

DRAFT
**RCRA FACILITY INVESTIGATION
SUPPLEMENTAL REPORT**
VOLUME 1: TEXT, TABLES, FIGURES

***PFIZER PHARMACEUTICALS, LLC.
BARCELONETA, PUERTO RICO***

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EXECUTIVE SUMMARY

TRC Environmental Corporation (TRC) conducted a RCRA Facility Investigation (RFI) at the Pfizer Pharmaceuticals LLC, Barceloneta Operations (Pfizer) facility in Barceloneta, Puerto Rico. The RFI was conducted in accordance with the EPA-approved RFI Work Plan dated May 1991 the RFI Work Plan Addendum No. 1., dated August 6, 1991, the RFI Work Plan for Ground Water Investigation, dated January 2003, the RFI Work Plan dated May 2005, the RFI Draft Supplemental Work plan dated February 2006, as well as applicable EPA guidance (EPA, 1989a). This report presents the findings of the RFI, including the most recent sampling and interpretive effort.

Summary of Investigations Performed Since Last Report

As part of this latest investigative effort, four additional ground water monitoring wells were installed at the facility. Wells MW-3 and MW-4 were installed upgradient of SWMU-11 and wells MW-5 and MW-6 were installed downgradient of SWMU-11. Each well was installed in bedrock in the uppermost water producing zone and the well screens were placed to intercept the highest levels of VOC contamination based on aquifer profile screening. Aquifer profile screening indicated VOC contamination only in well MW-6. Each profile ground water sample was analyzed for 8260 VOCs plus tetrahydrofuran, and the results were used to help determine the placement of the well screen.

Each well was advanced at least 50 feet deeper than the water table, and aquifer profile screening samples were obtained during drilling to determine the primary flow path (zone of contamination) in order to select well screen depth.

A topographic elevation survey of monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5 and MW-6 was conducted to allow interpretation of the water table surface. Water level measurements indicate that the water table surface slopes northward and that ground water flow is interpreted to be directed to the north with a hydraulic gradient of 1 foot per 200 feet (0.005).

Ground Water Sampling Results

A total of four rounds of ground water sampling have been conducted at the site. The chlorobenzene plume appears to emanate near SWMU-11 and extend north to MW-6, though the area where the chlorobenzene MCL is exceeded is limited to approximately 200 feet from SWMU-11.

No VOCs were detected in the upgradient wells MW-3 and MW-4; nor in the downgradient well MW-5 or in the Pfizer supply well.

Chlorobenzene concentrations observed in ground water from well MW-1 have varied from a low of 33ppb (June 2003) to the highest value (450ppb) detected during the most recent sampling round (January 2007).

Ground water from monitoring well MW-2, installed northeast of the former tank farm at SWMU-11, contained chlorobenzene at a maximum concentration of 239 ppb (June 2003 sampling round), but the most recent sampling of this well indicates concentrations below the MCL (76 ppb).

Chlorobenzene was observed to be present in the initial sampling rounds at the Rayo Farm well (RF-1, maximum concentration of 6 ppb, well below the MCL) but no VOCs were detected in the Rayo Farm well during the last two sampling rounds.

Contaminant Transport Modeling

TRC evaluated the fate/transport of chlorobenzene in ground water to assess the extent of migration. The Air Force Center for Environmental Excellence BIOSCRN model (version 1.4) was used to simulate the chlorobenzene migration from SWMU-11. The model result representing the centerline of the plume after 100 years with no corrective measures taken indicates that the plume would not be detectable beyond 1,800 feet from the source, with concentrations predicted to be below MCLs less than 200 feet from the SWMU-11 – as supported by field data. Therefore, field data and fate/transport modeling data indicate there will be no off-site impacts.

Human Health Risk Assessment

TRC updated the previous Human Health Risk Assessment incorporating new data and updated EPA guidance.

Receptors

The Pfizer facility is an industrial facility, so current and anticipated uses include construction/excavation and industrial/commercial.

Exposure Pathways

The exposure scenarios developed for evaluation in the HHRA for the PPI facility include the following:

- Scenario 1 (Future Construction Worker) -
- Scenario 2 (Current/Future Commercial/Industrial)

Risk Characterization

Human health risks were evaluated quantitatively based on potential effects from the COPCs.

Scenario 1 (Construction Worker): Cancer Risks and Non-Cancer HIs

The total estimated cancer risk and non-cancer HI for construction workers exposed to soils are $2\text{E-}09$ and $4.3\text{E-}02$, respectively and do not exceed target risks of $1\text{E-}04$ and $1\text{E+}00$, respectively.

Scenario 2 (Current/Future Commercial/Industrial)

The estimated cancer risk for the commercial/industrial worker exposed to soils, ground water and indoor air is $5\text{E-}08$ and does not exceed the target risk of $1\text{E-}04$. The non-cancer HI for current/future commercial/industrial workers exposed to soils, ground water and indoor air is 35 and does exceed the non-cancer target of $1\text{E+}00$. This exceedance is entirely due to hypothetical inhalation of benzene in indoor air. The indoor air concentrations modeled by use of USEPA's most current version of the Johnson & Ettinger spreadsheets were compared against the OSHA

PELs. The modeled indoor air concentration of benzene exceeds the OSHA PEL by 34 fold. These model results are generally conservative and are a screening tool to determine if further evaluation may be warranted.

Conclusions

Waste Characterization: The physical, chemical and fate and transport properties of the waste have been determined, and the contaminants of concern have been identified. Twelve VOCs that were used at the site have been detected in soils beneath the tank farm site and two chemicals have reached ground water. No RCRA Action Levels have been exceeded in soils but chlorobenzene is present in ground water at a concentration that exceeds the MCL.

Unit Characterization: The operating characteristics and design of the tank farm have been determined and related to the potential for contaminant release. There does not appear to be evidence of a major release of contaminants. The RFI data support that minor releases of contaminants may have occurred since 1972, and that the frequency and volume of releases was reduced after construction of the tank farm containment vault in 1982 (note that chlorobenzene has not been used at the facility since 1980). This has resulted in sporadic occurrences of VOCs in subsurface soils beneath the tank farm and the truck receiving area. The magnitude of the release cannot be directly ascertained, however the low-level concentrations in the vapor phase are consistent with the small contaminant mass in soils.

Environmental Setting Characterization: The nature of the soils in the area has been well described using multiple maps and cross sections, and the depth to bedrock is well defined. The depth to ground water is over 100 feet below the contaminant mass adsorbed to soils, and little evidence of contamination has been observed in bedrock beneath the tank farm. Relevant soil properties have been determined, and their variability beneath the site have been well described.

Release Characterization: Facility records relevant to the contaminant releases do not indicate any major uncontrolled contaminant releases. The area of contamination is well defined, and the distribution of contaminants within the subsurface area has been adequately assessed.

Risk based criteria are exceeded for current workers based on indoor air exposure to benzene. Pfizer has delineated the MCL exceedances in ground water and this area is limited to a small plume entirely contained within the site, and limited in extent to an area near SWMU-11. Pfizer has never detected VOC's in the nearby high volume (300,000 gallon per day) production well, indicated that the ground water used at the plant is not impacted (see sampling results, Appendix F). Pfizer has presented a detailed description of the subsurface geology and evaluated the fate and transport properties of the chemicals as they are released to the subsurface. This analysis also showed that the contaminant mass still present at the site is attenuating via biodegradation, based on decreasing subsurface gas concentrations.

Recommendations

Based on the potential human health risk of site workers exposed to indoor air, samples should be obtained from nearby buildings (proximate to soil/gas detections) to determine if this exposure pathway is complete and if any corrective measures are needed.

Groundwater monitoring is recommended for a sufficient period (e.g. 2 years) to verify that groundwater concentrations are stable or declining, since the ground water plume does not migrate off-site. Such monitoring will help determine if further corrective measures are needed for ground water.

1.0 INTRODUCTION

This report presents the results of Supplemental RCRA Facility investigations (RFI) described in the US EPA-approved Work Plan dated February 2006. TRC Environmental Corporation (TRC) conducted supplemental RCRA Facility Investigations (RFI) at the Pfizer Pharmaceuticals LLC (PPLLC), Barceloneta, Puerto Rico Operations (Pfizer) between July 2006 and June 2007.

Throughout the duration of the RFI, Pfizer reported preliminary data to EPA in the form of status update memoranda, periodic meetings and telephone calls. Pfizer also added selected scope items in an effort to fully characterize the nature and extent of the release. EPA was consulted throughout the planning process, and EPA comments were factored into the investigative approach. The resulting investigation is complete, has been conducted in accordance with EPA guidance, and is presented in this Draft Supplemental RFI Report.

1.1 Purpose

The purpose of an RFI is to determine the nature and extent of releases of hazardous waste or constituents from solid waste management units (SMWUs) and other potential source areas of treatment, storage and disposal facilities regulated under Subtitle C of RCRA. This RFI was initiated as a requirement of Pfizer's Part B permit application (EPA, 1990). The primary objective of this Supplemental RFI was to further characterize groundwater specific to the source, nature and extent of chlorobenzene detected in groundwater (near or slightly above MCLs) downgradient of SWMU-11 (Tank Farm Area) - to support the implementation of corrective measures, if warranted based on risk to human health and the environment.

The supplemental RFI was conducted in accordance with the EPA-approved Supplemental Work plan dated February 2006 and where applicable, the RFI Work Plan dated May 1991, the RFI Work Plan Addendum No. 1., dated August 6, 1991, the RFI Work Plan for Ground Water Investigation, dated January 2003, as well as applicable EPA guidance (EPA, 1989a).

This report includes several types of data presentations as discussed in the RFI Guidance (EPA, 1989a, Section 9.5). EPA RFI Guidance suggests that data be presented using graphs and tables, surface maps and plan drawings, soil boring logs, cross sections, area site maps with chemical concentrations, stack maps, and data tables. Where possible, these types of data presentations have been included in the Draft RFI Report to facilitate presentation of the RFI results.

1.2 Site Location

Figure 1.2-1 shows a map of the Pfizer Barceloneta facility, and the location of SWMU-11 (Tank Farm Area). Figure 1.2-2 shows the three subareas of SWMU-11: the area north of the expansion tank farm; the former phenol oven area; and the tank farm. This Draft RFI Report presents results which are related to the tank farm sub-area of SWMU 11.

1.3 Background

In June 1986, Pfizer filed a RCRA Part B Permit application to operate this facility as a treatment, storage, and disposal facility for hazardous wastes. Pfizer identified 11 solid waste management units (SWMUs) in the RCRA Part B Permit application.

In August 1988, a RCRA Facility Assessment (RFA) of the Pfizer Barceloneta facility was completed by Versar for the EPA (Versar, 1988). Following a preliminary review and visual site inspection of the Pfizer facility, surface soil samples were collected from two SWMUs, SWMU 3 and SWMU 11. Based on the RFA, EPA determined that a RFI was warranted for SWMU 3 and SWMU 11. No other areas of potential contaminant releases were identified by EPA.

Pfizer submitted a revised RCRA permit application to EPA on September 15, 1989. In May 1990, EPA issued a RCRA permit. This permit included a requirement to conduct an RFI at SWMU 11. Based on the results of the RFA, EPA determined that a release of hazardous waste and/or hazardous constituents had occurred at SWMU 11. EPA also required that, if phthalate concentrations at SWMU 11 were determined to be above recommended action levels, then a RCRA facility investigation would also be required for SWMU 3. Since phthalate levels did not exceed RCRA action levels, no investigations were performed for SWMU 3.

1.4 Site History

Prior to construction of the pharmaceutical manufacturing facility, the land now occupied by the site was owned by the Puerto Rico Land Authority. The land was used for growing pineapples. In 1972, Pfizer began construction of the present manufacturing facility. The Tank Farm was constructed in 1973, and originally consisted of 12 underground tanks situated on concrete foundations, backfilled with soil. These tanks were installed to store chemicals used in the manufacturing processes.

In 1982, Pfizer expanded the tank farm to the north, adding six underground tanks. The tanks in the Expansion Tank Farm were installed within a concrete containment vault constructed of 6 to 8 inch thick walls, and a 9 to 16 inch thick base. The containment vault was backfilled with crushed stone, and the excavated soil was emplaced in an area north of the tank farm. Sumps were installed in the containment basin to collect precipitation and any spillage, for removal and proper disposal through Pfizer's on site treatment plant.

Pfizer upgraded the Old Tank Farm in 1984 in an effort to prevent any potential releases of hazardous substances to the environment. This upgrade included removal, inspection, and testing of the tanks. The tanks were reinstalled in a concrete containment basin with a sump to collect and remove rainwater, leakage, or spillage from within the containment basin, and backfilled with crushed stone.

Table 1.4-1 lists the chemicals that have been stored in the tank farm since the initial construction. Most of these chemicals have been used since 1972. Other chemicals were used only during specific time periods. For example, chlorobenzene was only used from 1976 until 1980, benzene was not used after 1979, and methylene chloride use began in 1981.

In April 1993, Pfizer conducted an integrity assessment of the process-water drain pipe near manhole MH-3 (Figure 1-3). A pressure test and camera survey identified a break in the pipe. The drain pipe was repaired in May 1993. A follow up integrity test, conducted in August 1993, verified the integrity and success of the May 1993 pipe repair work. Confirmatory laboratory soil samples collected during the RFI indicated no volatile organic compounds present above detection limits in the area of the pipeline break.

Pfizer decommissioned the Old Tank Farm in 1998 and constructed a new above ground tank farm north of SWMU-11. The decommissioning included removal, inspection and testing of the tanks and inspection of the concrete vault and construction of a new above ground tank farm with a raised bottom and new containment structure.

Available data suggest that the former containment structure is sound, and that there are no significant leaks. There were no cracks present in the concrete floor or walls of the concrete vault during the vault inspections conducted by ENSR in 1998 (tank closure activities) and conducted by TRC in March 2000. In addition, anecdotal historical data related by Pfizer plant personnel indicate that rain water was pumped out of the containment structure to keep the containment structure empty. The ability of rain water to collect within the tank farm vault and the lack of moisture observed in subsurface soils below the vault indicates the vault is preventing infiltration of water and chemicals. Rain water accumulates in the containment structure and remains until it is pumped out. Pfizer has a procedure for removing standing water from the containment structure on a regular basis.

Pfizer records indicate several minor spills associated with pump seals and pump priming have occurred in the tank farm. However, reliable data do not exist from the early period of tank farm use. The quantity of chemicals spilled prior to the construction of the containment vault is not known. Pfizer's current procedure is to estimate the quantity of all spills and to immediately implement spill response procedures and notifications and remove as much as possible from the tank farm.

1.5 Overview of Previous RFI Activities

The following documents have been submitted by Pfizer to EPA providing details of previous RFI project activities for this project.

- 5/91, RFI Work Plan
- 10/91, RFI Work Plan Addendum
- 1992-1994 Bimonthly Reports
- 9/92, Interim RFI Report
- 12/94, RFI Report
- 10/96, Annual Soil Vapor Monitoring Report
- 9/97, Annual Soil Vapor Monitoring Report
- 7/98, Annual Soil Vapor Monitoring Report
- 1/99, Supplemental RFI Work Plan
- 12/99, Annual Soil Vapor Monitoring Report
- 3/00, Annual Soil Vapor Monitoring Report
- 11/01, Annual Soil Vapor Monitoring Report

- 3/01, Supplemental RFI Report
- 3/02, Annual Soil Vapor Monitoring Report
- 1/03, Annual Soil Vapor Monitoring Report
- 2/03, RFI Work Plan for Ground Water Investigation
- 12/03, Ground Water RFI Report
- 3/04, Annual Soil Vapor Monitoring Report
- 3/05, Annual Soil Vapor Monitoring Report
- 2/06, RCRA Facility Investigation Supplemental Work Plan

In accordance with Module III of the RCRA Permit, Pfizer submitted a Draft RFI Work Plan to EPA in May 1991. In 1991, after EPA approval, Pfizer began RFI activities at SWMU 11.

From 1991 until 1994, Pfizer conducted RCRA Facility Investigations of SWMU-11 in accordance with the EPA-approved RFI Work Plan, dated May 1991. The findings of the RFI indicated that there had been a release of volatile organic compounds (VOCs) to the subsurface soils and subsurface gas. All chemicals detected in soil were at concentrations below RCRA action levels, site specific Soil Screening Levels, and EPA Risk Based Concentrations. The RFI indicated that only methane in the subsurface gas exceeded RCRA action levels.

Following the initial phases of the RFI, Pfizer embarked on a periodic subsurface monitoring program to determine whether there were any changes in the subsurface gas concentrations over time. Sub-surface gas monitoring was conducted in 1992, 1993, 1996, 1997, 1998, 1999, 2001, 2002, 2004, 2005 and 2006.

