ug/L	100
25) Benzene	4.75	78	58110	23.65 ug/L	99
26) 1,2-Dichloroethane	4.74	62	58896	24.53 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062427.D
Acq On : 24 Jun 2004 10:26 pm
Sample : LCS 25ppb
Misc : IS/Surr 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 25 11:47 2004

Vial: 27
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) Trichloroethene	5.40	95	37561	23.79 ug/L	97
28) 1,2-DICHLOROPROPANE	5.63	63	12719	24.90 ug/L	96
29) Methylcyclohexane	5.62	83	21521	23.05 ug/L	96
30) Bromodichloromethane	5.92	83	53467	23.81 ug/L	98
31) cis-1,3-Dichloropropene	6.43	75	27167	21.91 ug/L	99
32) 4-Methyl-2-Pentanone (MIBK	6.61	43	15407	25.64 ug/L	91
34) TOLUENE	6.83	92	48353	23.68 ug/L	100
35) trans-1,3-Dichloropropene	7.07	75	31442	22.80 ug/L	97
36) 1,1,2-Trichloroethane	7.29	83	14320	23.49 ug/L	97
37) Tetrachloroethene	7.49	166	26038	22.59 ug/L	96
38) 2-Hexanone (MBK)	7.62	43	9742	25.46 ug/L	94
40) Dibromochloromethane	7.78	129	28234	23.79 ug/L	100
41) 1,2-Dibromoethane	7.92	107	26342	23.62 ug/L	98
42) Chlorobenzene	8.56	112	57016	22.58 ug/L	93
43) ETHYLBENZENE	8.72	91	103958	23.75 ug/L	100
44) m&p-Xylene	8.87	106	71912	47.54 ug/L	99
45) o-Xylene	9.40	106	34714	22.76 ug/L	95
46) Styrene	9.42	104	58617	23.23 ug/L	95
47) Bromoform	9.64	173	25991	23.75 ug/L	98
49) Isopropylbenzene	9.91	105	88869	23.79 ug/L	99
51) 1,1,2,2-Tetrachloroethane	10.30	83	17478	25.89 ug/L	97
52) 1,3-Dichlorobenzene	11.63	146	34621	23.21 ug/L	98
53) 1,4-Dichlorobenzene	11.76	146	34933	22.79 ug/L	95
54) 1,2-Dichlorobenzene	12.28	146	33730	22.71 ug/L	99
55) 1,2-Dibromo-3-chloropropan	13.39	75	4633	25.60 ug/L	98
56) 1,2,4-Trichlorobenzene	14.61	180	19841	22.70 ug/L	100
57) Naphthalene	0.00	128	0	Not Detected	

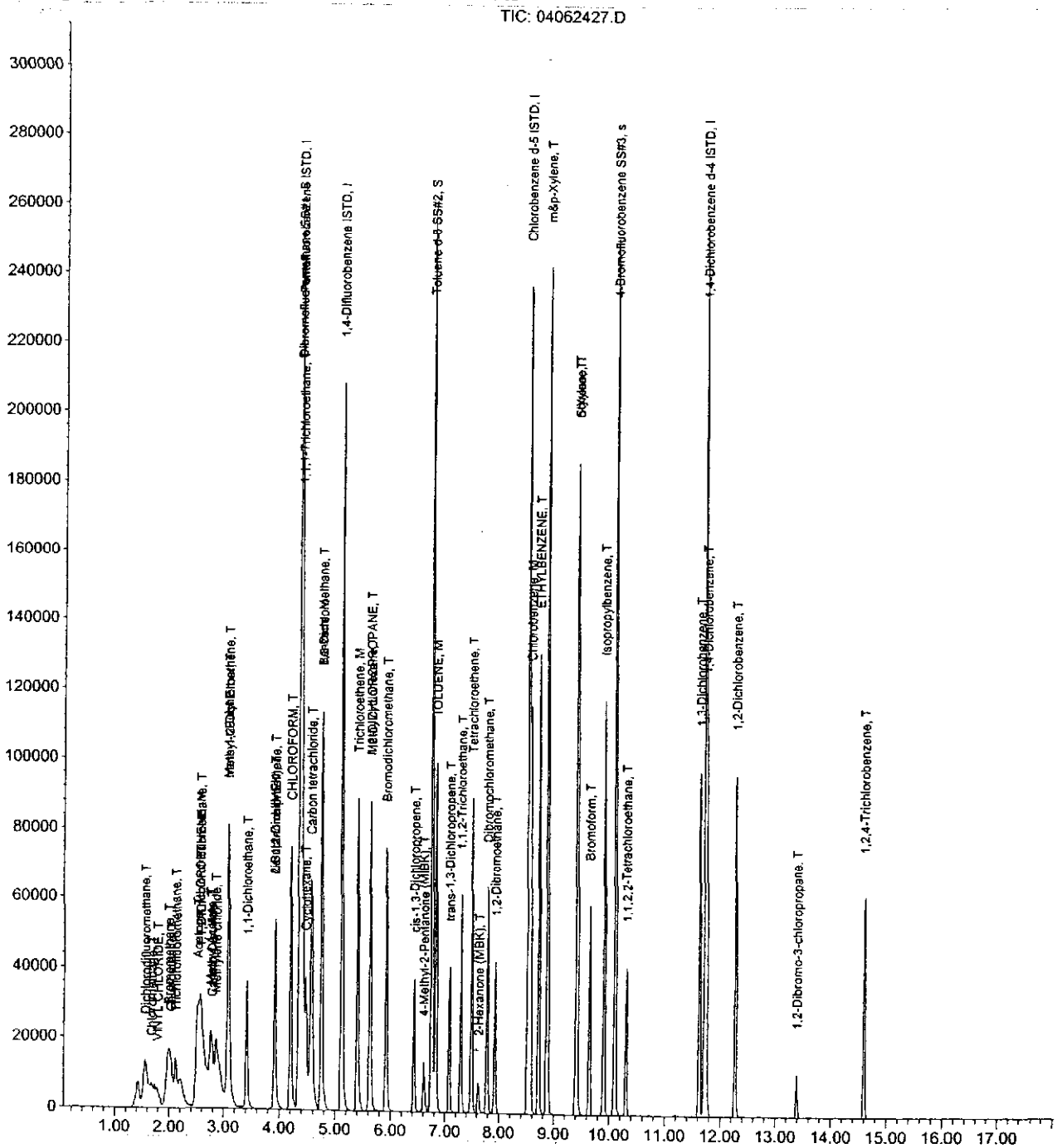
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040624\04062427.D
Acq On : 24 Jun 2004 10:26 pm
Sample : LCS 25ppb
Misc : IS/Surr 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 25 11:47 2004

Vial: 27
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062428.D
Acq On : 24 Jun 2004 10:52 pm
Sample : LCS-DUP 25ppb
Misc : IS/Surr 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 25 11:48 2004