On October 3, 1995, EPA issued a letter to Pfizer indicating that the RFI Report sampling data were adequate to make determinations for further actions. The letter also requested Pfizer to submit a work plan for a hydrogeological study and a Corrective Measures Study. Subsequent to that letter, Pfizer met with EPA in April 1996 to discuss the need for additional studies. At that meeting Pfizer described plans for relocating the tank farm, and the possibility of performing additional sampling that would determine the extent of soil contamination directly underneath the tank farm containment vault. Both EPA and Pfizer agreed that this additional sampling would be beneficial, once the tank farm was relocated.

Pfizer also proposed at the April 1996 meeting and in a subsequent letter, to develop a soil vapor extraction corrective measure study, since this is a feasible means of reducing site contamination. This proposal reflected discussions at the April 1996 meeting, at which EPA representatives indicated they would entertain remediation proposals in lieu of a hydrogeological study.

In 1998, Pfizer decommissioned the original Tank Farm and installed a new above ground tank farm, north of SWMU-11 and refurbished a portion of the existing tank farm. As was agreed upon with the EPA in 1995, Pfizer conducted additional soil sampling from the area located directly below the SWMU-11 tank farm containment vault, where sampling was previously not possible. As soon as this area was available for sampling access, Pfizer conducted a sampling

program. This supplemental RFI, was performed in March 2000. The results of this sampling were consistent with previous sampling of soil from SWMU-11, and chlorobenzene was not detected.

After review of the data from the 2000 soils investigation, Pfizer recommended that a geophysical survey be performed followed by installation of two ground water monitoring wells in areas identified by the geophysics, as areas where underground water bearing conduits are likely. Based on the results of the geophysical testing, EPA requested installation and sampling of two ground water monitoring wells that were installed in 2003. Four rounds of sampling were conducted between January 2003 and January 2005.

Analysis of ground water samples from two ground water monitoring wells near SWMU-11 indicated concentrations of chlorobenzene that exceed the Maximum Contaminant Level (MCL). After review of these data, the United States Environmental Protection Agency (EPA) and the Puerto Rico Environmental Quality Board (EQB) issued a letter received by Pfizer on February 3, 2005, indicating that the existing data set was not sufficient to rule out SWMU-11 as the source of the chlorobenzene detected in ground water. This letter also requested that Pfizer perform additional ground water characterization specific to SWMU-11.

1.6 Conceptual Model of Contaminant Source

There are no facility records which suggest that a single major (point-source) release of contaminants ever occurred at the Pfizer Barceloneta Facility.

Therefore, the exact release mechanism, and the timing of the release is uncertain. It is possible that releases of minor amounts of solvents have occurred over time, due in part to the discontinued practice of pump priming, use of pumps with leaky seals, incidental releases of solvents during truck unloading operations. The containment vault appears to be structurally sound and it does not appear that any major leakage could have occurred after 1982 when it was constructed; nevertheless, the use of chlorobenzene was discontinued at the Facility in 1980.

The present conceptual model for contaminant release includes a series of minor incidental releases related to pump priming and seal leakage prior to construction of the containment vault (1972-1982). In addition, there may have been minor spillage of solvents associated with truck unloading operations extending over time since construction of the tank farm (1972-present). Minor spillage (i.e. or small-scale release/source) is also consistent with the relatively low-level concentrations historically measured in groundwater (below or slightly above MCLs) downgradient of the Tank Farm and manufacturing area. Therefore, the residual source mass is limited.

2.0 SUPPLEMENTAL RFI IMPLEMENTATION

2.1 Ground Water Well Installation

Figure 2.1-1 shows the location of the four ground water monitoring wells that were installed during this supplemental RFI and Table 2.1-1 shows the well construction details. Due to access limitations associated with plant operational issues, wells were advanced in a different sequence than originally proposed in the RFI Work Plan. Well MW-6 was installed first, followed by MW-3, MW-5 and MW-4.

Table 2.1-2 lists the aquifer profile samples that were collected at each location. At each well location, borings were advanced 50-100 feet deeper than the observed water table, and aquifer profile screening samples were obtained during drilling at 20 foot intervals (beginning 10 feet below the water table). Each profile ground water sample was analyzed (within 24 hours) for VOCs plus tetrahydrofuran, and the results were used to help determine the placement of the well screen.

Wells were screened in water-bearing bedrock zones corresponding to the depth interval of the highest total VOC concentrations observed. If no VOCs were detected, the well screen was installed in the shallowest, most permeable (flow) zone encountered.

The Work Plan proposed that wells be installed beginning with MW-3, but due to logistic and safety-related issues at the plant, installation of MW-3 was delayed so MW-6 was installed first. Installation of MW-4 was also delayed due to plant construction in the proposed drill location. The sequence of actual well installations proceeded from MW-6, MW-3, MW-4 and MW-5.

Each well was advanced at least 50 feet deeper than the water table, and aquifer profile screening samples were obtained during drilling at depths of 10, 30 and 50 feet below the water table using a point source bailer. A deeper sample was obtained in MW-6 in order to delineate the vertical extent of contamination, since the aquifer profile screening results indicated VOC contamination at 50 feet below the water table. Deeper samples were also obtained in MW-5 due to the higher topographic surface elevation of that well and the proximity to MW-6.

All wells were completed in bedrock in the uppermost water bearing zone. The monitoring wells are constructed of 10 to 15 feet of 2-inch (minimum) diameter 0.010-inch machine slotted PVC well screen attached with flush threaded joints to 2-inch diameter PVC well casing (Schedule 40 minimum). Well screen lengths were selected based on field information regarding the thickness of the flow zone. The annulus between the borehole and the well screen was backfilled with clean filter pack material to a minimum of 2 feet above the top of the well screen. At least a three-foot thick seal of bentonite pellets or chips is installed above the sand pack. The remainder of the borehole was sealed with a cement/bentonite grout. Well development was conducted in accordance with the RFI Work Plan.

Drilling at the site was performed using the "dual-tube" reverse air rotary drilling method. Soil and rock stratigraphy was logged from samples (drill cuttings) obtained using the dual-tube method. Samples from the vadose-zone were retained every 20 feet, with samples from the

aquifer retained every 10 feet. Cuttings from the cyclone of the dual tube reverse air rotary drill rig were field screened using a portable organic vapor screening device.

2.2 Ground Water Well Development

Well development was conducted in accordance with TRC SOP 010 and the Supplemental RFI Work Plan. Wells were developed with a portable positive displacement pump. Each well was pumped until field parameters (DO, turbidity, pH, and conductivity) stabilized and the water ran clear.

Pfizer contained the purge water from wells MW-3, MW-4, MW-5 and MW-6 and, after laboratory analysis, discharged the purge water in the on-site waste water collection and treatment system. Water from the Rayo Farm well RF-1 was discharged to the ground since the ground water quality of this well has consistently been well below the MCLs.

2.3 Ground Water Well Sampling

All wells were purged and sampled in accordance with the EPA low-flow sampling procedures by means of a stainless steel positive displacement pump. Purging was achieved by monitoring the stabilization of ground water parameters (pH, temperature and specific conductance) during evacuation and/or by assuring the removal of a minimum of five times the standing groundwater volume in the well. Dedicated pumps were installed in wells MW-1, MW-2, MW-3, MW-4, MW-5 and MW-6.

2.4 Well Elevation Survey

Pfizer surveyed the vertical elevations of wells MW-1 through MW-6 and the Rayo Farm Well to allow interpretation of ground water table elevations.

3.0 PHYSICAL CHARACTERISTICS OF THE STUDY AREA

3.1 Regional Geology

Figure 3.1-1 shows the location of the study area. The study area is located within the coastal plain on the north coast of the island of Puerto Rico, approximately 40 miles west of San Juan, and the terrain is elevated 200 to 300 feet above sea level. The surface topography is controlled by solution cavity, sinkhole collapse and fill, and is typical of a mature elevated karst platform. The area receives approximately 71 inches of rain annually (Giusti, 1978). Surface water drains into sinkholes and into surface streams in the area.

Figure 3.1-2 shows typical karst landforms and subsurface features which are likely to be present in the area. Karst is essentially a surface process, especially in vegetated and soil-covered landscapes. Most of the solution takes place in or just beneath the soil profile, where groundwater has the greatest capacity to dissolve contaminants. Water from precipitation percolates into the soil layer or makes its way into sinkholes as surface water runoff. Depending on the pH and Eh of the subsurface environment, the water may react with the limestone. Limestone may be dissolved into solution, starting the formation of vadose shafts and sinkholes. As the diameter of the vadose shafts increases over time, water that percolates through the soil or is collected in sinkholes makes its way down the vadose shafts forming conduit flow and cave streams. Discharge from these underground flow conduits may cause numerous surface springs. Occasionally, extensive weathering and collapse and fill of a line of sinkholes, coalesces into a feature known as a uvala. The area also contains numerous mogotes (steep carbonate peaks), and pepinos (steep sided ridges) (Meyerhoff, 1938a,b; Monroe, 1968). All of these features are present in the north coast limestones of Puerto Rico.

Numerous sinkholes are present in the area, ranging in size up to 30 feet in diameter. On the Pfizer property, there are five, UIC-permitted sinkholes that are used for storm drainage. All drainage into the tank farm is contained and pumped into the on-site water treatment plant.

Figure 3.1-3 shows the principal geologic formations present in the study area. The formation that is present at the surface on the Pfizer site is the Lower Miocene age Aymamon Limestone Formation. The Aymamon Limestone is composed of a very fine to fine grained limestone, which may be locally coarsely fragmental and chalky. The formation is commonly thick-bedded and primarily composed of moderately fossiliferous and very pure, 99 percent calcium carbonate. Color ranges from light gray to pale reddish brown. The Aymamon Limestone is approximately 670 feet thick. Solution of the Aymamon Limestone typically develops a karst topography featuring conical towers (mogotes) and steep-sided ridges (pepinos) which develop parallel to joint systems (Briggs, 1965; Giusti, 1978).

Figure 3.1-4 shows the surface extent of the rock formations in the area, and shows the general east-west striking pattern of exposure. Each of these formations dip approximately 5 degrees toward the north (Giusti, 1978).

Figure 3.1-4 also shows the fracture patterns which are apparent in the Aymamon Limestone, which is the exposed bedrock in the study area. One dominant fracture trend that is apparent strikes in a northeast direction. The area fracture patterns are a significant controlling factor in

development of surface topographic features, as well as subsurface ground water flow patterns. The Aymamon Limestone develops mogotes and pepinos parallel to joint systems (Briggs, 1965).

3.2 Regional Hydrogeology

Ground water movement in a conduit-flow dominated karst system is generally characterized by flow through a distributary series of conduits. In the vadose zone, most of the conduits are oriented vertically, generally originate in sinkholes at the ground surface, and drain into one another below the ground. The primary direction of water flow is downward, and is convergent in the sense that gradually, smaller conduits merge into larger conduits. Flow is highly episodic, and is directly controlled by precipitation events.

Flow in the saturated zone may also be through conduits, however the flow directions are more horizontal, typically discharging "downgradient" in springs. Flow rates are typically much higher in karst aquifers than in soils. Small gradients can result in relatively high flow rates since the flow is through pipes, unimpeded by a matrix of soil particles. Some karst aquifers may be essentially porous media, with low porosities, especially confined karst aquifers.

Between the vadose zone and the saturated zone is a highly weathered zone called the epikarst. The epikarst zone represents the uppermost zone of subsurface solution weathering. This zone is alternately wetted and drained with each precipitation event. Consequently, some water storage occurs in this zone, however flushing is frequent, and residence times are short.

The caves found in the north coast limestones are almost invariably tunnel like and develop from limestone solution along bedding planes. As a result, the regional ground water flow lines tend to follow the bedding of the limestone layers down dip, presumably along preferential paths of higher permeability (Giusti, 1978).

There are three aquifers in the study area which are used for drinking water, a water-table aquifer and two artesian aquifers. The Aymamon Limestone is a water table aquifer, with a hydraulic conductivity of approximately 0.2 cm/s. The water-table aquifer is underlain by a confining unit that is part of the upper member of the Cibao Formation. The upper artesian aquifer is the Montebello and Qebrada Arenas Members of the Cibao Formation (hydraulic conductivity approximately 0.005 cm/s) and the lower artesian aquifer is the Lares Limestone (hydraulic conductivity approximately 0.0002 cm/sec). Pfizer is currently determining which of these aquifers are used in the area downgradient of the facility.

Studies performed by United States Geological Survey in the municipality of Manati, which is 2 miles from the study area, found that the water level in the water-table (Aymamon) aquifer ranged from 81 to 89 feet deep and the relative yield in the water-table aquifer remained constant at 120 gallons per minute (gal/min) to a depth of 547 feet. In the upper artesian aquifer, at depths of 900 to 957 feet water levels remained constant at 4.8 feet, and the relative yield ranged from 60 to 135 gal/min, decreasing with depth. In the lower artesian aquifer at a depth of 1,898 ft, water levels ranged from 88 to 85 feet above ground surface, and the relative yield ranged from 190 to 195 gal/min (U.S. Geological Survey, 1992).

Figure 3.1-3 shows a cross section from the central highlands of Puerto Rico to the Atlantic Coast through the north coast limestones and bisecting the study area. The cross section shows the relationships of the limestone formations and their thickness. It also shows the potentiometric surface of the artesian aquifers, above ground level.

3.3 Regional Ground Water Quality

Pfizer is currently conducting an a review of regional downgradient water quality and aquifer drinking water supplies and will provide this report as soon as it is available.

3.4 Site Vicinity – Industrial and Waste Sites

Abbott Chemicals Inc. is a RCRA facility located to the east and north of the facility. Abbott Chemicals is located to the south (upgradient) of the Pfizer facility across P.R. Highway 2.

Within a five mile radius, there are 11 RCRA Facilities and 3 Superfund sites. The Superfund sites include the Barceloneta Landfill, RCA Del Caribe, and Upjohn Facility. Many of these hazardous waste sites have been found to be sources of ground water contamination. None of these facilities appear to be directly up or down gradient of the Pfizer facility.

At the Upjohn Facility, approximately 15,300 gallons of a manufacturing by-product waste mixture estimated to be comprised of 65 percent carbon tetrachloride and 35 percent acetonitrile was discharged by a leaking underground storage tank, resulting in the release of the waste into the ground. Upjohn subsequently conducted cleanup activities and installed deeper (artesian) aquifer water supply wells for affected municipal wells to address this release.

At the Barceloneta Landfill, about 300 tons of hazardous wastes have been placed in sinkholes, some of which are 100 feet deep. On-site sampling results have identified various heavy metal and volatile organic compounds.

At RCA Del Caribe ferric chloride solution from their manufacturing operations was stored in four lined surface lagoons. These lagoons were breached due to sinkhole development, which discharged approximately one million gallons of ferric chloride into the sinkholes.

3.5 Site Geology

Figure 3.5-1 shows a map of the bedrock elevation beneath the site. Numerous borings around the tank farm and in the truck receiving area have defined the bedrock surface in the area. Bedrock is within 10 feet of the surface around most of SWMU-11. A cone shaped bedrock depression filled with soils is present beneath the truck receiving area. Additional details regarding site-specific subsurface geology can be found in previous RFI reports.

Appendix A presents the boring logs and well completions for the Supplemental RFI wells.

3.6 Site Hydrogeology

3.6.1 Surface Water

Figure 3.6-1 shows surface water drainage at the Pfizer facility. All surface water runoff at the facility is discharged into five sinkholes on the property. The tank farm area drains into

sinkhole, UIF-002, and receives approximately 37,500 gallons per day, during a normal rain event according to Pfizer records. The rain water which enters the tank farm vault is pumped into the on-site water treatment plant then discharged to the Barceloneta public treatment plant. Figure 3.6-1 indicates that approximately 10 acres of the site drains into this sinkhole. The average annual rainfall for the area is 71 inches per year (Giusti, 1978). Given an average rainfall of 71 inches per year, and a minimum of approximately 40 inches of evapotranspiration per year (Ward, 1975, Giusti, 1978), then approximately 65,000 gallons per day of rainfall onto the UIF-002 drainage basin, and approximately 36,000 gallons per day are lost to evapotranspiration. Since an average of approximately 37,500 gallons per day of water drain into the sinkhole and the tank farm is basically covered with pavement, there is little or no water available to infiltrate into the soil below the tank farm.

Since there can be no net loss, the amount of evapotranspiration must be actually lower than these conservative estimates, and therefore the amount of water available for infiltration must be very low. Given that approximately 95% of the site is paved, infiltration is estimated to be no more than 7 inches per year or 6,500 gallons per day. Given the large amount of paved areas, it is unlikely that much water infiltrates the subsurface in the area of the tank farm.

3.6.2 Ground Water

Pfizer has two water supply wells on site at Pfizer. One well is installed in the Aymamon water table aquifer, at a depth of approximately 500 feet deep. The depth to ground water is approximately 200 feet. The second well is installed in the deeper confined aquifer and is open over an interval of from 1322 to 1390 feet.

Based on the character of drill cuttings observed during drilling (including some samples up to 5 inches long and 2 inches in diameter) and water production during drilling, TRC estimates the hydraulic conductivity of the upper Aymamon formation at approximately 0.015 cm/s and the effective porosity is approximately 0.30.

Figure 3.6-2 shows the water table surface based on the existing ground water wells at the site. Ground water flow is interpreted to be directed to the north with a hydraulic gradient of approximately 1 foot per 200 feet (0.005).

4.0 NATURE AND EXTENT OF CONTAMINATION

This section presents a discussion of the analytical results of the Supplemental RFI sampling in the area of the tank farm and truck receiving area (SWMU-11).

Appendix B contains all of the validated analytical data results. All data were analyzed by Pace Laboratories. All laboratory data results of were validated according to EPA Region II guidance by a certified data validation specialist.

4.1 Ground Water

4.1.1 *Aquifer Profile Sampling Results*

Table 4.1-1 shows the aquifer profile sample results for each boring drilled in 2006.

For each well location, the borehole was advanced 50 feet deeper than the observed water table, and aquifer profile screening samples were obtained during drilling at depths of 10, 30 and 50 feet below the water table using a point source bailer. Deeper samples were obtained Each profile ground water sample will be analyzed for VOCs plus tetrahydrofuran within 24 hours. The well screen will be placed in a water-bearing zone at the depth interval of the highest total VOC concentrations observed.

4.1.2 *Monitoring Well Sampling Results*

Table 4.1-2 presents the results of four rounds of ground water sampling at the site. Figure 4.1-1 shows a map of the ground water sampling results for chlorobenzene from the October 2006 sampling round. . Table 4.1-2 also shows the results of the ground water sampling for each well together with the Federal Maximum Contaminant Level (MCL) for each compound for which there is an MCL. These results were validated in accordance with "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," (10/99). Except for benzene in one well, at a very low concentration (1 ppb). Note that benzene, chlorobenzene and chloroform were detected in vapor sampling from SWMU-11, but chlorobenzene was not detected in any soil sample at a concentration above the detection limit and chlorobenzene and benzene have not been used at the facility for over 20 years.

Chlorobenzene concentrations observed in ground water from well MW-1 have varied from a low of 33ppb (June 2003) to the highest value (450ppb) detected during the most recent sampling round (January 2007). Chlorobenzene was present at a concentration that exceeds the MCL (100ppb) in four of six rounds and was present below the MCL in two sampling rounds. The highest concentration of chloroform detected in well MW-1 is 21.3 ppb, which is well below the MCL for total trihalomethanes (TTHM), which are common disinfectant byproducts of chlorination.

Ground water from monitoring well MW-2, installed northeast of the former tank farm at SWMU-11, contained chlorobenzene at a maximum concentration of 239 ppb which exceeds the MCL (100 ppb). Note that the maximum detected chlorobenzene concentrations in well MW-2 were in the summer (June 2003 and July 2003) sampling rounds with concentration of 239 µg/L and 216 µg/L respectively; and the lower concentrations (below the MCL) have been observed in

all sampling rounds since. Benzene was also detected (July 2003) in well MW-2 at a maximum concentration (1.5 ppb) which is below the MCL (5 ppb).

No VOCs were detected in the Pfizer Supply Well (SW-1).

Chlorobenzene was observed to be present in the July 2003 and January 2005 sampling rounds of the Rayo Farm well (RF-1, maximum concentration of 6 ppb, well below the MCL) but no VOCs were detected during the last two sampling rounds.

The chlorobenzene plume appears to emanate near SWMU-11 and extend north to MW-6, although because the concentrations (source strength) are low, the extent where the chlorobenzene exceeds the MCL is limited to approximately 200 feet from SWMU-11.

4.2 Summary

Based on the relative agreement between the soil gas, soil headspace, soil and subsurface gas analyses, the nature and extent of soil contamination is well defined. Extensive sampling of the subsurface has resulted in a set of internally consistent data. There are no indications of a major contaminant release, and using a soil sampling approach coupled with field GC screening, and no soil samples have contaminants in excess of RCRA Action Levels or EPA SSLs. Soil results are consistent with observed groundwater concentrations that show low-levels at or near the MCL for chlorobenzene.

The extent of ground water contamination is also well-defined, both vertically and horizontally.

5.0 CONTAMINANT FATE AND TRANSPORT

This section provides an analysis and discussion of physical and chemical processes that control the fate and transport of site contaminants. This analysis takes into account the physical setting of the site, the interaction of the surface and ground water hydrology, the previous industrial operations at the site, the nature of the chemical compounds encountered during the sampling and analysis program, and any apparent trends in the distribution of contaminants. This section provides a discussion of the physical, chemical, and biological characteristics of chemical compounds of concern, and a discussion of the sources, pathways and receptors for those chemical compounds associated with the site.

5.1 Physical and Chemical Properties

Table 5.1-1 lists the chemicals of concern at the site together with a summary of the physical and chemical properties of these compounds.

5.2 Potential Sources of Contamination

No distinct release of chlorobenzene occurred during its historic use (1976 To 1980) at the Pfizer Barceloneta manufacturing site. Therefore, based on the results of the RFI sampling and analysis, the primary sources of chlorobenzene that may have contributed to contamination beneath the Tank Farm potentially include the following.

- Incidental spillage in the Southeast Truck Receiving Area (no longer in use) during solvent transfer from tankers to the Pfizer storage tanks.
- Leaks from pump priming and leaking pump seals prior to the construction of the Tank Farm vault.
- Spills associated with tank filling prior to the construction of the Tank Farm vault
- Leakage from appurtenant piping in the Tank Farm prior to the construction of the Tank Farm vault.
- Seepage of chemicals into the soil and water-bearing layers below the site.
- Leakage from wastewater drainage lines.

The volume of chemicals that might have been released due to these mechanisms is unknown, but there are barriers to restrict spills from being released to the environment. Pfizer has detailed records of spills associated with the tank farm since 1991, indicating no major release of chemicals from the Tank Farm. Also, Pfizer has procedures to address each spill that occurs, including estimation of the volume of each spill and immediate action to remove the spilled material. Since construction of the tank farm vault (designed to contain chemical spills), the volume of releases associated with tanks in the tank farm is controlled by the presence of the concrete vault. In addition, Pfizer no longer uses pumps that need to be primed, new pumps and piping were installed and the piping is inspected regularly.

Spills were previously possible in the southeastern truck receiving area (no longer in use), but only minor volumes (if any) would be expected to possibly infiltrate through the pavement, since most of the spills are washed down a drain or quickly evaporate. All spills that occurred in the southeastern truck receiving area were collected in subsurface drains that run to the on-site treatment system. No evidence of contaminant release from the drain pipes was observed during this investigation.

The tank farm was most vulnerable to contaminant releases prior to construction of the concrete vault in 1983. During this time period, spills could infiltrate directly into the ground, impeded only by natural soil layering and volatilization.

Although the relative significance of the individual release mechanisms is unknown, the low levels of VOCs detected in subsurface soils and subsurface gas beneath the truck receiving area and the tank farm indicate that there probably has been a series of minor releases. This is indicated by the irregular distribution of low-level soil contamination. As expected, some partitioning to the gas-phase occurs, therefore, measurable levels are found in both soil and subsurface gas media.

The contamination may be confined to the subsurface soil and gas, or may migrate into air or ground water by the following secondary release processes.

- Leaching through infiltration and percolation of rain water
- Vaporization of VOCs

Leaching of contaminants from soil and gas is limited by the available infiltrating water. There does not appear to be any infiltration occurring at the present time. Water budget analysis of the annual precipitation to the site indicated at least 90% of the annual rainfall is either evaporated, or runs off into sinkhole drainages. Most of the area is paved or covered, and field observations indicate that the upper 60 feet of soils is very dry. The subsurface soils are fine grained (i.e., clay and silt) and probably have relatively low hydraulic conductivities, which further restricts infiltration. This is supported by the observation that no water or moisture was observed in the upper 80 feet of soil.

5.3 Contaminant Fate and Persistence

Organic contaminants in soils are generally subject to multiple degradation processes, including photolysis, oxidation, hydrolysis, volatilization and biodegradation. Photolysis and oxidation are not likely to contribute to the degradation process since the soil contaminants are not exposed to sunlight (photolysis) and little oxygen (based on field oxygen measurements during drilling) is present beneath the Tank Farm for oxidative reaction. Therefore hydrolysis and biodegradation are likely to be the predominant degradation processes.

Hydrolysis: Hydrolysis refers to the chemical breakdown reaction involving the water hydrogen ions (H^+) and hydroxyl radicals (OH) associated with water. The result of hydrolytic reaction is the subsequent breakdown and/or modification of the compound. The extent of chemical

hydrolytic reactivity depends upon both pH (acidity/alkalinity) and the molecular structure of the specific target chemical.

Several of the detected contaminants are susceptible to hydrolysis, they include acetone, 2-butanone, chlorobenzene, chloroform, methylene chloride, and tetrahydrofuran. Hydrolysis involves the reaction of organic chemicals with water and results in the introduction of a hydroxyl group (-OH) to the organic chemical. With the addition of a hydroxyl group, the organic chemical is considered an alcohol and a more water soluble chemical.

Biodegradation: Biotransformation/Biodegradation refers to the biologic conversion of chemical compounds to other products. Many microorganisms and biota are resistant to, or develop resistance, to specific chemicals (particularly organic chemicals) and can metabolically transform those compounds to products that may or may not be as toxic as the original compounds. Biological transformation includes a variety of enzyme-catalyzed reactions such as oxidation and reduction. Variables affecting the rate of biodegradation include the following.

- Number of microorganisms
- Chemical properties, concentrations, and distribution
- Presence of food and nutrients
- Temperature
- pH
- moisture and oxygen content

The rate of biodegradation tends to be higher for low molecular weight compounds. Naturally occurring soil and aquatic microorganisms capable of degrading aromatic hydrocarbons (e.g., BTEX) have been studied, and a relationship between dissolved oxygen and biodegradation has been documented (Jamison, et al., 1975; and Bailey, et al., 1973). As the aromatic hydrocarbons are mobilized by dissolution from soil or sediment, they are likely to be rapidly degraded as long as microorganisms and dissolved oxygen are available. Degradation rates for aromatic hydrocarbons are much slower under anaerobic conditions.

Biodegradation of organic chemicals can be accomplished under aerobic and anaerobic conditions. The environment beneath the Tank Farm contains little oxygen to support aerobic bacteria, thus suggesting anaerobic processes as the principle means of biodegradation. Furthermore, the high methane levels indicate that anaerobic biodegradation is probably occurring in the subsurface soils. The only potential source for presence of methane is biodegradation of organics from SWMU-11, since the organic carbon content of the soils is low. , the methane is a result of biodegradation from organics released from SWMU-11.

The biodegradation processes that may occur are dependent upon the chemical structure of the contaminant. Aromatic compounds such as benzene, chlorobenzene, ethylbenzene, toluene, and xylenes will most likely undergo reduction of the aromatic ring to form saturated, cyclic intermediate compounds (Dragun, 1988). The ring of the intermediate compounds may be cleaved as oxygen from soil water is introduced to ring. Very soluble carboxylic acids may then be formed from the cleaved, intermediate compounds. For halogenated compounds such as methylene chloride and chloroform, anaerobic biodegradation will most likely involve reductive

dehalogenation whereby chlorine molecules are successively removed from the compound (Dragun, 1988). An alcohol is likely to be formed via reduction once all but the final chlorine molecule is removed.

Volatilization: Volatilization describes the movement of a chemical from the surface of a liquid or solid matrix to a gas or vapor phase. Only the neutral (uncharged) form of a compound can volatilize. Volatilization rates are affected by soil properties, vapor pressure, temperature, and sorption. VOCs partition between the aqueous and gaseous phase in unsaturated soils. This process will occur most readily for compounds with a high vapor pressure and a high Henry's Law Constant Value (K_H). Volatilization is a particularly important environmental fate and/or transport process for chemicals exhibiting low aqueous solubility and polarity. The K_H for chlorobenzene is 3.93×10^{-3} which means it volatilizes relatively rapidly.

Volatilization is likely to occur after VOCs are released, and vapors may migrate laterally, upward, or downward. Upward releases to the atmosphere could possibly occur of lighter-than-air chemicals (such as methane), but the high levels of methane observed in the subsurface gas indicates that upward migration is not occurring. The low permeability soils and extensive surface paving appears to limit the volume released to the atmosphere. Lateral migration does not appear to be extensive either, since the observed subsurface gas levels vary greatly over short distances in the subsurface. If lateral migration were occurring, the subsurface gas concentrations would not vary significantly in the various wells sampled. Vertical migration appears to be limited by the low air permeabilities measured from the soils, however once vapors reach the bedrock, they may migrate rapidly, due to higher porosities and permeabilities.

Sorption: Sorption (adsorption/absorption) is the reversible binding of a chemical to a solid matrix. Both soluble nonpolar and insoluble chemicals may sorb strongly to sediments, suspended soils, and soils. Sorption of these compounds limits the fraction available for other fate processes such as volatilization and/or hydrolysis.

Partition coefficients, which are measures of sorptive characteristics, define the relative concentrations of a given chemical in two phases or matrices. The tendency of organic chemicals to be sorbed is also dependant on the organic content of the soil and the degree of hydrophobicity (lack of affinity for water) of the solute (contaminant).

The rate of travel for each chemical depends on the ground water seepage velocity and the degree of sorption. If an organic chemical is extensively adsorbed by particles, it will be rendered relatively immobile. The rates and degree of volatilization, photolysis, hydrolysis, and biodegradation are directly dependant on the extent of adsorption (Montgomery, 1991). The vadose zone typically contains greater amounts of organic material and metal oxides (which may also act as sorbents) than the saturated zone, which may make the rate of movement in the vadose zone substantially less than that in the saturated zone (USEPA, 1989a).

Partition coefficients are expressed as concentration ratios between two phases. Partition coefficients useful in describing the environmental behavior of chemical contaminants include K_{ow} , K_d and K_{oc} , and are defined below.

- **K_{ow}** (Octanol-water partition coefficient): the ratio of the chemical concentration in octanol (organic solvent) to that in water, at steady state conditions. The octanol serves as a surrogate for lipid or other organic phases.
- **K_d** (Distribution Coefficient): the K_d parameter is important in estimating the potential for the adsorption of dissolved contaminants in contact with soil. As typically used in fate and contaminant transport calculations, the K_d is defined as the ratio of the contaminant concentration associated with the solid to the contaminant concentration in the surrounding aqueous solution when the system is at equilibrium.

For example, the most conservative estimate of contaminant migration through the subsurface natural soil is to assume that the soil has little or no ability to slow (retard) contaminant movement (i.e., a minimum bounding K_d value). Consequently, the contaminant would migrate in the direction and, for a K_d value of ≈ 0 , travel at the rate of water. To estimate the maximum risks (and costs) associated with onsite remediation options, the bounding K_d value for a contaminant will be a maximum value (i.e., maximum retardation).

The K_d value is usually a measured parameter that is obtained from laboratory experiments. Ideally, site-specific K_d values would be available for the range of aqueous and geological conditions in the system to be modeled. Values for K_d not only vary greatly between contaminants, but also vary as a function of aqueous and solid phase chemistry.

- **K_{oc}** (Organic carbon-water partition coefficient): the K_d normalized to the concentration of organic carbon in the solid phase. High K_{oc} values usually indicate a high tendency of a compound to sorb to the organic soil matter. Chemicals with a K_{oc} greater than 10,000 will adsorb strongly to soil organic carbon (e.g., fluoranthene, phenanthrene, and pyrene). Chemicals with a K_{oc} ranging from 1,000 to 10,000 will moderately adsorb, and move slowly in the soil profile (e.g., naphthalene). Chemicals with a K_{oc} of less than 1,000 weakly adsorb to soil organic carbon and tend to be more mobile. Examples of weakly adsorbed compounds include many VOCs such as benzene and xylene.

5.4 Contaminant Transport Modeling

Since there are ground water samples containing chlorobenzene at concentrations exceeding the MCL, it is necessary to evaluate whether the ground water plume might introduce elevated contaminant concentrations off-site. The Air Force Center for Environmental Excellence BIOSCRN model (version 1.4) was used to simulate the chlorobenzene migration from SWMU-11. The modeling procedure and results are presented below.