Vial: 28
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.37	168	115944	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.11	114	166031	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.53	117	131448	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.72	152	58252	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	4.35	113	90689	51.45 ug/L	0.00
Spiked Amount 50.000			Recovery =	102.90%	
33) Toluene d-8 SS#2	6.74	98	180325	50.02 ug/L	0.00
Spiked Amount 50.000			Recovery =	100.04%	
50) 4-Bromofluorobenzene SS#3	10.10	95	94726	54.09 ug/L	0.00
Spiked Amount 50.000			Recovery =	108.18%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.55	85	39406	19.76 ug/L	100
3) Chloromethane	1.66	50	12657	21.59 ug/L	100
4) VINYL CHLORIDE	1.77	62	13702	19.78 ug/L	96
5) Bromomethane	1.98	94	28354	20.42 ug/L	97
6) Chloroethane	2.02	64	7639	21.42 ug/L	99
7) Trichlorofluoromethane	2.11	101	38178m	21.84 ug/L	
8) Acetone	2.51	43	8098	23.60 ug/L	98
9) 1,1-DICHLOROETHENE	2.56	96	26462	19.91 ug/L	89
10) 1,1,2-Trichlorotrifluoroet	2.55	101	33982m	21.73 ug/L	
11) Carbon Disulfide	2.78	76	56841	21.27 ug/L	100
12) Methyl Acetate	2.75	74	1685	19.90 ug/L #	73
13) Methylene chloride	2.89	84	24276m	20.95 ug/L	
14) trans-1,2-Dichloroethene	3.07	96	25796	20.96 ug/L	97
15) Methyl-t-Butyl Ether	3.07	73	42431	21.61 ug/L	100
16) 1,1-Dichloroethane	3.41	63	32290	22.78 ug/L	100
17) cis-1,2-Dichloroethene	3.92	96	25780	22.71 ug/L	93
18) 2-Butanone (MEK)	3.91	43	6862	25.27 ug/L	96
19) CHLOROFORM	4.20	83	65409	23.02 ug/L	99
21) 1,1,1-Trichloroethane	4.39	97	73949	23.25 ug/L #	1
22) Cyclohexane	4.47	56	16850	21.44 ug/L	94
24) Carbon tetrachloride	4.57	117	59276	25.05 ug/L	98
25) Benzene	4.75	78	56666	23.35 ug/L	98
26) 1,2-Dichloroethane	4.75	62	58526	24.68 ug/L	97

#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062428.D
Acq On : 24 Jun 2004 10:52 pm
Sample : LCS-DUP 25ppb
Misc : IS/Surr 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 25 11:48 2004

Vial: 28
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) Trichloroethene	5.40	95	36066	23.12 ug/L	98
28) 1,2-DICHLOROPROPANE	5.63	63	12797	25.36 ug/L	97
29) Methylcyclohexane	5.62	83	21439	23.25 ug/L	96
30) Bromodichloromethane	5.91	83	52391	23.63 ug/L	98
31) cis-1,3-Dichloropropene	6.42	75	27040	22.08 ug/L	97
32) 4-Methyl-2-Pentanone (MIBK	6.60	43	15744	26.52 ug/L	97
34) TOLUENE	6.83	92	47892	23.75 ug/L	98
35) trans-1,3-Dichloropropene	7.07	75	31438	23.08 ug/L	93
36) 1,1,2-Trichloroethane	7.29	83	13830	22.97 ug/L	98
37) Tetrachloroethene	7.49	166	24918	21.88 ug/L	97
38) 2-Hexanone (MBK)	7.62	43	10171	26.91 ug/L	95
40) Dibromochloromethane	7.78	129	28175	24.01 ug/L	96
41) 1,2-Dibromoethane	7.92	107	25809	23.40 ug/L	99
42) Chlorobenzene	8.56	112	57083	22.87 ug/L	95
43) ETHYLBENZENE	8.72	91	102977	23.79 ug/L	99
44) m&p-Xylene	8.87	106	70113	46.88 ug/L	99
45) o-Xylene	9.40	106	35366	23.45 ug/L	97
46) Styrene	9.41	104	57379	23.00 ug/L	93
47) Bromoform	9.64	173	26568	24.56 ug/L	98
49) Isopropylbenzene	9.91	105	89643	24.48 ug/L	99
51) 1,1,2,2-Tetrachloroethane	10.30	83	17955	27.13 ug/L	99
52) 1,3-Dichlorobenzene	11.62	146	34172	23.37 ug/L	96
53) 1,4-Dichlorobenzene	11.76	146	34191	22.75 ug/L	93
54) 1,2-Dichlorobenzene	12.27	146	33504	23.01 ug/L	98
55) 1,2-Dibromo-3-chloropropan	13.39	75	4906	27.66 ug/L	93
56) 1,2,4-Trichlorobenzene	14.61	180	19823	23.14 ug/L	100
57) Naphthalene	14.94	128	111	Not Detected	