5.4.1 Model Setup

Table 5.4-1 presents the key model input parameters and the basis for selection of each parameter and Figure 5.4-1 shows the model input data screen. These values were used as starting values for BIOSCRN modeling.

Figure 5.4-2 shows the results of the BIOSCRN model using the input parameters. The known field values are also shown on Figure 5.5-1 as square black data points with a yellow plus sign through the middle. Although there are only two data points for comparison to the modeled output, the data do not match well at the 600 foot point, where the model predicts no chlorobenzene, and the field data indicating that there is approximately 0.025 mg/l of chlorobenzene.

The setup model was evaluated after a 30 year time period to approximately match current data conditions, since the earliest year of suspected contaminant release at the site is in the late 1970's. The blue curve represents the modeled chlorobenzene concentrations calculated every 200 feet assuming a first-order decay process, in which the contaminant degradation rate is proportional to the concentration of the chemical. The BIOSCRN first-order decay model conservatively assumes that there is no biodegradation in the source area, though it appears that some biodegradation is occurring in the source area.

5.4.2 Calibration

Table 5.4-2 shows the model parameters determined after calibration and Figure 5.5-3 shows the input model screen. The model was calibrated to match the known chlorobenzene concentrations from monitoring wells at the site after 30 years. Normally, calibration is performed by making changes to three parameters: dispersivity, source half life and soluble mass. However, changes made to the input dispersivity and soluble mass did not lead to acceptable model results. The only parameter that needed to be adjusted was the source half-life (originally set to 2 years, based on published empirical data) which needed to be increased to 20 years. It is possible that conditions at the site are less favorable to degradation of chlorobenzene than for other chemicals, but use of more aggressive half-lives were

Figure 5.4-4 shows the calibrated result, showing more acceptable concurrence between the field data and the modeled result.

The calibrated BIOSCRN result shows that the plume extends out approximately 1,200 feet from the source, with a ground water concentration at the plume terminus of 0.001 mg/l. Note that chlorobenzene concentrations are projected to exceed the MCL only within 150 feet of the source area. This distance is well within the Pfizer property boundary that is located approximately 3,000 feet away. Beyond 150 feet of the source area, chlorobenzene concentrations are less than the MCL.

5.4.3 Predictive Simulation

Figure 5.4-5 shows the model result representing the centerline of the plume after 100 years with no corrective measures taken. The BIOSCRN model results indicate that the source continues to be active but that the plume concentrations demonstrate a similar pattern to that of the calibrated model. The various mechanisms that are attenuating spread of the plume appear to be effective in ensuring that the off-site concentrations will not exceed the MCL (0.1 mg/L). The predictive model results are consistent with basic expectations that the plume should be at steady-state or shrinking, given that the source of chlorobenzene is approximately 30 years old, the source strength (mass) is small, and site surface conditions have been consistent). Given that the standard method detection limit for chlorobenzene is 0.005 mg/l, the plume would not be detectable beyond 1,800 feet from the source.

6.0 HEALTH AND ENVIRONMENTAL ASSESSMENT

This section provides the revised HHRA prepared by TRC for the PPI facility located in Barceloneta, Puerto Rico. This risk assessment has been updated to include an evaluation of constituents of potential concern (COPCs) in ground water and soil gas as well as the original soil data. In addition, updated methodology such as calculation of the Upper Confidence Limit (UCL) using USEPA's ProUCL (USEPA 2004a), new USEPA Dermal Risk Assessment Guidance (2004b) and updated toxicity criteria have been incorporated into this revised HHRA (USEPA 2004c, 2007). In addition, the future residential scenario has been eliminated from the consideration since it is considered to be an incomplete pathway. Future use of the property would be consistent with current use and should it ever be sold, the property would be deed restricted for industrial/commercial use only.

The primary objectives of the revised HHRA are to identify the COCs in the environmental media, characterize the potential pathways for exposure, and estimate the potential for adverse human health effects for the identified COCs and exposure conditions.

Specific exposure scenarios are considered and developed that represent current and anticipated situations in which people may be exposed to site-related constituents. Efficacy of specific remedial programs is not included as part of this analysis.

Human health risks associated with the site are presented with regard to potential effects from the selected COCs. These potential effects include an increased risk of cancer or the occurrence of non-cancer (systemic) effects. The assessment of risks associated with exposures to carcinogens involves calculations of the incremental lifetime probabilities of cancer that take into account the exposure estimates and the carcinogenic potencies (i.e., slope factors) for the constituents. To determine whether non-cancer health effects may be a concern, constituent-specific hazard quotients (HQs) are used which incorporate the exposure estimates and the acceptable exposure levels (i.e., reference doses (RfDs)) for the constituents.

Ultimately, the HHRA presented in this report is expected to be used within a risk management framework. In making decisions concerning what actions, if any, should be taken at a site (including, for example, the collection of additional data or implementation of a remedial program), the results of the HHRA should be used in concert with other information on the site. The HHRA identifies whether the current or anticipated future land use conditions present unacceptable human health risks. The results of the HHRA also identify constituents and exposure pathways contributing the greatest risk to the receptor populations. From this information, recommendations for future activities at the site (including remedial alternatives) can be made such that public health is protected.

The HHRA uses the methods currently accepted by the USEPA (e.g., USEPA 1989, 1991, 2001). Where assumptions were made, they are realistic but conservative (i.e., protective of public health). In keeping with accepted practices for conducting such assessments, all assumptions are carefully discussed and an assessment was made of the uncertainty associated with the overall health risks presented. The tables from RAGS Part D are used in this risk assessment and are

provided in Appendix C. Per RAGS Part D, the table numbers have not been altered and thus the tables may not be discussed in numeric order as they fit within the context of this report.

6.1 Methodology

Following the guidelines accepted by the USEPA, the basic components of the HHRA for the Facility are organized and presented as follows:

- Data Collection and Evaluation;
- Exposure Assessment;
- Toxicity Assessment;
- Risk Characterization; and
- Uncertainty Analysis.

6.2 Data Collection and Evaluation

Surface and subsurface soils, ground water and soil gas data were considered in evaluating the constituents of potential concern (COPCs) identified for PPI in this revised risk assessment. The data were evaluated for usability and are organized following USEPA guidance (USEPA 1989, 1992a) as follows:

All Data Gathered and Sorted by Medium (combined surface/subsurface soils, ground water and soil gas).

Evaluation of Methods of Analysis – Data were analyzed following USEPA's Superfund Contract Laboratory Program (CLP) procedures. The soil data used in the risk assessment were collected in 1991 – 1993 and 2000, while the ground water data was collected in October 2006 and January 2007. Soil gas samples collected in 2006 were evaluated in this revised risk assessment.

Data qualifiers are also assessed during the data evaluation process. As indicated in USEPA (1989, 1992a) guidance, unqualified data and data qualified with a "J" qualifier are treated as detectable concentrations. Data qualified with "UJ" or "U" qualifiers are treated as non-detectable concentrations. "R" data were rejected during the data validation and are eliminated from the data set. As described in step 7 below, non-detects are assigned a value equal to the SQL or one-half the SQL. All data are included in the risk assessment. As described by EPA (1989b, 1992b), "J" and "U" qualifiers are defined as follows:

"J"	-	Value is estimated, either for a TIC or when a constituent is present but the value is less than the contract required quantitation limit (CRQL). Data qualified as estimated may be biased high or low, resulting in an overestimate or underestimate of the actual concentrations.
"U"	-	Constituent was analyzed for, but not detected. The non-detected values reported in the PPI facility datasets correspond to the SQLs.

"UJ" - Constituent was analyzed for, but not detected. The "J" qualifier signifies that the SQL is estimated.

- 4) No field or laboratory blanks were evaluated.
- 5) For each pair of sample and field duplicate concentrations, the non-divergent data are averaged. The resulting average concentration is treated as detected if either the sample or duplicate concentration was reported as detected. The criterion used to measure divergence was relative percent difference (RPD) calculated as:

$$\frac{\text{* Sample B Duplicate *}}{\text{Average of Sample + Duplicate}} \times 100\%$$

If the sample data and duplicate data for any given analyte had a RPD of more than 35% for soil samples or 20% for ground water samples, then the original sample result was kept. For nine occurrences in soil, the predetermined RPD was exceeded and the original sample results kept. The predetermined RPD was not exceeded for duplicate samples in ground water and averages were used. Values which reflect the original sample result are bolded in the data tables of Appendix D.

- 6) No sample recollect data were reported for the PPI facility.
- 7) For the purpose of this evaluation, all non-detects were evaluated at a value of one-half the SQL.
- 8) Tentatively identified compounds (TICs) are constituents which are reported in the analytical data results, but for which the laboratory equipment (i.e. gas chromatography-mass spectrometry (GC-MS) instrument) was not specifically calibrated. No TICs were reported in soil for the PPI site.
- 9) No background samples were collected.
- 10) Development of Data Sets by Medium - Tables were designed to provide summary statistics (i.e., frequency, minimum and maximum detects, range of SQLs, screening criteria and justification for selection as COPC) for constituents detected in surface/subsurface soils, ground water and soil gas. Tables 2.1, 2.2 and 2.3 in Appendix C present the summary statistics for surface/subsurface soils, ground water and soil gas from the PPI site. Data tables, sorted by medium, can be found in Appendix D. Detection frequency and screening against appropriate criteria (Region IX residential PRGs, MCLs, and target soil gas volatilization criteria) were the primary criteria used to determine whether or not a constituent is potentially site-related.

Table 2.1 presents the summary statistics for surface/subsurface soils. Of the 13 VOCs analyzed for presence in the 46 soil samples, ten were detected. None of

the VOCs were detected in 100% of the samples. The detected concentrations of VOCs in the soil range from 0.0011 mg/kg (Methylene Chloride) to 420 mg/kg (Xylenes). The SQLs for VOCs in surface soil were unusually elevated in 20 samples. The RPD for the VOCs detected in sample B-02 and its duplicate B-02 duplicate exceeds the 35% criterion, and the results for the duplicate sample are used since VOCs were not analyzed for in the original sample. Benzene, tetrahydrofuran and xylenes exceed the Region IX Residential PRG screening criteria (USEPA 2004c) and were chosen as COPCs. Tetrahydrofuran was screened against the PRG for furan as there are no screening levels or toxicity criteria for tetrahydrofuran.

Table 2.2 presents the summary statistics for ground water. Ground water sampling started on site in 2003. For this revised risk assessment, data obtained from the October 2006 and the January 2007 sampling rounds were evaluated. Of the 68 constituents analyzed for in ground water, 2 were detected. Detections ranged from 8.45 ug/L (chloroform) to 450 ug/L (chlorobenzene). Both detected constituents were selected as COPCs since both exceeded their respective MCLs or Region IX PRG for tap water.

Table 2.3 presents the summary statistics for soil gas. Pfizer has conducted annual vapor sampling at the former tank farm area since February 1992. For this revised risk assessment, data obtained from the 2006 sampling round was evaluated. Of the 12 constituents analyzed for in soil gas, 10 are selected as COPCs. Detections ranged from 0.99 ppmv (toluene) to 81,763 ppmv (benzene).

6.3 Exposure Assessment

The exposure assessment and associated tables and appendices (1) identify the exposure scenarios and pathways of interest, (2) calculate the exposure point concentrations used in quantifying constituent exposures, and (3) estimate the constituent-specific exposure doses for each pathway and scenarios.

6.3.1 Selection of Exposure Scenarios and Pathways

The most critical aspect of a technically sound exposure assessment is the identification of exposure routes together with the identification of human receptors.

6.3.1.1 Receptors

The exposure assessment involves consideration of current and anticipated future receptor populations. As previously indicated, PPI is an industrial facility, current and anticipated use include construction/excavation and industrial/commercial. For this reason, residential development of PPI is considered highly unlikely and has been eliminated from consideration. Should the property ever be sold, the property would be deed restricted for industrial/commercial use only.

6.3.1.2 Exposure Pathways

Table 1 in Appendix C depicts the complete exposure pathways evaluated in this risk assessment. Due to the limited number of surface soils, it was assumed that subsurface soils would be brought to the surface during construction/excavation activities, and thus be available for contact.

The exposure scenarios developed for evaluation in the HHRA for the PPI facility include the following:

- Scenario 1 (Future Construction Worker) - Exposure of construction workers during construction/excavation activities to on-site soils. These workers are assumed to contact on-site soils through incidental ingestion and dermal contact and through the inhalation of soil particulates. Ground water are at depths of 300 feet and are therefore not available for contact.
- Scenario 2 (Current/Future Commercial/Industrial) - Exposure of current/future adult workers to on-site soils, ground water and soil gas. These workers are assumed to contact on-site soils through incidental ingestion and dermal contact, inhale volatiles in indoor air from soil gas, as well as dermal contact with and ingestion of ground water.

6.3.2 Estimation of Exposure Point Concentrations

For this revised HHRA, exposure point concentrations (EPCs) for the identified receptors were calculated as specified by USEPA (USEPA 1989, 1992b, and 2004a). A conservative, theoretical mean for the datasets were calculated using USEPA's ProUCL software (USEPA 2004a), which evaluates whether the data distribution is normal, lognormal or a gamma distribution. The statistical tests used in this determination are the Shapiro-Wilks and Lilliefors tests (normal and lognormal distributions) and the Anderson-Darling and Kolmogorov-Smirnov tests to determine gamma distribution. The software provides methods for calculating a theoretical mean concentration based on the distribution (normal, lognormal, gamma or nonparametric) and the standard deviation of the dataset (USEPA 2004a). As indicated in the data evaluation section, non-detect values for COPCs were included in the calculation of exposure point concentrations as one-half of the SQL.

Tables 3.1, 3.2 and 3.3 in Appendix C present the exposure point concentrations chosen for surface/subsurface soils, ground water and soil gas, respectively.

6.3.3 Estimation of Exposure Intakes

Tables 4.1 and 4.2 in Appendix C present the equations and input parameters for each receptor, exposure media and exposure pathway. Table 4.1 presents the equations and input parameters for the incidental ingestion of and dermal contact with surface/subsurface soils and the inhalation of fugitive dusts from soils. Table 4.2 presents the equations and input parameters for the ingestion of and dermal contact with ground water. The evaluation of the risk from inhalation of volatiles from soil gas was conducted using USEPA's SG-1, version 3.1 spreadsheets (USEPA 2004d) spreadsheets, these can be found in Appendix E.

The following equations were used for calculating constituent exposure intakes.

Ingestion of soils and ground water:

$$\text{Intake} = \frac{\text{Conc} \times \text{CR} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Where:

Intake	=	Amount of constituent at the exchange boundary (mg/kg-d)
Conc	=	Exposure point concentration (mg/kg for soils, mg/l for water, ug/m ³ for air)
CR	=	Contact rate; amount of medium contacted per unit time or event (mg/d for soils, l/d for water, m ³ /d for air)
EF	=	Exposure frequency (days or events/yr)
ED	=	Exposure duration (yr)
BW	=	Body weight; average body weight over the exposure period (kg)
AT	=	Averaging time; period over which exposure is averaged (25,550 d for cancer; ED x 365 d/yr for non-cancer)

Dermal contact with soils:

The calculation of the dermally absorbed dose through contact with soil is based upon current USEPA methodology (USEPA 2004b).

$$\text{Absorbed Dose} = \frac{\text{DA}_{\text{event}} \times \text{UC} \times \text{EV} \times \text{ED} \times \text{EF} \times \text{SA}}{\text{BW} \times \text{AT}}$$

Where:

Absorbed Dose	=	Average daily absorbed dose via dermal contact (mg/kg-d)
DA _{event}	=	Dermally absorbed dose per event (mg/cm ² -event), see below
SA	=	Body surface area (cm ²)
UC	=	Units Conversion (days/hour)
EV	=	Event frequency (events/day)
EF	=	Exposure frequency (d/yr)
ED	=	Exposure duration (yr)
BW	=	Body weight (kg)
AT	=	Averaging time (day)

DA_{event} in the above equation describes the mass of a chemical that enters the body via transport through the skin per event. For soil, DA_{event} is dependent on length of time soil adheres to the skin and the fraction absorbed through the skin. DA_{event} model parameter values and equations are presented on the DA_{event} calculation tables provided in Appendix F. For COPCs in soil, DA_{event} is described by the following equation:

$$DA_{event} = EPC_{soil} \times UC \times AF \times ABS_d$$

Where:

EPC	=	Exposure point concentration in soil (mg/kg)
UC	=	Units Conversion (1E-06 kg/mg)
AF	=	Adherence factor of soil to skin (mg/cm ² -event)
ABS _d	=	Dermal absorption fraction (--)

Dermal contact with ground water:

This methodology uses either a steady state or non-steady state approach for organics, depending on whether the event duration is less than or greater than the length of time to reach steady state conditions for chemical transfer through the skin. (USEPA 2004b).

$$\text{Absorbed Dose} = \frac{DA_{event} \times EV \times ED \times EF \times SA}{BW \times AT}$$

Where:

Absorbed Dose	=	Average daily absorbed dose via dermal contact (mg/kg-d)
DA _{event}	=	Dermally absorbed dose per event (mg/cm ² -event), see below
SA	=	Body surface area (cm ²)
EV	=	Event frequency (events/day)
EF	=	Exposure frequency (d/yr)
ED	=	Exposure duration (yr)
BW	=	Body weight (kg)
AT	=	Averaging time (day)

DA_{event} in the above equation describes the mass of a chemical that enters the body via transport through the skin per event. For ground water, DA_{event} is dependent on the duration of exposure to ground water (via the tap) and the length of time required for chemical transport through the skin layers. For organics in ground water, DA_{event} is described by the following equations, depending on whether t_{event} is less than or equal to or greater than the time the chemical takes to reach steady state (i.e., time to transfer through skin layers (t*)). DAevent model parameter values and equations are presented on the DAevent calculation tables provided in Appendix F.

$$\text{For } t_{event} \leq t^*, \quad DA_{event} = 2FA \times K_p \times EPC \sqrt{\frac{6\tau_{event} \times t_{event}}{\pi}}$$

$$\text{For } t_{event} > t^*, \quad DA_{event} = FA \times K_p \times EPC \left[\frac{t_{event}}{1+B} + 2\tau_{event} \left(\frac{1+3B+3B^2}{(1+B)^2} \right) \right]$$

Where:

DA_{event}	=	Absorbed dose per event ($\text{mg}/\text{cm}^2\text{-event}$)
FA	=	Fraction absorbed
K_p	=	Dermal permeability coefficient (cm/hr)
EPC	=	Exposure point concentration in water (mg/cm^3 or g/L)
t_{event}	=	Event duration (hr/event)
τ_{event}	=	Lag time per event (hr/event)
t^*	=	Time to reach steady-state (hr)
B	=	Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless)

6.4 Toxicity Assessment

The toxicity assessment presents information on the carcinogenic and non-carcinogenic effects associated with the identified COPCs. If available, cancer and non-cancer toxicity values, in order of preference, were obtained according to USEPA's revised hierarchy of toxicological sources of information (USEPA 2003). The revised recommended toxicity value hierarchy is as follows:

Tier 1- EPA's IRIS (USEPA 2007)

Tier 2- EPA's Provisional Peer Reviewed Toxicity Values (PPRTVs) – The Office of Research and Development/National Center for Environmental Assessment/Superfund Health Risk Technical Support Center (STSC) develops PPRTVs on a chemical specific basis when requested by USEPA's Superfund program.

Tier 3- Other Toxicity Values – Tier 3 includes additional USEPA and non-USEPA sources of toxicity information. Priority should be given to those sources of information that are the most current, the basis for which is transparent and publicly available, and which have been peer reviewed. Tier 3 values include toxicity values obtained from CalEPA, Agency for Toxic Substances and Disease Registry's (ATSDR's) Minimum Risk Levels (MRLs) and toxicity values obtained from HEAST (USEPA 1997a).

6.4.1 Toxicity Information for Non-Carcinogenic Effects

Tables 5.1 and 5.2 in Appendix C are provided to summarize the available toxicity data for non-carcinogenic effects associated with oral/dermal and inhalation exposures, respectively. Included in these tables are the available reference doses (RfDs) or reference concentrations (RfCs), the USEPA's confidence level in the RfDs/RfCs, the critical effect (i.e., target organ or system), the source of the RfDs/RfCs, and the uncertainty and modifying factors used in setting the RfDs/RfCs. For evaluating the potential non-cancer risks from dermal exposure, the available oral RfDs are used. Adjustments for differences in oral and dermal absorption are addressed in accordance with RAGS Part A, Appendix A: Adjustments for Absorption Efficiency (USEPA 1989) and RAGS Part E: Supplemental Guidance for Dermal Risk

Assessment (USEPA 2004b) to determine a more realistic estimate of risk following dermal exposure.

The evaluation of the potential for non-cancer (e.g., systemic) effects from exposure to non-carcinogens is based on the use of RfDs, in units of (mg/kg-d) for oral and dermal exposures and on the use of RfCs, in units of (mg/m³) for inhalation exposures. These toxicity criteria are estimates of daily exposure to the population (including sensitive subpopulations) that are likely to be without appreciable risk of deleterious effects for the defined exposure period, subchronic or chronic. In general, the RfD or RfC is calculated by dividing the no adverse effect level (NOAEL) or lowest observed adverse effect level (LOAEL) derived from animal or human studies by an uncertainty and/or modifying factor.

RfDs and RfCs incorporate uncertainty factors that serve as a conservative downward adjustment of the numerical value and reflect scientific judgment regarding the data used to estimate the RfD or RfC. For example, a factor of 10 is used to account for variations in human sensitivity (i.e., to protect sensitive subpopulations) when the data stems from human studies involving average, healthy subjects. An additional factor of 10 may also be used for extrapolation from chronic animal studies to humans, extrapolation from a LOAEL to a NOAEL, and extrapolation from subchronic to chronic studies. Finally, based on the level of certainty of the study and database, an additional modifying factor (between zero and ten) may be used. The USEPA assigns RfDs and RfCs a confidence level: low, medium, or high, which reflects USEPA's confidence in the study data set used in developing the specific toxicity criteria.

6.4.2 Toxicity Information for Carcinogenic Effects

Tables 6.1 and 6.2 in Appendix C are provided to summarize the available toxicity data for carcinogenic effects related to oral/dermal and inhalation exposures, respectively. For each constituent of potential concern, the table provides the available cancer slope factors or unit risk factors, the USEPA's weight-of-evidence classification, the type of cancer, and the source of the cancer slope or unit risk factor. For assessing the potential risks from dermal exposure, the available oral slope factors are used. Adjustments for differences in oral and dermal absorption are addressed in accordance with RAGS Part A, Appendix A: Adjustments for Absorption Efficiency (USEPA 1989) and RAGS Part E: Supplemental Guidance for Dermal Risk Assessment (USEPA 2004b) to determine a more realistic estimate of risk following dermal exposure.

The constituent-specific oral slope factors (in units of (mg/kg-d)⁻¹) and inhalation unit risk factors ((ug/m³)⁻¹) for carcinogens are generally estimated through the use of mathematical extrapolation models (e.g., the linearized multistage model). These models estimate the largest possible linear slope, within a 95% confidence interval, at low extrapolated doses. Thus, the slope/unit risk factor is characterized as a 95% upper-bound estimate, such that the true risk is not likely to exceed the upper-bound estimate and may be lower. In addition to identifying cancer slope and unit risk factors, the USEPA classifies constituents with regard to their relative carcinogenicity. The classification scheme is as follows (USEPA 1997a):

<u>Classification</u>	<u>Basis</u>
Group A: Human Carcinogen	Sufficient evidence of carcinogenicity in humans.

Group B1: Probable Human Carcinogen	Limited evidence in humans.
Group B2: Probable Human Carcinogen	Sufficient evidence in animals with inadequate or lack of evidence in humans.
Group C: Possible Human Carcinogen	Limited evidence in animals with inadequate or lack of evidence in humans.
Group D: Not Classifiable	Inadequate or lack of evidence.
Group E: Not Carcinogenic	No evidence in adequate studies.

The new Guidelines for Cancer Risk Assessment (USEPA 2005) provide for five recommended standard hazard descriptors:

- “*Carcinogenic to Humans,*”
- “*Likely to Be Carcinogenic to Humans,*”
- “*Suggestive Evidence of Carcinogenic Potential,*”
- “*Inadequate Information to Assess Carcinogenic Potential,*”
- “*Not Likely to Be Carcinogenic to Humans.*”

6.4.3 Constituents for Which EPA Has Not Developed Toxicity Criteria

Screening (Region IX PRGs) and toxicity criteria were not available for pentanol and tetrahydrofuran which are present in soils. As discussed in the screening level health evaluation performed for this site in 1994 (TRC 1994), toxicity criteria for these two constituents were cross-assigned from structurally similar chemicals, isobutanol for pentanol, and furan for tetrahydrofuran. A comparison of the LD₅₀s (i.e., Lethal Dose 50 which produces fifty percent mortality in the experimental animals) shows that isobutanol and pentanol are apparently equitoxic, while furan is significantly more toxic than tetrahydrofuran (for a more complete discussion, please refer to TRC 1994). Therefore, the use of the screening/toxicity criteria of isobutanol for pentanol appears to be of similar magnitude, while the use of the furan screening/toxicity criteria for tetrahydrofuran will be an overly conservative, health-protective approach.

6.4.4 Workplace Standards

In the specific case of the commercial/industrial worker, the indoor air concentrations calculated by USEPA’s SG-1 spreadsheets were compared against the OSHA PELs. As cited in USEPA’s draft guidance for evaluating subsurface vapor intrusion (USEPA 2002a), “OSHA and EPA have agreed that OSHA generally will take the lead role in addressing occupational exposures”. The PELs (as cited in NIOSH 2005) used in this evaluation are listed below:

<i>Constituent</i>	<i>OSHA PEL (mg/m3)</i>
Acetone	2400
Benzene	3.19
Chlorobenzene	350
Chloroform	240
Ethylbenzene	435
Methylene Chloride	86.75
m,p – Xylene	435
o- Xylene	435
Tetrahydrofuran	590
Toluene	754

6.5 Risk Characterization

Human health risks were evaluated quantitatively based on potential effects from the COPCs. A quantitative HHRA for carcinogens involves calculations of the lifetime incremental probabilities of cancer that take into account exposure concentrations and the carcinogenic potencies of the chemicals. Health effects associated with exposures to non-carcinogenic chemicals were evaluated by comparing estimated exposure concentrations with RfD values published by the USEPA.

The established potential for a human health risk is a function of the exposure duration and frequency for each exposure scenario. The selection of commercial/industrial workers and future construction workers are based upon the usage of the site. Although a future residential use of the site is highly unlikely, this receptor was chosen as a conservative estimate of risk. Exposure duration and frequency are based on USEPA guidance, professional judgment and conservative assumptions.

The results of the quantitative risk analysis are presented in two ways—as a probability for carcinogenic risk and as a ratio for non-carcinogenic risk. In the case of human health effects associated with exposure to potential carcinogens, risk estimates are expressed as the lifetime probability of additional cancer risk associated with the given RME specific to the COPCs. The cancer risk estimates were calculated as the cancer-based intake (mg/kg-d) or (ug/m³) times the slope factor ([mg/kg-d]⁻¹) or unit risk factor ((ug/m³)⁻¹). In numerical terms, these risk estimates are presented in scientific notation in the risk assessment report. Thus, a lifetime risk of 1E-04 means a lifetime incremental risk of one in ten thousand; a lifetime risk of 1E-06 means an incremental lifetime risk of one in one million.

For estimating risks to human health from exposure to non-carcinogens, the hazard quotient (HQ) is used. The HQ is calculated as the non-cancer exposure dose (mg/kg-d) divided by the RfD (mg/kg-d) or (mg/m³) divided by the RfC (mg/m³).

Cancer risks and non-cancer Hazard Indices (HI) for each exposure pathway are obtained by summing across constituents. Total receptor cancer risks and non-cancer HIs are obtained by summing across receptor-specific pathways. For each exposure scenario, exposure to both cancer and non-cancer health risks are discussed. The estimated cancer risks and non-cancer HIs are compared to available regulatory guidelines. Under Superfund (USEPA 1990), the acceptable range for excess lifetime cancer risk is 1E-06 to 1E-04. Per the approved Final Interim Measures Work Plan (TRC 2003), the cumulative risk is compared to 1E-04 (EPA 1990). For non-carcinogenic health hazards, typically a HI exceeding one (1) indicates the potential for adverse health effects (USEPA 1989). For those HIs exceeding 1.0, the HIs for the major health effects and target organs or systems are calculated separately.

The estimated cancer risks and non-cancer HIs for the exposure scenarios are provided in Tables 7.1 – 7.3 in Appendix C. Tables 9.1 through 9.3 in Appendix C provide the summary risk tables. Cancer risks greater than 1E-04 are outlined.

Scenario 1 (Construction Worker): Cancer Risks and Non-Cancer HIs

The estimated pathway-specific cancer risks and non-cancer HIs for Scenario 1 (construction worker) are provided in Table 7.1 and summarized in Table 9.1. For this scenario, cancer risks and non-cancer HIs are calculated for construction workers involved in construction/excavation activities on the site assuming incidental ingestion of and dermal contact with soil as well as inhalation of soil particulates.

As shown in Table 9.1, the total estimated cancer risk and non-cancer HI for construction workers exposed to soils are 2E-09 and 4.3E-02, respectively and do not exceed target risks of 1E-04 and 1E+00, respectively.

Scenario 2 (Current/Future Commercial/Industrial)

The estimated pathway-specific cancer risks and non-cancer HIs for Scenario 2 (future commercial/industrial) are provided in Table 7.2 and summarized in Table 9.2. For this scenario, cancer risks and non-cancer HIs are calculated for future workers assuming incidental ingestion of and dermal contact with soil, ingestion and dermal contact with ground water through showering and inhalation of VOCs in indoor air.

As shown in Table 9.2, the estimated cancer risk for the commercial/industrial worker exposed to soils, ground water and indoor air is 5E-08 and does not exceed the target risk of 1E-04. The non-cancer HI for current/future commercial/industrial workers exposed to soils, ground water and indoor air is 35 and does exceed the non-cancer target of 1E+00. This exceedance is entirely due to the potential inhalation of benzene in indoor air – provided that pathway exists. The indoor air concentrations modeled by use of USEPA's most current version of the Johnson &

Ettinger spreadsheets were compared against the OSHA PELs. The modeled indoor air concentration of benzene exceeded its OSHA PEL by 34 fold.

2.6 Uncertainty Assessment

Each component of the HHRA (i.e., hazard identification, dose-response assessment, exposure assessment, and risk characterization) contributes some degree of uncertainty to the quantitative estimates of potential health risk. This section discusses general and site-specific uncertainties associated with each component. Examples of site-specific uncertainties include COC selection, lack of EPA toxicity values for identified COCs, assumptions about the nature and frequency of exposures to site-related constituents, and uncertainties associated with the constituents contributing the most to the estimated cancer risks and non-cancer HIs.

6.5.1 Uncertainties Related to the Hazard Identification

The primary sources of uncertainty associated with the hazard identification are the environmental sampling and analysis, and the subsequent selection of COCs.

As described previously, soil samples were collected and analyzed for VOCs. There are several potential sources of uncertainty associated with the collection and analysis of these samples. First, the list of constituents analyzed for presence in the samples may or may not reflect all of the constituents present in the soil at the PPI facility. The uncertainty in this case is most likely minimized since the type of contaminants spilled were known, thus allowing a more targeted sampling approach. Also, samples selected for laboratory analysis were based on field screening and generally represent the highest or more conservative concentrations. Another potential source of uncertainty with respect to potential human exposures is the lack of surface soil samples from the 0 - 6 inch interval. However, the intervals selected for the soil boring analyses were based on the presence of the soil contamination source (namely, the tank excavation area) at depths of greater than 10 feet below grade. Thus, the lack of data for soils within the surface soil range (and therefore their exclusion from the quantitative HHRA) is unlikely to have led to a lack of knowledge about the site or significantly underestimated the potential health risks associated with the site.

Another source of uncertainty associated with environmental sampling and analysis is that the sampling locations may not accurately reflect the range, frequency, and distribution of constituents at the site. In general, this phenomenon could lead to an under- or over-estimation of (for example) the frequency of detection and magnitude of concentrations. The impact on the risk assessment by this potential source of uncertainty is likely to be low due to the use of judgmental samples focused on areas of contamination. For risk assessment purposes, a receptor may be exposed at any location within an exposure area for the duration of exposure (e.g., 250 days per year for 25 years). However the sample data used in the HHRA were collected for the purpose of characterizing potential contaminated areas and were not collected randomly throughout the exposure areas. This will likely overestimate true risks to all receptors for all exposure scenarios.

Finally, there are uncertainties associated with the analytical methods and instruments used in the analysis of samples. For example, the values reported as non-detected may actually range from non-detect (i.e., not present) up to the value of the SQL. The replacement of non-detects with a value equal to one-half the SQL is intended to be reasonably conservative, but could over- or underestimate the actual constituent concentrations present in the environmental media.