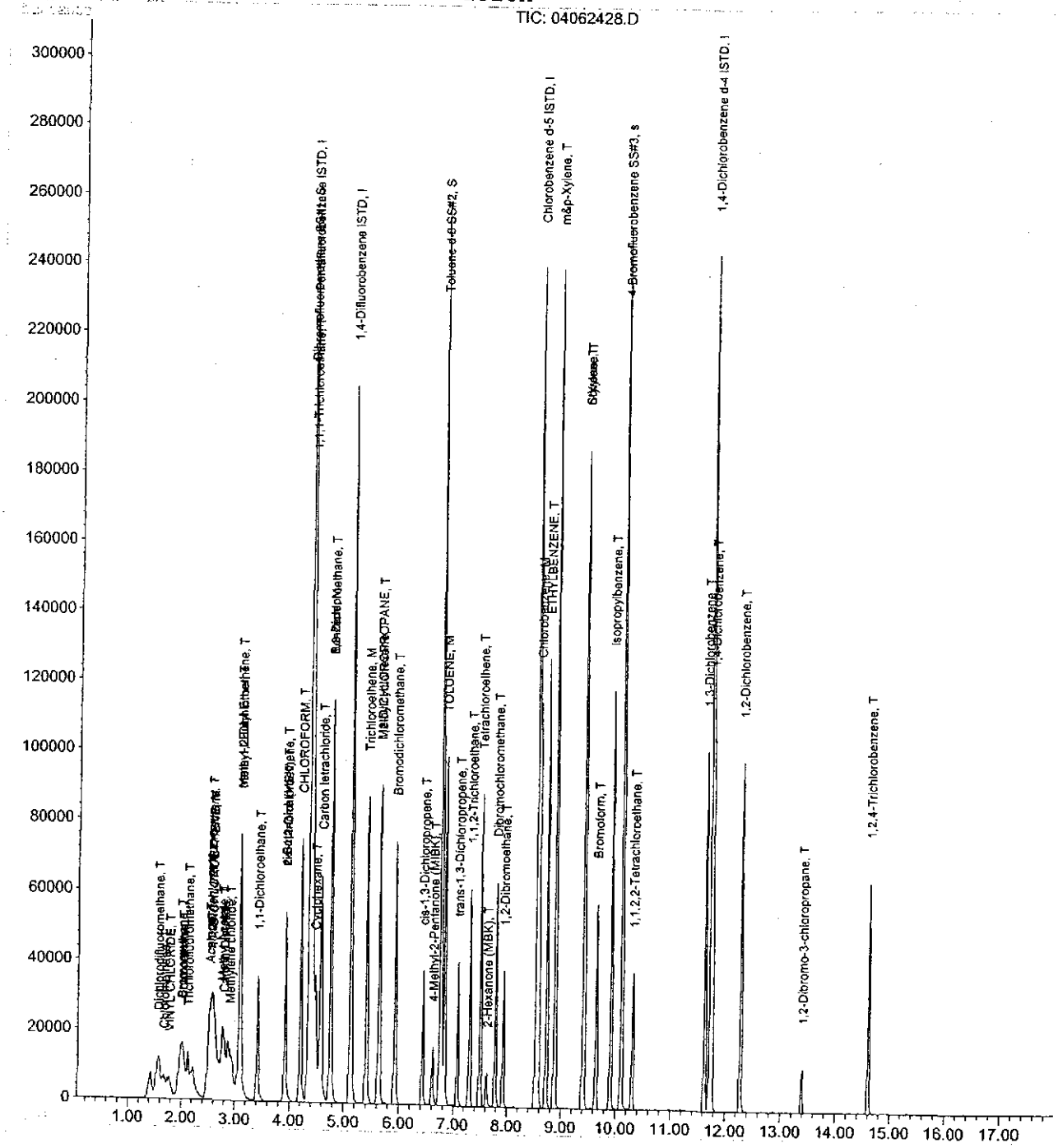
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040624\04062428.D
Acq On : 24 Jun 2004 10:52 pm
Sample : LCS-DUP 25ppb
Misc : IS/Surr 1uL #432, LCS 5uL #350
MS Integration Params: rteint.p
Quant Time: Jun 25 11:48 2004

Vial: 28
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\040624\04062402.D
Acq On : 24 Jun 2004 10:42 am
Sample : TCL-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p

Vial: 2
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene ISTD	1.000	1.000	0.0	69	0.00
2	T	Dichlorodifluoromethane	0.860	0.999	-16.2	79	0.00
3	T	Chloromethane	0.253	0.249	1.6	71	0.00
4	T	VINYL CHLORIDE	0.299	0.278	7.0	66	0.01
5	T	Bromomethane	0.599	0.529	11.7	64	0.01
6	T	Chloroethane	0.154	0.146	5.2	63	0.03
7	T	Trichlorofluoromethane	0.754	0.821	-8.9	72	-0.09
8	T	Acetone	0.148	0.122	17.6	56	0.01
9	M	1,1-DICHLOROETHENE	0.573	0.503	12.2	63	0.02
10	T	1,1,2-Trichlorotrifluoroeth	0.674	0.572	15.1	62	0.00
11	T	Carbon Disulfide	1.152	1.055	8.4	62	0.00
12	T	Methyl Acetate	0.037	0.032	13.5	59	0.00
13	T	Methylene chloride	0.771	0.443	42.5#	53	-0.04
14	T	trans-1,2-Dichloroethene	0.531	0.502	5.5	64	0.00
15	T	Methyl-t-Butyl Ether	0.847	0.803	5.2	67	0.00
16	T	1,1-Dichloroethane	0.611	0.595	2.6	66	0.01
17	T	cis-1,2-Dichloroethene	0.490	0.473	3.5	67	0.00
18	T	2-Butanone (MEK)	0.117	0.102	12.8	60	0.00
19	T	CHLOROFORM	1.225	1.231	-0.5	70	0.00
20	S	Dibromofluoromethane SS#1	0.760	0.770	-1.3	70	0.00
21	T	1,1,1-Trichloroethane	1.371	1.380	-0.7	71	0.00
22	T	Cyclohexane	0.339	0.325	4.1	71	0.01
23	I	1,4-Difluorobenzene ISTD	1.000	1.000	0.0	67	0.00
24	T	Carbon tetrachloride	0.713	0.809	-13.5	75	0.00
25	M	Benzene	0.731	0.748	-2.3	69	0.00
26	T	1,2-Dichloroethane	0.714	0.751	-5.2	71	0.00
27	M	Trichloroethene	0.470	0.481	-2.3	70	0.01
28	T	1,2-DICHLOROPROPANE	0.152	0.162	-6.6	72	0.00
29	T	Methylcyclohexane	0.278	0.281	-1.1	67	0.00
30	T	Bromodichloromethane	0.668	0.699	-4.6	71	0.00
31	T	cis-1,3-Dichloropropene	0.369	0.381	-3.3	69	0.00
32	T	4-Methyl-2-Pentanone (MIBK)	0.179	0.176	1.7	67	0.00
33	S	Toluene d-8 SS#2	1.086	1.093	-0.6	68	0.00
34	M	TOLUENE	0.607	0.611	-0.7	69	0.00
35	T	trans-1,3-Dichloropropene	0.410	0.427	-4.1	68	0.00
36	T	1,1,2-Trichloroethane	0.181	0.184	-1.7	67	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\040624\04062402.D
Acq On : 24 Jun 2004 10:42 am
Sample : TCL-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p

Vial: 2
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
3	T	Tetrachloroethene	0.343	0.329	4.1	66	0.00
38	T	2-Hexanone (MBK)	0.114	0.107	6.1	62	0.01
3	I	Chlorobenzene d-5 ISTD	1.000	1.000	0.0	67	0.00
40	T	Dibromochloromethane	0.446	0.464	-4.0	69	0.00
4[illegible]	T	1,2-Dibromoethane	0.419	0.418	0.2	66	0.00
4[illegible]	M	Chlorobenzene	0.950	0.942	0.8	67	0.00
43	T	ETHYLBENZENE	1.646	1.656	-0.6	67	0.00
4[illegible]	T	m&p-Xylene	0.569	0.571	-0.4	67	0.00
4[illegible]	T	o-Xylene	0.574	0.571	0.5	68	0.00
46	T	Styrene	0.949	0.966	-1.8	68	0.00
47	T	Bromoform	0.412	0.439	-6.6	70	0.00
48	I	1,4-Dichlorobenzene d-4 IST	1.000	1.000	0.0	68	0.00
49	T	Isopropylbenzene	3.143	3.103	1.3	67	0.00
5[illegible]	s	4-Bromofluorobenzene SS#3	1.503	1.543	-2.7	71	0.00
51	T	1,1,2,2-Tetrachloroethane	0.568	0.544	4.2	65	0.00
52	T	1,3-Dichlorobenzene	1.255	1.245	0.8	67	0.00
53	T	1,4-Dichlorobenzene	1.290	1.198	7.1	66	0.00
54	T	1,2-Dichlorobenzene	1.250	1.230	1.6	68	0.00
55	T	1,2-Dibromo-3-chloropropane	0.152	0.158	-3.9	68	0.00
56	T	1,2,4-Trichlorobenzene	0.735	0.760	-3.4	66	0.00
57	t	Naphthalene	1.077	1.013	5.9	59	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration

Calibration Files
C1 =04061602.D C2 =04061604.D C3 =04061605.D
C4 =04061606.D C5 =04061607.D C6 =04061608.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
1)	I	Pentafluorobenzene IS	----------ISTD----------							
2)	T	Dichlorodifluoromet	0.762	0.898	0.903	0.869	0.868	0.859	0.860	5.95
3)	T	Chloromethane	0.263	0.270	0.259	0.243	0.243	0.239	0.253	5.06
4)	T	VINYL CHLORIDE	0.304	0.315	0.304	0.293	0.289	0.287	0.299	3.63
5)	T	Bromomethane	0.697	0.613	0.581	0.581	0.565	0.555	0.599	8.68
6)	T	Chloroethane	0.166	0.122	0.163	0.155	0.160	0.157	0.154	10.45
7)	T	Trichlorofluorometh	0.711	0.772	0.695	0.702	0.782	0.861	0.754	8.54
8)	T	Acetone		0.196	0.132	0.128	0.150	0.133	0.148	19.16
9)	M	1,1-DICHLOROETHENE		0.612	0.586	0.568	0.552	0.548	0.573	4.61
10)	T	1,1,2-Trichlorotrif	0.692	0.705	0.703	0.669	0.636	0.642	0.674	4.48
11)	T	Carbon Disulfide	1.115	1.190	1.135	1.157	1.164	1.154	1.152	2.20
12)	T	Methyl Acetate		0.030	0.038	0.040	0.038	0.037	0.037	9.63
13)	T	Methylene chloride		1.197	0.895	0.691	0.579	0.491	0.771	36.59
14)	T	trans-1,2-Dichloroe	0.479	0.566	0.530	0.535	0.541	0.534	0.531	5.38
15)	T	Methyl-t-Butyl Ethe	0.890	0.898	0.846	0.829	0.823	0.792	0.847	4.84
16)	T	1,1-Dichloroethane	0.587	0.626	0.621	0.609	0.617	0.608	0.611	2.26
17)	T	cis-1,2-Dichloroeth	0.455	0.521	0.495	0.489	0.488	0.489	0.490	4.27
18)	T	2-Butanone (MEK)	0.135	0.112	0.110	0.116	0.116	0.112	0.117	7.91
19)	T	CHLOROFORM	1.176	1.288	1.249	1.229	1.210	1.200	1.225	3.20
20)	S	Dibromofluoromethan	0.766	0.756	0.756	0.757	0.762	0.764	0.760	0.58
21)	T	1,1,1-Trichloroetha	1.397	1.435	1.373	1.363	1.342	1.319	1.371	2.97
22)	T	Cyclohexane	0.399	0.365	0.312	0.323	0.316	0.319	0.339	10.37
23)	I	1,4-Difluorobenzene I	----------ISTD----------							
24)	T	Carbon tetrachlorid	0.684	0.731	0.751	0.693	0.713	0.703	0.713	3.50
25)	M	Benzene	0.703	0.764	0.752	0.715	0.720	0.732	0.731	3.15
26)	T	1,2-Dichloroethane	0.650	0.777	0.746	0.706	0.703	0.703	0.714	6.06
27)	M	Trichloroethene	0.441	0.505	0.488	0.470	0.459	0.455	0.470	4.95
28)	T	1,2-DICHLOROPROPANE	0.143	0.160	0.154	0.150	0.150	0.154	0.152	3.75
29)	T	Methylcyclohexane	0.260	0.284	0.285	0.276	0.278	0.284	0.278	3.44
30)	T	Bromodichloromethan	0.659	0.700	0.682	0.656	0.657	0.654	0.668	2.81
31)	T	cis-1,3-Dichloropro	0.308	0.403	0.383	0.367	0.369	0.383	0.369	8.86
32)	T	4-Methyl-2-Pentanon	0.185	0.179	0.185	0.175	0.176	0.174	0.179	2.82
33)	S	Toluene d-8 SS#2	1.081	1.080	1.103	1.075	1.075	1.101	1.086	1.15
34)	M	TOLUENE	0.579	0.611	0.645	0.596	0.592	0.623	0.607	3.92
35)	T	trans-1,3-Dichlorop	0.370	0.427	0.417	0.402	0.416	0.429	0.410	5.35
36)	T	1,1,2-Trichloroetha	0.164	0.186	0.199	0.176	0.181	0.182	0.181	6.29
37)	T	Tetrachloroethene	0.336	0.357	0.359	0.333	0.333	0.340	0.343	3.44
38)	T	2-Hexanone (MBK)	0.106	0.117	0.112	0.117	0.115	0.115	0.114	3.59

(#) = Out of Range

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration

Calibration Files
C1 =04061602.D C2 =04061604.D C3 =04061605.D
C4 =04061606.D C5 =04061607.D C6 =04061608.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
39)	I	Chlorobenzene d-5 IST	----------ISTD----------							
40)	T	Dibromochloromethan	0.406	0.461	0.455	0.460	0.450	0.445	0.446	4.66
41)	T	1,2-Dibromoethane	0.373	0.437	0.434	0.428	0.425	0.420	0.419	5.59
42)	M	Chlorobenzene	0.916	0.978	0.963	0.944	0.941	0.954	0.950	2.22
43)	T	ETHYLBENZENE	1.524	1.701	1.673	1.630	1.656	1.694	1.646	3.96
44)	T	m&p-Xylene	0.541	0.581	0.561	0.562	0.571	0.597	0.569	3.37
45)	T	o-Xylene	0.580	0.586	0.563	0.569	0.567	0.577	0.574	1.51
46)	T	Styrene	0.882	0.954	0.950	0.949	0.958	1.002	0.949	4.05
47)	T	Bromoform	0.357	0.422	0.416	0.425	0.423	0.426	0.412	6.60
48)	I	1,4-Dichlorobenzene d	----------ISTD----------							
49)	T	Isopropylbenzene	3.080	3.216	3.192	3.061	3.138	3.167	3.143	1.97
50)	s	4-Bromofluorobenzen	1.513	1.534	1.522	1.472	1.493	1.486	1.503	1.55
51)	T	1,1,2,2-Tetrachloro	0.540	0.600	0.571	0.556	0.573	0.569	0.568	3.47
52)	T	1,3-Dichlorobenzene	1.115	1.324	1.309	1.259	1.272	1.252	1.255	5.92
53)	T	1,4-Dichlorobenzene	1.382	1.332	1.293	1.244	1.246	1.242	1.290	4.46
54)	T	1,2-Dichlorobenzene	1.313	1.265	1.240	1.215	1.242	1.222	1.250	2.87
55)	T	1,2-Dibromo-3-chlor	0.135	0.162	0.146	0.154	0.157	0.159	0.152	6.67
56)	T	1,2,4-Trichlorobenz	0.588	0.769	0.714	0.738	0.789	0.815	0.735	10.98
57)	t	Naphthalene	0.923	1.031	1.061	1.095	1.168	1.188	1.077	9.01