The selection of COCs is intended to identify those constituents which are likely to be site-related. Most of the uncertainty in the COC selection is associated with the uncertainties in the environmental sampling and analysis.

6.5.2 Uncertainties Related to the Dose-Response Assessment

There are several main sources of uncertainty related to the toxicity information. First, the availability and quality of toxicity data affects the ability of experts to derive toxicity criteria and the quality/certainty of the toxicity criteria that are derived.

The uncertainty associated with the toxicity values developed by EPA (1997, 2004, 2007) for each constituent contributes to the overall uncertainty in the risk characterization of the site. The possible sources of uncertainty for a given constituent include: the number of available studies in the toxicological literature, the quality of these studies, the consistency among the study results (e.g., across species, strains, sex and exposure pathways), the plausibility of the biological mechanism, and the existence and nature of a dose-response relationship. The quality of individual studies is influenced by some of these same factors as well as the test species, the dose used, the route of exposure, the length of exposure, and other study design issues (e.g., sample size and statistical power). In addition, animal to human extrapolation, high dose to low dose extrapolation, and short-term to long-term extrapolation often introduce considerable uncertainty into the derivation of toxicity values by EPA. An additional source of uncertainty in the toxicity assessment is the use of toxicity values of one constituent for other structurally similar constituents. The cross-assignment of the screening criteria for isobutanol for pentanol and the screening/toxicity criteria for furan for tetrahydrofuran in the quantitative analysis is not likely to contribute to an underestimation of potential health risk, but rather an overestimation of the potential health risk since tetrahydrofuran is significantly less toxic than furan based upon LD₅₀ data.

6.5.3 Uncertainties Related to the Exposure Assessment

Assumptions are inherent in any assessment of exposure and risk. This section identifies and quantifies to the extent possible the uncertainties associated with the exposure assessment for PPI. The potential areas of uncertainty include the selection of current and anticipated future land uses, selection of exposure pathways, calculation of EPCs, and the selection of specific exposure parameters.

6.6.3.1 Current and Anticipated Future Land Use

The HHRA considers potential risks associated with construction workers working on the site, future/current commercial/industrial use of the site. As discussed in Section 6.3.1.2, these scenarios are intended to represent the reasonably likely land uses, but do not necessarily reflect

all theoretically possible exposure scenarios at the PPI facility. The estimated risks associated with all of the selected scenarios are conditioned on these land uses occurring.

Pfizer indicates that future use would be consistent with current use (i.e. Industrial/commercial). Therefore, the scenarios evaluated would continue to apply.

6.6.3.2 Exposure Pathways

The exposure pathways evaluated under one or more scenarios for the PPI facility include incidental ingestion and dermal contact with surface soil, inhalation of fugitive dusts, inhalation of soil volatiles either in indoor air, ingestion and dermal contact with ground water. These exposure pathways are intended to be representative of the most likely routes of exposure, but do not necessarily reflect all theoretically possible means of contact between the identified receptors and the environmental media. The risks associated with these exposure pathways are conditioned upon the land uses and exposure routes occurring.

This evaluation overestimates risk in that it evaluates some pathways that are not currently occurring on site. PPI has two supply wells on-site, neither of which has shown contamination. This risk assessment evaluates levels of contamination from all on-site wells over two sampling events and therefore overestimates risks.

There is uncertainty with the inhalation pathway in that indoor air concentrations were modeled from soil gas concentrations. Since there is a lack of site specific data regarding buildings, etc, the majority of the input values were default values. The use of these values may over- or underestimate the air concentrations of the volatilized constituents.

6.6.3.3 Exposure Point Concentrations

The calculated UCL exceeds the maximum detected values for chlorobenzene in ground water at the PPI facility due to small datasets and/or the range of concentrations. Use of the maximum detected concentration likely overestimates the potential risk.

6.6.3.4 Exposure Parameter Values

The exposure estimates produced for each receptor in each scenario are based on numerous exposure parameters which are associated with varying degrees of uncertainty. A number of these parameter values correspond to upper (e.g., 90th, 95th) percentile (RME) values and therefore likely overestimate the potential exposures and risks associated with soil, ground water and indoor air at the PPI facility.

6.5.4 Uncertainties Related to the Risk Characterization

The uncertainties associated with the risk characterization may be categorized into two groups: those related to the components of the risk estimates (i.e., the estimates of exposure and toxicity) and those inherent in the risk characterization methodologies.

For the estimation of cancer risks and non-cancer HIs, the values for all constituents in each pathway have been summed to yield the total cancer risk and non-cancer HI for each pathway. Summation of cancer risks and non-cancer HQs across constituents is a general source of uncertainty in the risk characterization portion of the HHRA. This is a conservative approach since, in general, different constituents do not have the same target organ or mechanism of action. Thus, their toxic effects may be, at least in some cases, independent and not additive. Further, constituents may antagonize one another through competition for enzymes and binding sites, and by inhibition of pathways needed for constituent transport (absorption, cellular uptake, etc.) or metabolic activation. However, it is also possible that certain constituents can be synergistic such as is the case when a promotor-type carcinogen greatly enhances the expression of genetic damage induced by a low dose of an initiator.

7.0 CONCLUSIONS

The results of the RFI indicate that the objectives of this investigation have been satisfied.

Waste Characterization: The physical, chemical and fate and transport properties of the waste have been determined, and the contaminants of concern have been identified. Twelve VOCs that were used at the site have been detected in soils beneath the tank farm site and two chemicals have reached ground water. No RCRA Action Levels have been exceeded in soils but chlorobenzene is present in ground water at a concentration that exceeds the MCL.

Unit Characterization: The operating characteristics and design of the tank farm have been determined and related to the potential for contaminant release. There does not appear to be evidence of a major release of contaminants. The RFI data support that minor releases of contaminants may have occurred since 1972, and that the frequency and volume of releases was reduced after construction of the tank farm containment vault in 1982 (note that chlorobenzene has not been used at the facility since 1980). This has resulted in sporadic occurrences of VOCs in subsurface soils beneath the tank farm and the truck receiving area. The magnitude of the release cannot be directly ascertained, however the low-level concentrations in the vapor phase are consistent with the small contaminant mass in soils.

Environmental Setting Characterization: The nature of the soils in the area has been well described using multiple maps and cross sections, and the depth to bedrock is well defined. The depth to ground water is over 100 feet below the contaminant mass adsorbed to soils, and little evidence of contamination has been observed in bedrock beneath the tank farm. Relevant soil properties have been determined, and their variability beneath the site have been well described.

Release Characterization: Facility records relevant to the contaminant releases do not indicate any major uncontrolled contaminant releases. The area of contamination is well defined, and the distribution of contaminants within the subsurface area has been adequately assessed.

Risk based criteria are exceeded for current workers based on indoor air exposure to benzene. Pfizer has delineated the MCL exceedances in ground water and this area is limited to a small plume entirely contained within the site, and limited in extent to an area near SWMU-11. Pfizer has never detected VOC's in the nearby high volume (300,000 gallon per day) production well, indicated that the ground water used at the plant is not impacted (see sampling results, Appendix F). Pfizer has presented a detailed description of the subsurface geology and evaluated the fate and transport properties of the chemicals as they are released to the subsurface. This analysis also showed that the contaminant mass still present at the site is attenuating via biodegradation, based on decreasing subsurface gas concentrations.

Based on an extensive sampling and investigative program, Pfizer has completed a detailed characterization of the nature and extent of contamination in the subsurface soils, and has determined that there are no exceedances of RCRA action levels in soils.

Risk based screening criteria are exceeded for workers based on potential indoor air exposure scenario to benzene.

Pfizer has delineated the MCL exceedances in ground water and this area is limited to a small plume entirely contained within the site, and limited in extent to an area near SWMU-11. Pfizer has never detected VOC's in the nearby high volume (300,000 gallon per day) production well, indicated that the ground water used at the plant is not impacted. Pfizer has presented a detailed description of the subsurface geology and evaluated the fate and transport properties of the chemicals as they are released to the subsurface. This analysis also showed that the contaminant mass still present at the site is attenuating via biodegradation, based on decreasing subsurface gas concentrations.

8.0 RECOMMENDATIONS

Based on the potential human health risk of site workers exposed to indoor air, samples should be obtained from nearby buildings (proximate to soil/gas detections) to determine if this exposure pathway is complete and if any corrective measures are needed.

Groundwater monitoring is recommended for a sufficient period (e.g. 2 years) to verify that groundwater concentrations are stable or declining, since the ground water plume does not migrate off-site. Such monitoring will help determine if further corrective measures are needed for ground water.

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Tables

TABLE 1 .4-1: CHEMICALS THAT WERE STORED AT THE BARCELONETA FACILITY

Solvent/Material	Year Started Use	Year Ended Use
Xylene	1973	1991
Acetone	1973	In Use
Isopropanol	1973	In Use
Methanol	1973	In Use
Toluene	1973	In Use
Ethyl Acetate	1973	In Use
Tetrahydrofuran	1973	In Use
Methylene chloride	1981	In Use
Heptane	1981	1989
Dimethyl acetamide	1981	In Use
Dimethyl sulfoxide	1986	1990
Ethanol	1973	In Use
Amyl acetate	1990	In Use
Chloroform	1981	1988
Hexane	1981	1995
Isoamyl alcohol	1981	In Use
Benzene	1973	1979
Chlorobenzene	1976	1980
DMF	1973	In Use

Table 2.1-1: BORING AND WELL CONSTRUCTION DETAILS

Well #	Boring Diameter (inches)	Boring Angle off Horizontal (degrees)	Measured Boring Total Length (feet)	True Vertical Depth (feet)	Measured Depth to Bedrock (feet)	True Vertical Depth to Bedrock (feet)	Screen Diameter (inches)	Screen Slot Size (inches)	Measured Depth to Top of Screen (feet)	Measured Depth to Bottom of Screen (feet)	Screen Length (feet)	Top of Screen True Vertical Depth (feet)	Bottom of Screen True Vertical Depth (feet)	UTM COORDINATE EAST	UTM COORDINATE NORTH	ELEVATION feet above mean sea level	BEDROCK ELEVATION feet above mean sea level
Vapor Wells																	
AB-1	8	45	90	64	10	7	2	0.02	6	26	20	4	18	137800.4217	66641.4719	310.25	303.25
AB-2	5	45	50	35	8	6	2	0.02	8	18	10	6	13	137802.9509	66676.6229	311.40	305.80
AB-3	8	45	60	42	10/33	7/23	2	0.02	13	53	40	9	37	137812.2719	66676.21	311.14	304/288
AB-5	5	45	90	64	8	6	2	0.02	10	80	70	7	57	137818.1849	666676.2588	311.40	305.80
AB-7	8	45	45	32	10	7	2	0.02	10	40	30	7	28	137822.1827	66676.3654	311.37	304.37
AB-8	4	45	40	28	30	21	2	0.02	6.5	36.5	30	5	28	137838.1026	66667.7131	311.66	290.45
AB-9	4	45	40	28	30	28	2	0.02	6	35	30	4	25	137838.4158	66665.027	311.66	283.66
AB-10	8	45	29	21	ND	ND	2	0.02	4	29	25	3	21	137829.0271	66637.3721	306.12	
AB-10B	5	45	95	67	ND	ND	2	0.02	40	95	55	28	67	137830.1544	66637.4717	306.12	
AB-11	4	45	90	64	7	5	2	0.02	5	25	20	4	18	137831.3133	66658.3133	311.04	306.14
AB-12	5	45	21	15	ND	ND	2	0.02	1	21	20	1	15	137836.9998	66637.7928	306.12	
VB-13	5	90	11	11	ND	ND	2	0.02	1	11	10	1	11	137834.7621	66639.9539	306.15	
VB-14	5	90	12	12	ND	ND	2	0.02	2	12	10	2	12	137834.3053	66637.9796	306.15	
VB-14	5	90	108	108	ND	ND	2	0.02	21	105	10	21	31	137833.352	66637.9877	306.15	
VB-15	5	90	111	111	97	97	4	0.02	95	105	10	95	105	137832.8093	66637.7047	306.15	209.15
VB-15a	14	90	111	111	48	13	2	0.02	21	41	20	15	45	137827.946	66627.5506	306.31	258.23
AB-16	5	45	68	18	13	18	2	-	-	-	-	-	-	137838.8261	66632.7327	306.08	293.36
AB-17	5	45	34	24	34	24	2	0.02	20	30	10	14	21	137837.8956	66634.8211	305.95	281.91
AB-18	5	45	40	28	40	28	2	0.02	13	23	10	9	16	137830.4009	66634.1705	306.08	277.80
AB-19	5	45	95	67	ND	ND	2	0.02	47	67	92	33	47	137835.9998	66637.7928	306.12	
AB-20	5	45	58	41	58	41	2	0.02	30	50	20	21	35	137830.1852	66635.6755	305.08	265.07
AB-21	5	45	33	23	33	23	2	0.02	15	25	10	11	18	137839.0614	66636.243	305.92	282.59
AB-22	5	45	82	58	82	58	2	0.02	35	55	20	25	35	137839.2523	66666.4198	311.56	253.68
VB-24a	5	90	9	9	9	9	-	-	-	-	-	-	-	137838.9451	66615.5221	306.05	297.05
VB-24b	5	90	21	21	ND	ND	-	-	-	-	-	-	-	137838.958	66614.0943	306.28	
VB-1	6	90	6.5	6.5	ND	ND	-	-	-	-	-	-	-	137793.8855	66675.3307	311.53	306.23
VB-2	6	90	5.3	5.3	5.3	5.3	-	-	-	-	-	-	-	137795.2823	66641.1735	311.53	304.23
VB-3	6	90	7.3	7.3	7.3	7.3	-	-	-	-	-	-	-	137785.1201	66642.942	311.53	304.53
VB-4	6	90	7	7	7	7	-	-	-	-	-	-	-	137775.4553	66667.8999	ND	
B-01	4	90	10	10	ND	ND	2	0.02	1	10	9	1	10	ND	ND	ND	ND
B-02	4	90	8	8	ND	ND	-	-	-	-	-	-	-	ND	ND	ND	ND
B-03	4	90	10	10	ND	ND	-	-	-	-	-	-	-	ND	ND	ND	ND
B-04	4	90	10	10	ND	ND	2	0.02	1	10	9	1	10	ND	ND	ND	ND
B-05	4	90	11	11	ND	ND	-	-	-	-	-	-	-	ND	ND	ND	ND
B-06	4	90	10	10	ND	ND	2	0.02	1	10	9	1	7.5	ND	ND	ND	ND
B-08	2	90	8	8	ND	ND	1	Hand-Slotted	1	7.5	6.5	1	-	ND	ND	ND	ND
B-09	2	90	10	10	ND	ND	-	-	-	-	-	-	-	ND	ND	ND	ND
AB-1s	4	45	16	11	ND	ND	-	-	-	-	-	-	-	ND	ND	ND	ND
AB-2s	4	45	15	11	ND	ND	-	-	-	-	-	-	-	ND	ND	ND	ND
Ground Water Monitoring Wells																	
MW-1	6	90					2	0.01						ND	ND	ND	ND
MW-2	6	90					2	0.01	286	296	10	286	296	ND	ND	ND	ND
MW-3	6	90	337				2	0.01	312	322	10	312	322	ND	ND	ND	ND
MW-4	6	90	341				2	0.01	368	378	10	368	378	ND	ND	ND	ND
MW-5	6	90	397				2	0.01	383	393	10	383	393	ND	ND	ND	ND
MW-6	6	90	415				2	0.01						ND	ND	ND	ND
SW-1	6	90					16							ND	ND	ND	ND
RF-1	6	90												ND	ND	ND	ND

NOTES:
 ND = Not determined
 - = No well installed

Table 2.1-2: Water Screening Samples	
<i>Well ID</i>	<i>Sample Depth (feet below water table)</i>
MW-3	10
	30
	50
MW-4	10
	30
	50
MW-5	10
	30
	50
	70
	90
MW-6	10
	30
	50
	70
	90
	105

Table 4.1-2: Ground Water Sampling Results

Compound	MCL (µg/l)	MW-1								
		2/26/2003	6/3/2003		7/15/2003		1/21/2005	10/10/2006	1/11/2007	1/11/2007
		EQLab	EQLab	Accutest	EQLab	Accutest	Accutest	Pace	Pace	Pace
Benzene	5	3 U	3 U	1 U	3 U	1 U	0.46	5 U	5 U	5 U
Chlorobenzene	100	146 J	33.2	33	67.7	56.3	197	370	450	450
Chloroform	none	8 J	17.1	16	13.9	21.3	1 U	8.5	11 U	11 U

Compound	MCL (µg/l)	MW-2								
		2/26/2003	6/3/2003		7/15/2003		1/21/2005	10/10/2006	1/11/2007	
		EQLab	EQLab	Accutest	EQLab	Accutest	Accutest	Pace	Pace	
Benzene	5	1	1.3 J	1.3 J	1.5 J	1.1	0.9	5 U	5 U	
Chlorobenzene	100	177 J	239	192 J	216	194	89.5	63	76	
Chloroform	none	3 UJ	3 U	1 U	3 U	2 U	1 U	5 U	5 U	

Compound	MCL (µg/l)	MW-2 (duplicate)						
		2/26/2003	6/3/2003		7/15/2003		1/21/2005	
		EQLab	EQLab	Accutest	EQLab	Accutest	Accutest	
Benzene	5	1 J	1.3 J	0.8 J	1.5 J	1.1	0.73	
Chlorobenzene	100	152 J	234.8	118 J	216	203	75.3	
Chloroform	none	3 UJ	3 U	1 U	3 U	2 U	1 U	

Compound	MCL (µg/l)	MW-3		MW-4		MW-5		MW-6	
		10/9/2006	1/10/2007	10/9/2006	1/10/2007	10/9/2006	1/10/2007	10/10/2006	1/11/2007
		Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace
Benzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	48	25
Chloroform	none	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U

Compound	MCL (µg/l)	Pfizer Shallow Supply Well						
		6/4/2003		7/14/2003		1/24/2005	10/5/2006	1/10/2007
		EQLab	Accutest	EQLab	Accutest	Accutest	Pace	Pace
Benzene	5	3 U	1 U	3 U	1 U	1 U	5 U	5 U
Chlorobenzene	100	3 U	1 U	3 U	1 U	1 U	5 U	5 U
Chloroform	none	3 U	1 U	3 U	1 U	1 U	5 U	5 U

Compound	MCL (µg/l)	Rayo Farm Well				
		7/16/2003		1/19/2005	10/6/2006	1/10/2007
		EQLab	Accutest	Accutest	Pace	Pace
Benzene	5	3 U	1 U	1 U	5 U	5 U
Chlorobenzene	100	6.2	5.4	3.4	5 U	5 U
Chloroform	none	3 U	1 U	1 U	5 U	5 U

U Compound not detected at concentration listed.