#, = Out of Range

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062402.D
Acq On : 24 Jun 2004 10:42 am
Sample : TCL-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p
Quant Time: Jun 24 11:14 2004

Vial: 2
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.38	168	123876	50.00	ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.12	114	177918	50.00	ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.53	117	141589	50.00	ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.72	152	66490	50.00	ug/L	0.00
System Monitoring Compounds						
20) Dibromofluoromethane SS#1	4.35	113	95371	50.64	ug/L	0.00
Spiked Amount 50.000			Recovery = 101.28%			
33) Toluene d-8 SS#2	6.74	98	194397	50.32	ug/L	0.00
Spiked Amount 50.000			Recovery = 100.64%			
50) 4-Bromofluorobenzene SS#3	10.11	95	102619	51.33	ug/L	0.00
Spiked Amount 50.000			Recovery = 102.66%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.56	85	123760	58.10	ug/L	100
3) Chloromethane	1.68	50	30904	49.34	ug/L	95
4) VINYL CHLORIDE	1.78	62	34483	46.60	ug/L	95
5) Bromomethane	2.00	94	65526	44.17	ug/L	98
6) Chloroethane	2.04	64	18143	47.61	ug/L	87
7) Trichlorofluoromethane	2.12	101	101751m	54.49	ug/L	
8) Acetone	2.51	43	15112	41.21	ug/L	96
9) 1,1-DICHLOROETHENE	2.57	96	62349	43.90	ug/L	90
10) 1,1,2-Trichlorotrifluoroet	2.56	101	70857	42.41	ug/L	94
11) Carbon Disulfide	2.78	76	130659	45.76	ug/L	100
12) Methyl Acetate	2.75	74	3970	43.89	ug/L	84
13) Methylene chloride	2.86	84	54865	44.32	ug/L #	76
14) trans-1,2-Dichloroethene	3.08	96	62210	47.31	ug/L	97
15) Methyl-t-Butyl Ether	3.08	73	99415	47.40	ug/L	100
16) 1,1-Dichloroethane	3.42	63	73666	48.65	ug/L	99
17) cis-1,2-Dichloroethene	3.92	96	58603	48.31	ug/L	95
18) 2-Butanone (MEK)	3.90	43	12591	43.41	ug/L	99
19) CHLOROFORM	4.20	83	152438	50.21	ug/L	100
21) 1,1,1-Trichloroethane	4.40	97	171005	50.33	ug/L #	59
22) Cyclohexane	4.48	56	40201	47.88	ug/L	90
24) Carbon tetrachloride	4.57	117	143938	56.77	ug/L	99
25) Benzene	4.75	78	133069	51.16	ug/L	100
26) 1,2-Dichloroethane	4.75	62	133682	52.60	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062402.D
Acq On : 24 Jun 2004 10:42 am
Sample : TCL-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p
Quant Time: Jun 24 11:14 2004

Vial: 2
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27)	Trichloroethene	5.41	95	85646	51.24 ug/L	96
28)	1,2-DICHLOROPROPANE	5.63	63	28829	53.32 ug/L	99
29)	Methylcyclohexane	5.63	83	49916	50.52 ug/L	96
30)	Bromodichloromethane	5.92	83	124355	52.33 ug/L	100
31)	cis-1,3-Dichloropropene	6.42	75	67742	51.62 ug/L	98
32)	4-Methyl-2-Pentanone (MIBK	6.60	43	31259	49.14 ug/L	99
34)	TOLUENE	6.83	92	108623	50.26 ug/L	99
35)	trans-1,3-Dichloropropene	7.07	75	76023	52.09 ug/L	99
36)	1,1,2-Trichloroethane	7.30	83	32679	50.65 ug/L	98
37)	Tetrachloroethene	7.50	166	58525	47.97 ug/L	98
38)	2-Hexanone (MBK)	7.62	43	19069	47.08 ug/L	100
40)	Dibromochloromethane	7.79	129	65727	52.01 ug/L	100
41)	1,2-Dibromoethane	7.93	107	59216	49.85 ug/L	99
42)	Chlorobenzene	8.57	112	133344	49.59 ug/L	96
43)	ETHYLBENZENE	8.72	91	234447	50.28 ug/L	100
44)	m&p-Xylene	8.88	106	161827	100.45 ug/L	99
45)	o-Xylene	9.41	106	80913	49.81 ug/L	99
46)	Styrene	9.42	104	136793	50.90 ug/L	95
47)	Bromoform	9.64	173	62188	53.37 ug/L	99
49)	Isopropylbenzene	9.91	105	206342	49.38 ug/L	100
51)	1,1,2,2-Tetrachloroethane	10.31	83	36164	47.87 ug/L	99
52)	1,3-Dichlorobenzene	11.63	146	82793	49.61 ug/L	97
53)	1,4-Dichlorobenzene	11.76	146	79625	46.42 ug/L	96
54)	1,2-Dichlorobenzene	12.28	146	81801	49.23 ug/L	98
55)	1,2-Dibromo-3-chloropropan	13.39	75	10479	51.76 ug/L	86
56)	1,2,4-Trichlorobenzene	14.62	180	50565	51.70 ug/L	98
57)	Naphthalene	14.94	128	67334	47.00 ug/L	100

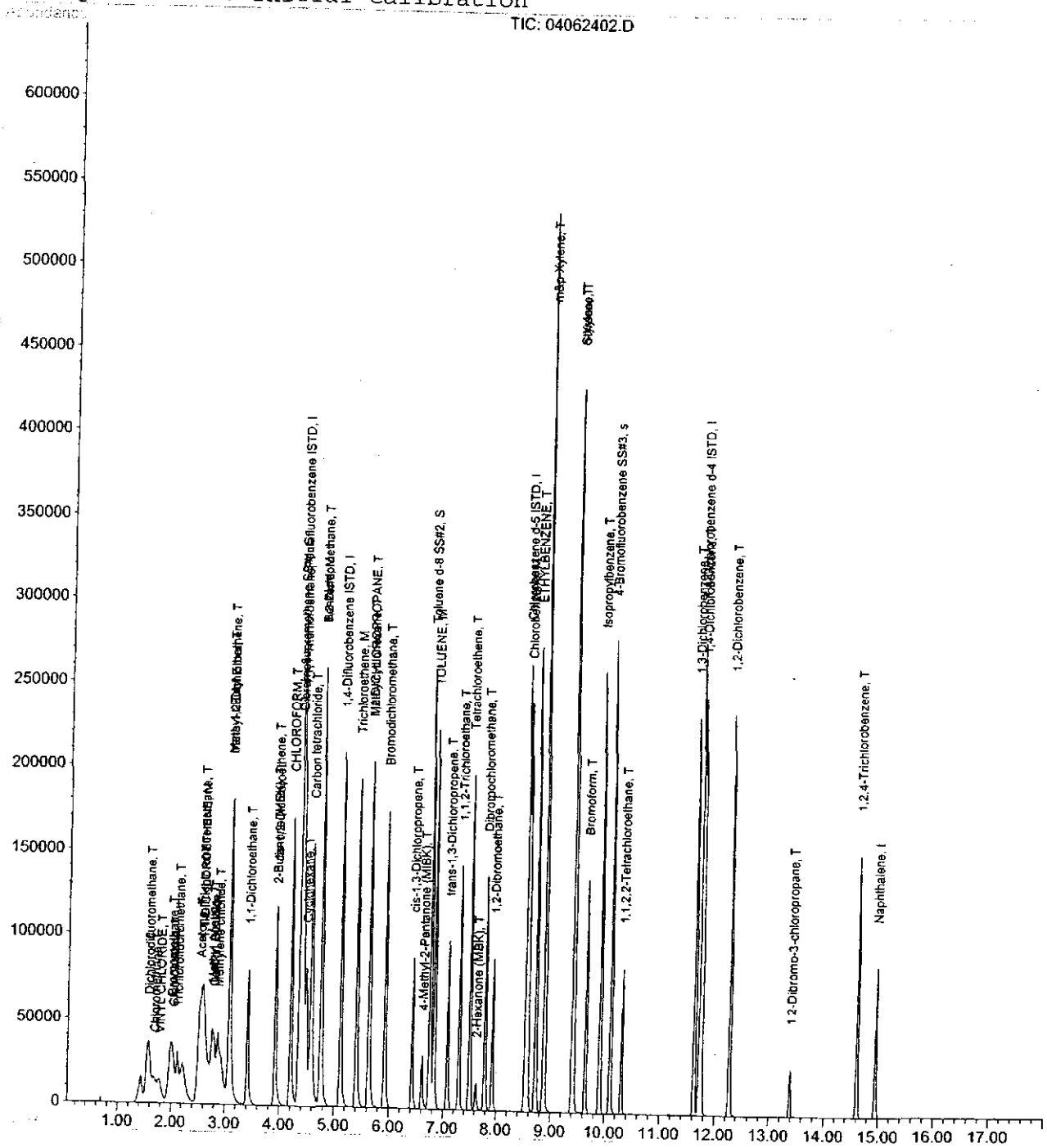
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040624\04062402.D
Acq On : 24 Jun 2004 10:42 am
Sample : TCL-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #415
MS Integration Params: rteint.p
Quant Time: Jun 24 11:14 2004

Vial: 2
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration



Response Factor Report GC/MS Ins

Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Mon Jun 21 15:31:55 2004
Response via : Initial Calibration

Calibration Files
C1 =04061603.D C2 =04061611.D C3 =04061612.D
C4 =04061613.D C5 =04061614.D C6 =04061615.D

		Compound	C1	C2	C3	C4	C5	C6	Avg	%RSD
1)	I	Pentaflourobenzene	----------ISTD----------							
2)	t	acrolein		0.023	0.040	0.032	0.029	0.033	0.032	19.31
3)	t	iodomethne	1.128	0.958	0.951	0.918	0.916	0.932	0.967	8.33
4)	t	acrylonitrile		0.066	0.080	0.069	0.065	0.063	0.069	9.86
5)	t	tert-butanol		0.046	0.046	0.047	0.048	0.048	0.047	1.67
6)	t	vinyl acetate	1.421	1.222	1.260	1.205	1.205	1.239	1.259	6.53
7)	t	diisopropyl ether	0.990	0.855	0.915	0.871	0.847	0.882	0.893	5.94
8)	t	tert-Butyl ethyl et	1.024	0.950	0.981	0.911	0.880	0.860	0.934	6.68
9)	T	2,2-Dichloropropane	0.994	0.813	0.815	0.763	0.757	0.755	0.816	11.16
10)	T	Bromochloromethane	0.215	0.221	0.227	0.224	0.223	0.221	0.222	1.77
11)	S	Dibromofluoromethan	0.756	0.757	0.777	0.756	0.762	0.776	0.764	1.28
12)	I	1,4-Difluorobenzene	----------ISTD----------							
13)	T	1,1-Dichloropropene	0.500	0.426	0.413	0.391	0.386	0.400	0.420	10.05
14)	t	tert-amyl methyl et	0.643	0.615	0.612	0.591	0.579	0.563	0.601	4.78
15)	T	Dibromomethane	0.404	0.347	0.349	0.337	0.330	0.338	0.351	7.71
16)	t	1,4-dioxane					0.000	0.000	0.000	10.06
17)	T	2-Chloroethylvinyl	0.101	0.096	0.091	0.093	0.092	0.095	0.094	3.65
18)	S	Toluene d-8 SS#2	1.081	1.091	1.066	1.095	1.075	1.102	1.085	1.24
19)	I	Chlorobenzene d-5	----------ISTD----------							
20)	T	1,3-Dichloropropane	0.437	0.394	0.431	0.405	0.410	0.410	0.414	3.90
21)	T	1,1,1,2-Tetrachloro	0.388	0.315	0.309	0.295	0.304	0.311	0.320	10.56
22)	T	1,2,3-Trichloroprop	0.172	0.149	0.152	0.145	0.144	0.143	0.151	7.16
23)	s	4-Bromofluorobenzen	0.705	0.693	0.691	0.692	0.683	0.700	0.694	1.08
24)	T	Bromobenzene	0.443	0.398	0.405	0.394	0.379	0.396	0.402	5.34
25)	t	trans-1,4-dichloro-		0.328	0.319	0.324	0.316	0.324	0.322	1.42
26)	T	n-Propylbenzene	1.908	1.645	1.658	1.591	1.596	1.773	1.695	7.27
27)	I	1,4-Dichlorobenzene d	----------ISTD----------							
28)	T	2-Chlorotoluene	4.162	3.592	3.597	3.472	3.427	3.548	3.633	7.37
29)	T	4-Chlorotoluene	3.063	2.743	2.715	2.611	2.560	2.525	2.703	7.25
30)	T	1,3,5-Trimethylbenz	3.154	2.875	2.938	2.860	2.856	2.948	2.938	3.84
31)	T	tert-Butylbenzene	0.339	0.251	0.252	0.264	0.265	0.266	0.273	12.20
32)	T	1,2,4-Trimethylbenz	3.154	2.875	2.938	2.860	2.856	2.948	2.938	3.84
33)	T	sec-Butylbenzene	3.336	2.866	2.962	2.817	2.818	2.914	2.952	6.64
34)	T	4-Isopropyltoluene	2.124	1.883	1.910	1.814	1.855	1.881	1.911	5.73
35)	T	n-Butylbenzene	1.029	0.828	0.739	0.727	0.741	0.749	0.802	14.58
36)	T	1,2,3-Trichlorobenz	0.638	0.605	0.647	0.651	0.683	0.707	0.655	5.44