J Result shown is estimated.

23 Compound present above detection limit.

23 Compound present above the MCL.

Note: 10/06 results not validated

Table 5.1-1: Physical and Chemical Properties of Detected Contaminants and Physical Properties of Soils at the Tank Farm Area

Chemical	Molecular Weight (g/mole)	Vapor Pressure (mm Hg)	Water Solubility (mg/L)	Henry's Law Constant (b) (atm*cu. m/mole)	(unitless)(c)	Organic/Carbon Partition Coefficient (mL/g)	Relative Vapor Density (g/L)(d)	Fraction of Organic Carbon(e)	Total Porosity (fraction)(e)	Soil Density (g/mL)(e)	Soil Moisture Content (fraction)(f)
Methylene Chloride	85	362	20000	3.2E-03	0.13268	8.8	1.936476	0.008715	0.196	2.53	0.05
Acetone	58	270	1000000	2.5E-05	0.00104	2.2	1.3670481	0.008715	0.196	2.53	0.05
Toluene	92	28	535	6.7E-03	0.27784	300	1.0897162	0.008715	0.196	2.53	0.05
Butanone (2-)	72	77.5	268000	2.7E-05	0.00114	3.5	1.1612128	0.008715	0.196	2.53	0.05
Benzene	78	95	1750	5.5E-03	0.22876	83	1.2221876	0.008715	0.196	2.53	0.05
Chlorobenzene	113	12	466	3.9E-03	0.16346	330	1.0536751	0.008715	0.196	2.53	0.05
Chloroform	119	151	8200	3.4E-03	0.14100	31	1.6306636	0.008715	0.196	2.53	0.05
Ethylbenzene	106	7	152	6.4E-03	0.26786	1100	1.0333638	0.008715	0.196	2.53	0.05
Tetrahydrofuran	72	162	(g) 313212	(h) 4.9E-05	0.00204	5.6	1.3275057	0.008715	0.196	2.53	0.05
Xylenes, Mixed	106	10	168	(i) 5.2E-03	0.21822	240	1.0439359	0.008715	0.196	2.53	0.05

(a) Values for vapor pressure, water solubility, and organic/carbon partition coefficient obtained from "Basics of Pump-and-Treat Ground Water Remediation Technology" (EPA, 1990a).

(b) Values for Henry's Law Constant obtained from "Air/Superfund National Technical Guidance Study Series: Air Stripper Design Manual" (EPA, 1990b).

(c) Dimensionless value calculated as follows: Henry's Constant (Unitless) = Henry's Constant (atm*cu.m/mole) / [R (0.000082057 atm*cu.m/K*mole) * T (293 K)] (Lyman, 1990).

(d) Relative vapor density calculated as follows: [(Vapor Pressure in mmHg * Molecular Weight / 760) + (29 * (760 - Vapor Pressure in mmHg) / 760)] / 28.75 (Schwille, 1988; Cohen and Mercer, 1993).

(e) Value measured from soil collected from the Tank Farm Area during current RFI.

(f) Value estimated from visual observations during TRC's drilling program.

(g) Value obtained from "Handbook of Environmental Fate And Exposure Data for Organic Chemicals, Volume II" (Howard, 1990).

(h) Value calculated as follows: Solubility (mg/L) = Vapor Pressure (atm) / [Henry's Constant (atm*cu.m/mole) * Molecular Weight (g/mole)] (Lyman, 1990).

(i) Value represents average solubility for o-, m-, and p-Xylene isomers.

Table 5.4-1 Summary of BIOSCRN Input Parameters

<i>Parameter</i>	<i>Value</i>	<i>Basis</i>	<i>Evaulation of Model Sensitivity</i>
Hydraulic Conductivity	0.015 cm/s	Estimated high value based on observed nature of limestone in water bearing zone obtained during well installation.	Low
Hydraulic Gradient	0.005	Measured value from site data.	Low
Porosity	.3	Estimated, based on observations of limestone in water bearing zone obtained during well installation.	Low
Dispersion/estimated Plume Length	1000 feet	Plume length is used by the model to calculate dispersivity. Plume length was estimated based on water quality test results.	Low
Soil bulk density	1.7	Estimated value	Low
Partition coefficient	300 l/kg	Source: toxnet.nlm.nih.gov (value cited is 313 l/kg)	Mod
F _{oc}	.01	Measured from RFI data	Low
Solute Half-life	2 years	Source: toxnet.nlm.nih.gov (value cited is 540 days)	Mod
Retardation Factor	18	Calculated by model using solute half-life, soil bulk density Partition coefficient, and F _{oc}	Mod
Source Thickness	50	Estimated reasonable value based on thickness of impacted soil below SWMU-11 and the known vertical thickness of the ground water plume	Low
Soluble Mass	500 kg	High estimate based on lack of confirmed records of release	Mod

Table 5.4-2 Summary of BIOSCRN Input Parameters After Calibration			
<i>Parameter</i>	<i>Value</i>	<i>Basis</i>	<i>Evaulation of Model Sensitivity</i>
Hydraulic Conductivity	0.015 cm/s	Estimated high value based on observed nature of limestone in water bearing zone obtained during well installation.	Low
Hydraulic Gradient	0.005	Measured value from site data.	Low
Porosity	.3	Estimated, based on observations of limestone in water bearing zone obtained during well installation.	Low
Dispersion/estimated Plume Length	1000 feet	Plume length is used by the model to calculate dispersivity. Plume length was estimated based on water quality test results.	Low
Soil bulk density	1.7	Estimated value	Low
Partition coefficient	300 l/kg	Source: toxnet.nlm.nih.gov (value cited is 313 l/kg)	Mod
F _{oc}	.01	Measured from RFI data	Low
Solute Half-life	4 years	Source: toxnet.nlm.nih.gov (value cited is 540 days)	Mod
Retardation Factor	18	Calculated by model using solute half-life, soil bulk density Partition coefficient, and F _{oc}	Mod
Source Thickness	50	Estimated reasonable value based on thickness of impacted soil below SWMU-11 and the known vertical thickness of the ground water plume	Low
Soluble Mass	500 kg	High estimate based on lack of confirmed records of release	Mod

Figures

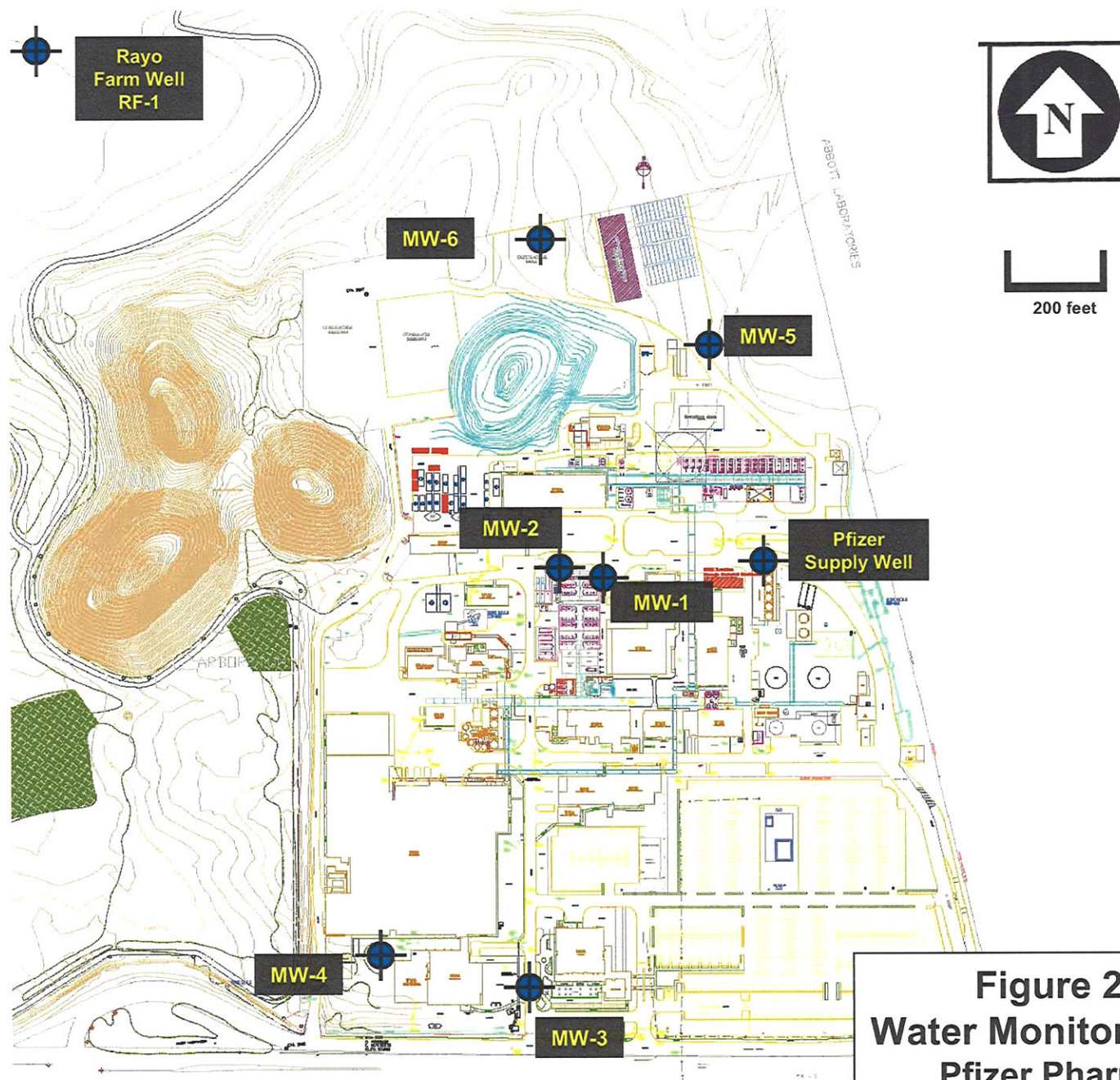


**Figure 2.1-1: Ground
Water Monitoring Well Locations
Pfizer Pharmaceuticals, LLC
Barceloneta, PR**

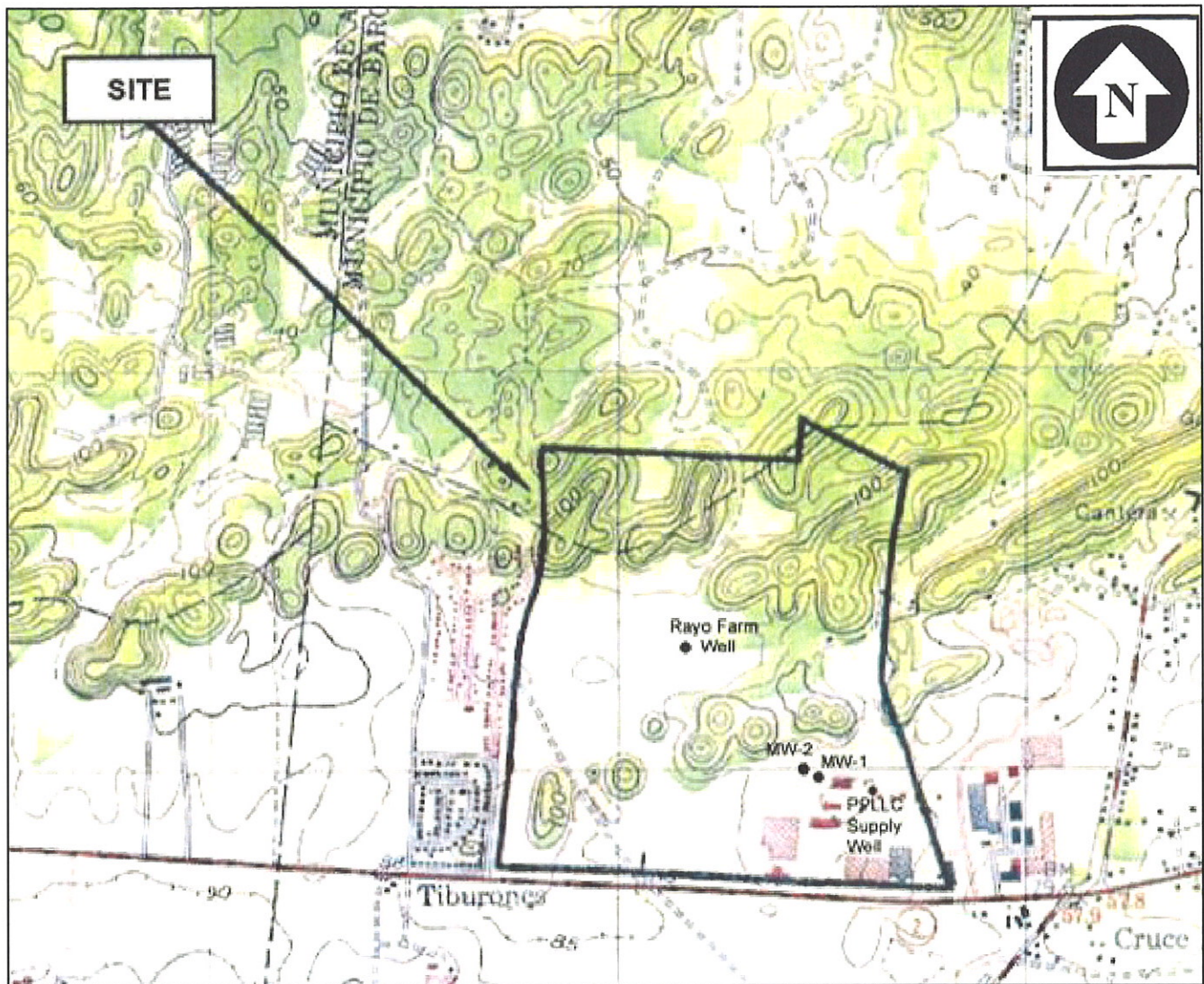
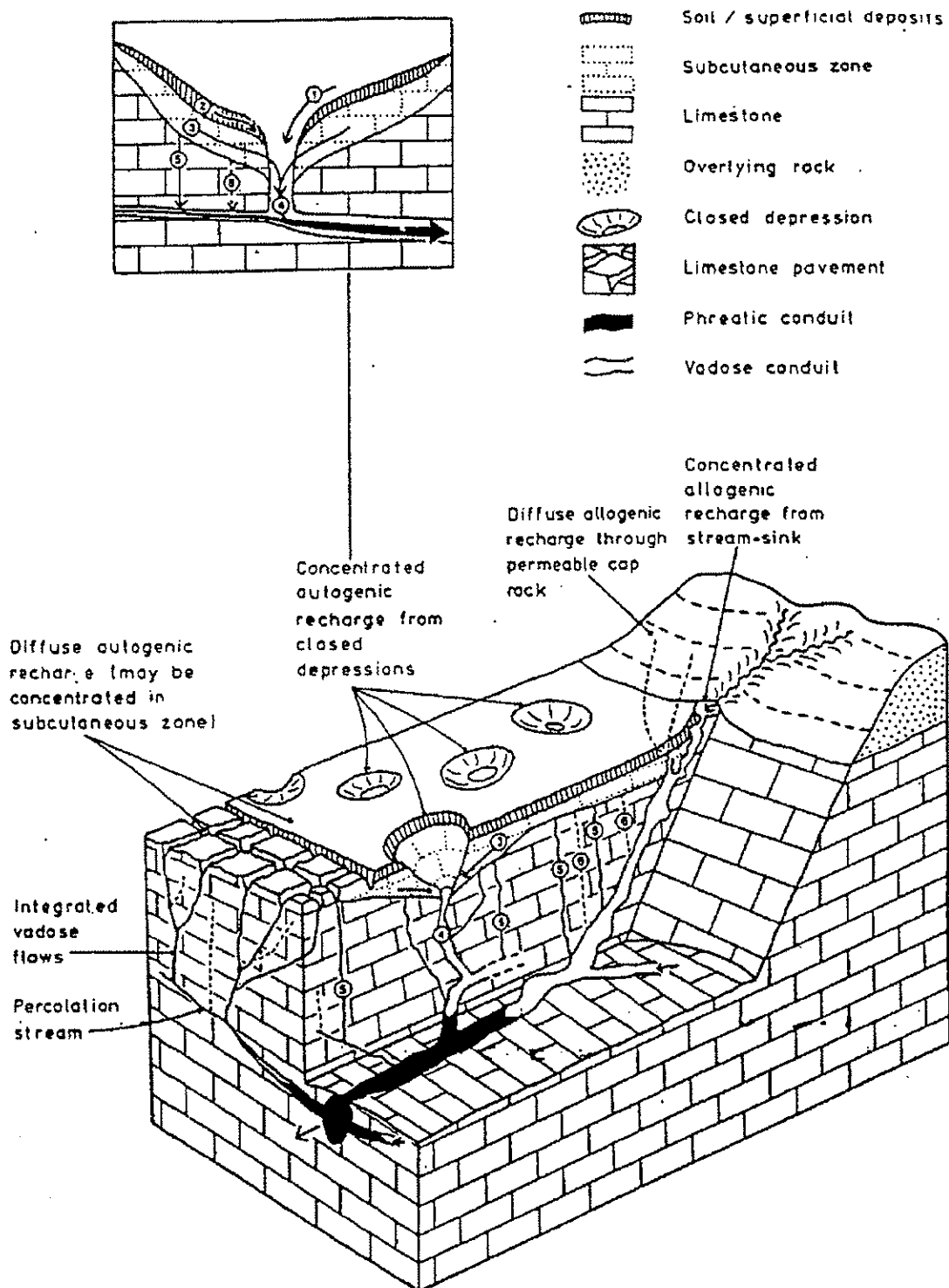