(# = Out of Range

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062403.D
Acq On : 24 Jun 2004 11:08 am
Sample : UNREG-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #463
MS Integration Params: rteint.p
Quant Time: Jun 24 11:39 2004

Vial: 3
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Mon Jun 21 15:31:55 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentaflourobenzene	4.38	168	121074	50.00 ug/L	0.00
12) 1,4-Difluorobenzene	5.12	114	180214	50.00 ug/L	0.00
19) Chlorobenzene d-5	8.53	117	140577	50.00 ug/L	0.00
27) 1,4-Dichlorobenzene d-4	11.72	152	64091	50.00 ug/L	0.00
System Monitoring Compounds					
11) Dibromofluoromethane SS#1	4.35	113	95944	51.85 ug/L	0.01
Spiked Amount 50.000 Range 80 - 120 Recovery = 103.70%					
18) Toluene d-8 SS#2	6.75	98	195761	50.05 ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.10%					
23) 4-Bromofluorobenzene SS#3	10.10	95	99064	50.78 ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 101.56%					
Target Compounds					Qvalue
2) acrolein	2.40	56	3044	39.80 ug/L #	100
3) iodomethne	2.70	142	103162	44.04 ug/L	86
4) acrylonitrile	3.02	53	6705	40.26 ug/L	100
5) tert-butanol	2.97	59	4552	39.92 ug/L	100
6) vinyl acetate	3.43	43	151138	49.59 ug/L	99
7) diisopropyl ether	3.46	45	109271	50.52 ug/L	97
8) tert-Butyl ethyl ether	3.78	59	110465	48.82 ug/L	100
9) 2,2-Dichloropropane	3.93	77	102976	52.09 ug/L	98
10) Bromochloromethane	4.14	128	26676	49.64 ug/L	92
13) 1,1-Dichloropropene	4.55	75	72599	48.01 ug/L	98
14) tert-amyl methyl ether	4.86	73	106948	49.41 ug/L	99
15) Dibromomethane	5.76	93	61395	48.55 ug/L	98
16) 1,4-dioxane	0.00	58	0	Not Detected	
17) 2-Chloroethylvinyl Ether	6.25	63	16384	48.11 ug/L	96
20) 1,3-Dichloropropane	7.50	76	57863	49.66 ug/L	99
21) 1,1,1,2-Tetrachloroethane	8.67	131	45198	50.16 ug/L	98
22) 1,2,3-Trichloropropane	10.36	110	19632	46.30 ug/L	100
24) Bromobenzene	10.30	156	52498	46.39 ug/L	94
25) trans-1,4-dichloro-2-buten	10.36	75	44037	48.62 ug/L #	100
26) n-Propylbenzene	10.48	91	232485	48.78 ug/L	100
28) 2-Chlorotoluene	10.48	91	232485	49.92 ug/L #	100
29) 4-Chlorotoluene	10.58	91	172586	49.81 ug/L	100
30) 1,3,5-Trimethylbenzene	10.74	105	193663	51.42 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062403.D
Acq On : 24 Jun 2004 11:08 am
Sample : UNREG-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #463
MS Integration Params: rteint.p
Quant Time: Jun 24 11:39 2004

Vial: 3
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Mon Jun 21 15:31:55 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) tert-Butylbenzene	10.74	119	17594	50.31 ug/L #	95
32) 1,2,4-Trimethylbenzene	10.74	105	193663	51.42 ug/L	99
33) sec-Butylbenzene	11.25	105	192838	50.96 ug/L #	100
34) 4-Isopropyltoluene	11.19	119	123734	50.51 ug/L	95
35) n-Butylbenzene	11.71	91	51692	50.25 ug/L	97
36) 1,2,3-Trichlorobenzene	15.32	180	43719	52.04 ug/L	100

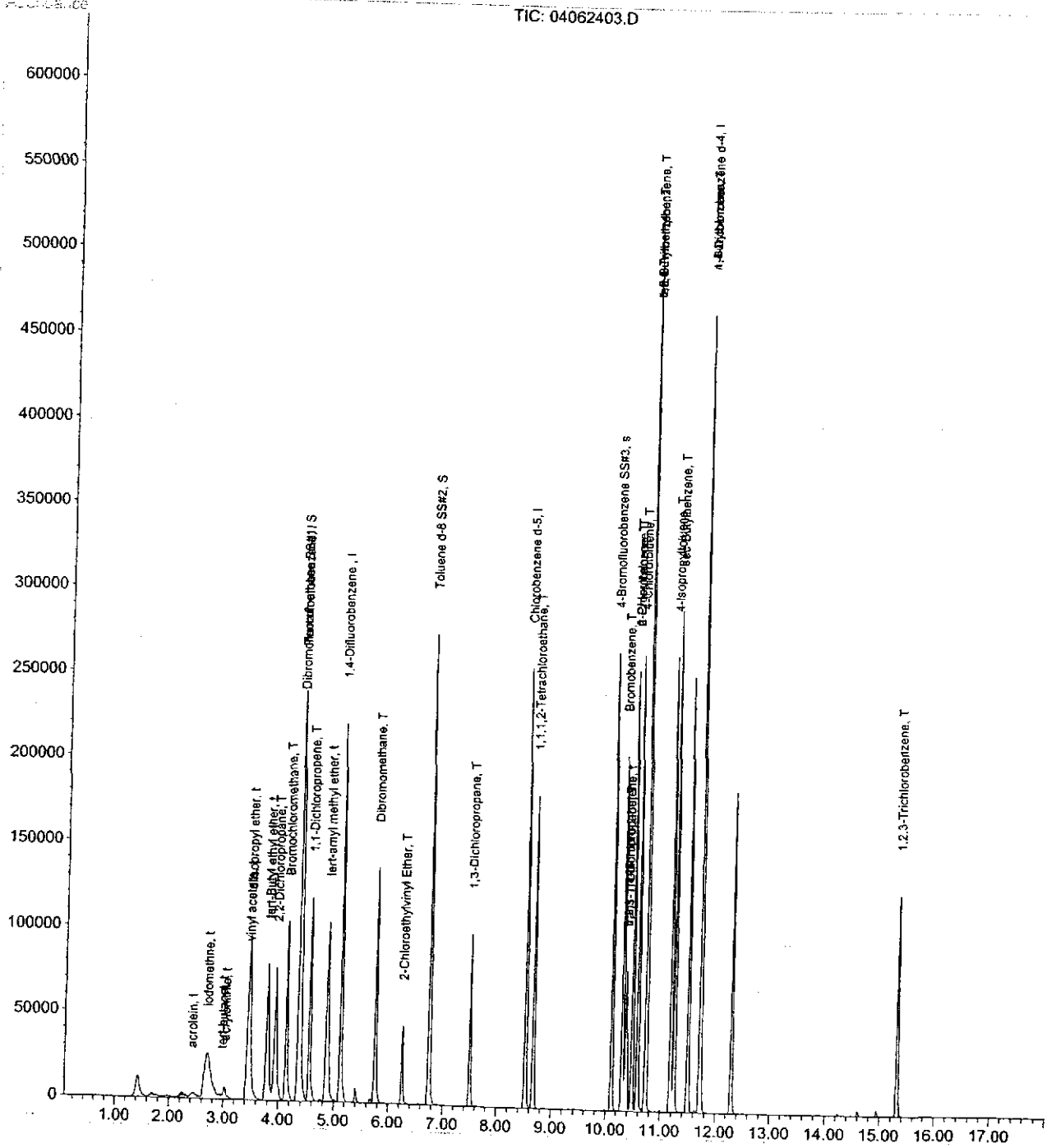
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\2\DATA\040624\04062403.D
Acq On : 24 Jun 2004 11:08 am
Sample : UNREG-W, CCV 50ppb
Misc : IS/Surr 1uL #432, CCV 10uL #463
MS Integration Params: rteint.p
Quant Time: Jun 24 11:39 2004

Vial: 3
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\UNREG-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Mon Jun 21 15:31:55 2004
Response via : Initial Calibration



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PHASE SEPARATION SCIENCE, INC.

VOLATILE ORGANIC COMPOUNDS
METHOD BLANK SUMMARY

ANALYSIS:	**GC/MS Volatiles**	**LAB CODE:**	**Method Blank**
METHOD:	**EPA 8260**	**LAB SAMPLE ID:**	**MBW**
LAB FILE ID:	**04062405.D**	**DATE/TIME ANALYZED:**	**06/24/04 12:00**
MATRIX:	**Water**		

This Method Blank applies to the following samples:

Sample ID	Lab Sample ID	Lab File ID	Date/Time Analyzed
LCS	LCS 25ppb	04062427.D	06/24/04 10:26:00 PM
TB061804	04062118-01	04062411.D	06/24/04 03:21:00 PM
DMW-3S-061804	04062118-02	04062422.D	06/24/04 08:15:00 PM
DMW-3I-061804	04062118-04	04062412.D	06/24/04 03:47:00 PM
DMW-2S-061804	04062118-06	04062413.D	06/24/04 04:13:00 PM
DMW-4D-061804	04062118-08	04062414.D	06/24/04 04:39:00 PM
DMW-7S-062104	04062118-10	04062423.D	06/24/04 08:44:00 PM
DMW-1B-062104	04062118-12	04062415.D	06/24/04 05:04:00 PM
DMW-1A-062104	04062118-14	04062416.D	06/24/04 05:30:00 PM

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\040624\04062405.D
Acq On : 24 Jun 2004 12:00 pm
Sample : METHOD BLANK 5mL
Misc : IS/Surr 1uL #432
MS Integration Params: rteint.p
Quant Time: Jun 24 16:13 2004

Vial: 5
Operator: MI
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TCL-W.M (RTE Integrator)
Title : 524.2 Purgable Organics
Last Update : Thu Jun 17 12:09:12 2004
Response via : Initial Calibration
DataAcq Meth : RTX1VOA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene ISTD	4.38	168	122623	50.00 ug/L	0.00
23) 1,4-Difluorobenzene ISTD	5.11	114	174976	50.00 ug/L	0.00
39) Chlorobenzene d-5 ISTD	8.53	117	141142	50.00 ug/L	0.00
48) 1,4-Dichlorobenzene d-4 IS	11.72	152	60317	50.00 ug/L	0.00
System Monitoring Compounds					
20) Dibromofluoromethane SS#1	4.34	113	95241	51.09 ug/L	0.00
Spiked Amount 50.000			Recovery =	102.18%	
33) Toluene d-8 SS#2	6.75	98	197571	52.00 ug/L	0.00
Spiked Amount 50.000			Recovery =	104.00%	
50) 4-Bromofluorobenzene SS#3	10.10	95	102513	56.53 ug/L	0.00
Spiked Amount 50.000			Recovery =	113.06%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85	0	Not Detected	
3) Chloromethane	0.00	50	0	Not Detected	
4) VINYL CHLORIDE	0.00	62	0	Not Detected	
5) Bromomethane	0.00	94	0	Not Detected	
6) Chloroethane	0.00	64	0	Not Detected	
7) Trichlorofluoromethane	2.17	101	61	Not Detected	
8) Acetone	2.52	43	255	Not Detected	
9) 1,1-DICHLOROETHENE	0.00	96	0	Not Detected	
10) 1,1,2-Trichlorotrifluoroet	0.00	101	0	Not Detected	
11) Carbon Disulfide	2.74	76	60	Not Detected	
12) Methyl Acetate	0.00	74	0	Not Detected	
13) Methylene chloride	2.88	84	225	Not Detected	
14) trans-1,2-Dichloroethene	0.00	96	0	Not Detected	
15) Methyl-t-Butyl Ether	0.00	73	0	Not Detected	
16) 1,1-Dichloroethane	0.00	63	0	Not Detected	
17) cis-1,2-Dichloroethene	0.00	96	0	Not Detected	
18) 2-Butanone (MEK)	3.90	43	57	Not Detected	
19) CHLOROFORM	4.28	83	55	Not Detected	
21) 1,1,1-Trichloroethane	0.00	97	0	Not Detected	
22) Cyclohexane	0.00	56	0	Not Detected d	
24) Carbon tetrachloride	0.00	117	0	Not Detected	
25) Benzene	0.00	78	0	Not Detected	
26) 1,2-Dichloroethane	0.00	62	0	Not Detected	

(#) = qualifier out of range (m) = manual integration