**Figure 3.1-1: Site Location
Pfizer Pharmaceuticals, LLC
Barceloneta, PR**



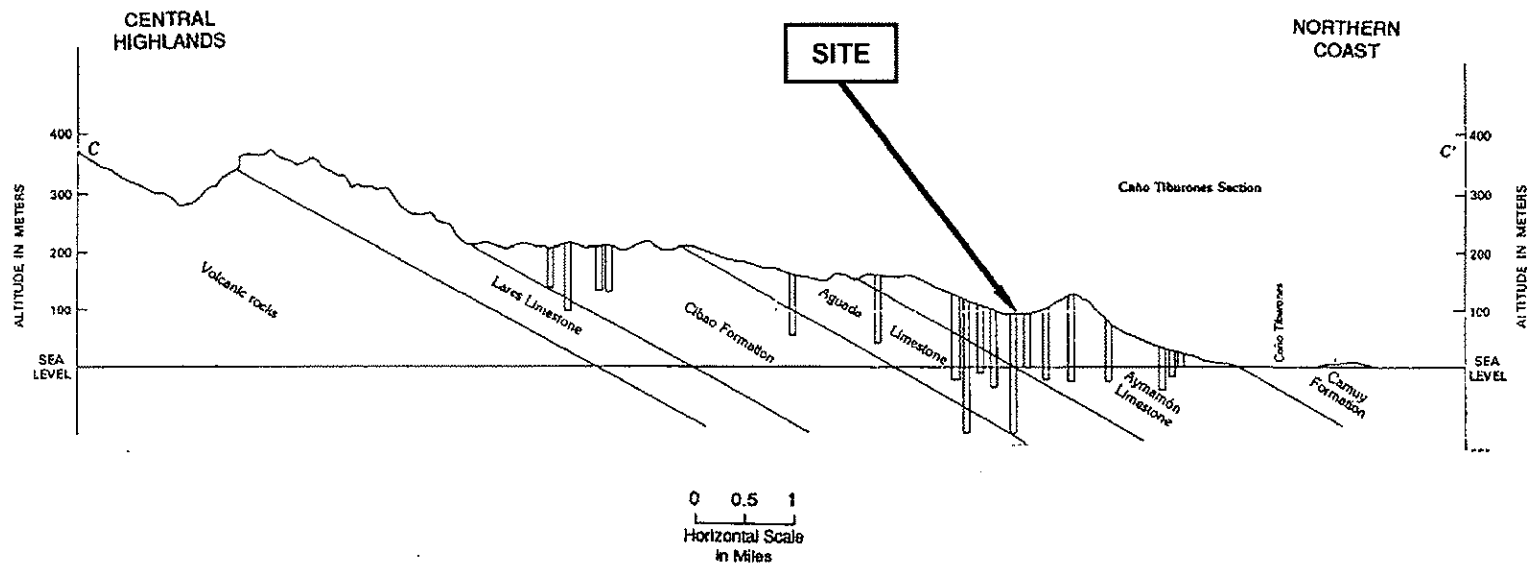
2777726

Source: GIUSTI, 1985

TYPICAL KARST LANDFORMS AND SUBSURFACE FEATURES

PFIZER PHARMACEUTICALS, LLC
BARCELONETA, PUERTO RICO

TRC
Figure 3.1-2



Source: GIUSTI, 1978

CROSS SECTION FROM CENTRAL HIGHLANDS TO NORTHERN COAST

PFIZER PHARMACEUTICALS, LLC
BARCELONETA, PUERTO RICO

TRC
Figure 3.1-3



Blanket deposits

QTb, Clayey quartz sand and sandy clay; moderate reddish brown, moderate yellowish brown, light brown, and pinkish gray; locally cemented by iron oxides, calcareous sandstone mixtures of medium and fine quartz grains and kaolinitic clay; quartz sand to clay ratios commonly range from 10:1 to 30:1; deposits probably average more than 4 meters thick and locally may exceed 30 meters in thickness. Blanket deposits are stranded sands that have been interbedded concurrently with the solution of underlying limestone; they are found intermittently overlying the cemented dunes and all the Tertiary formations exposed in the Barceloneta quadrangle and include residues from these strata.

QTs, Quartz sand, medium- and fine-grained, light-gray to white; commonly contains less than 2 percent clay and other impurities ("silica sand"), probably averages more than 2 meters in thickness. Monomineralic gross composition probably reflects general purity of original streambed sand, explained by leaching.

UNCONFORMITY



Canuy Limestone

Limestone, medium- to fine-grained, pure and somewhat clayey, very pale orange, grayish orange, yellowish gray, and light brown, interbedded with pale yellowish orange, grayish orange, and light gray chalk, clayey chalk, and marl, commonly thick-bedded, locally highly fossiliferous; some beds contain minor but conspicuous amounts of quartz grains. Limestone conglomerate, composed of pure very-fine grained limestone in a matrix of somewhat clayey chalk, occurs locally at the base. About 150 meters of the Canuy Limestone occurs in the quadrangle. At many places Canuy strata have been recrystallized with consequent development of veins and blocks of clay calcite. This recrystallization, which is most evident in rocks less than 10 meters above sea-level, locally obscures the contact between the somewhat clayey Canuy and the underlying pure Aymamón Limestone.

UNCONFORMITY



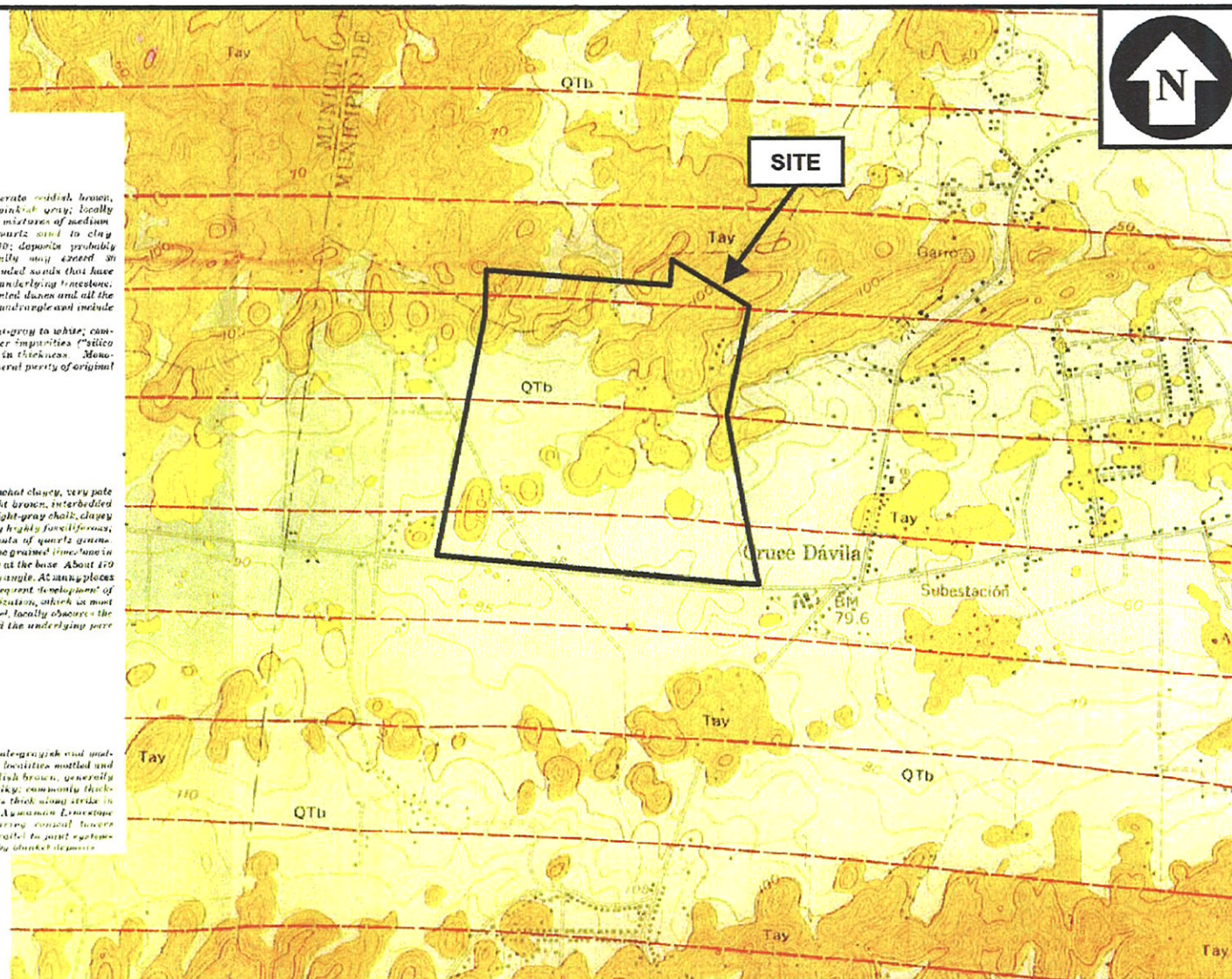
Aymamón Limestone

Limestone, very fine- and fine-grained, white to pale grayish and moderate shades of orange, yellow, and pink, at many localities mottled and streaked light brown, light gray, and pale reddish brown, generally very pure, locally coarsely fragmental and chalky; commonly thick-bedded, moderately fossiliferous; about 205 meters thick along strike in the middle of the quadrangle. Solution of the Aymamón Limestone typically develops a karst topography featuring conical towers, irregular and steep-sided ridges (peaks), parallel to joint systems or to the strike, with intervening basins covered by blanket deposits.

— A — 60 — ? — —

Structure contours

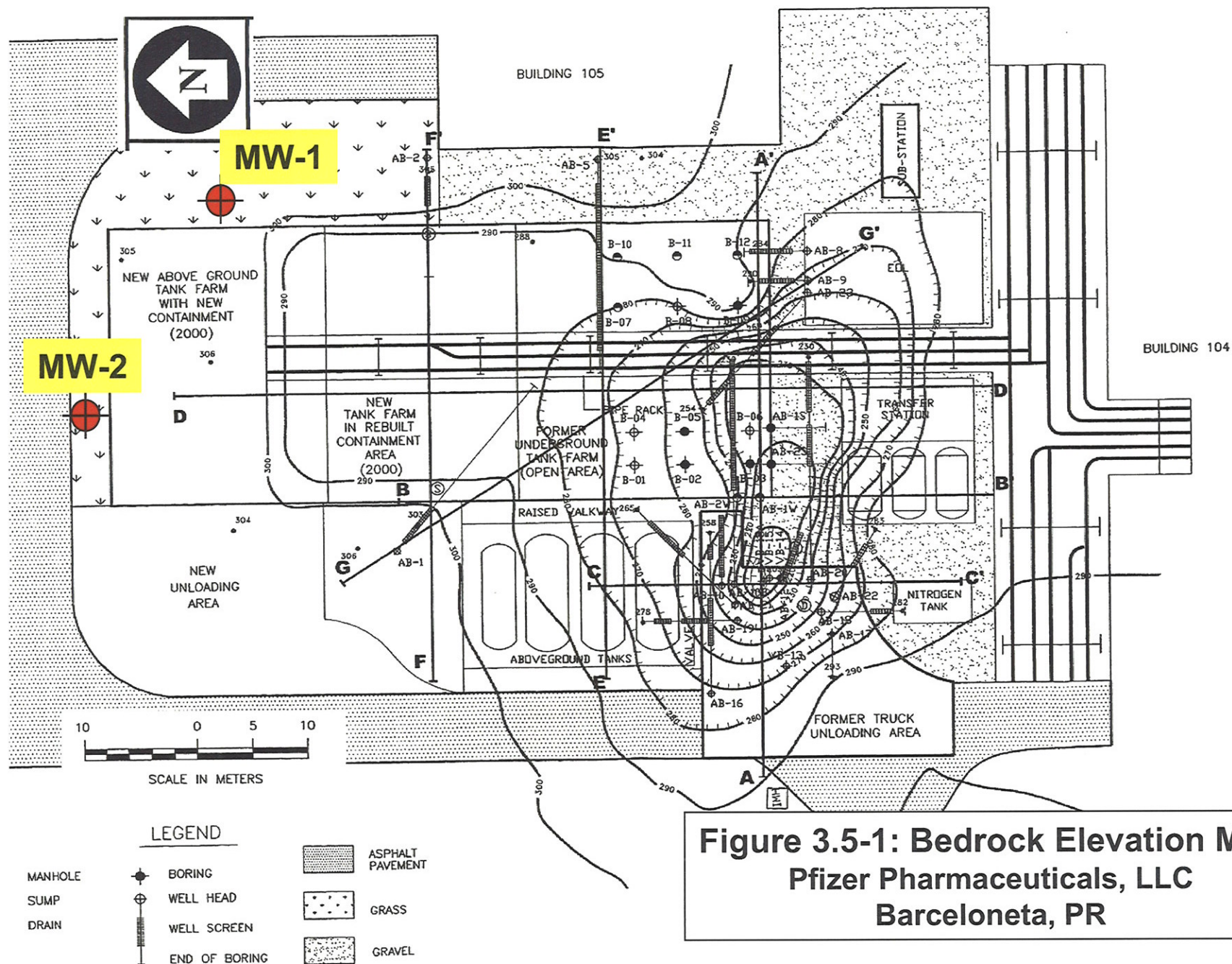
A, Drawn on the top of the Agüada Limestone

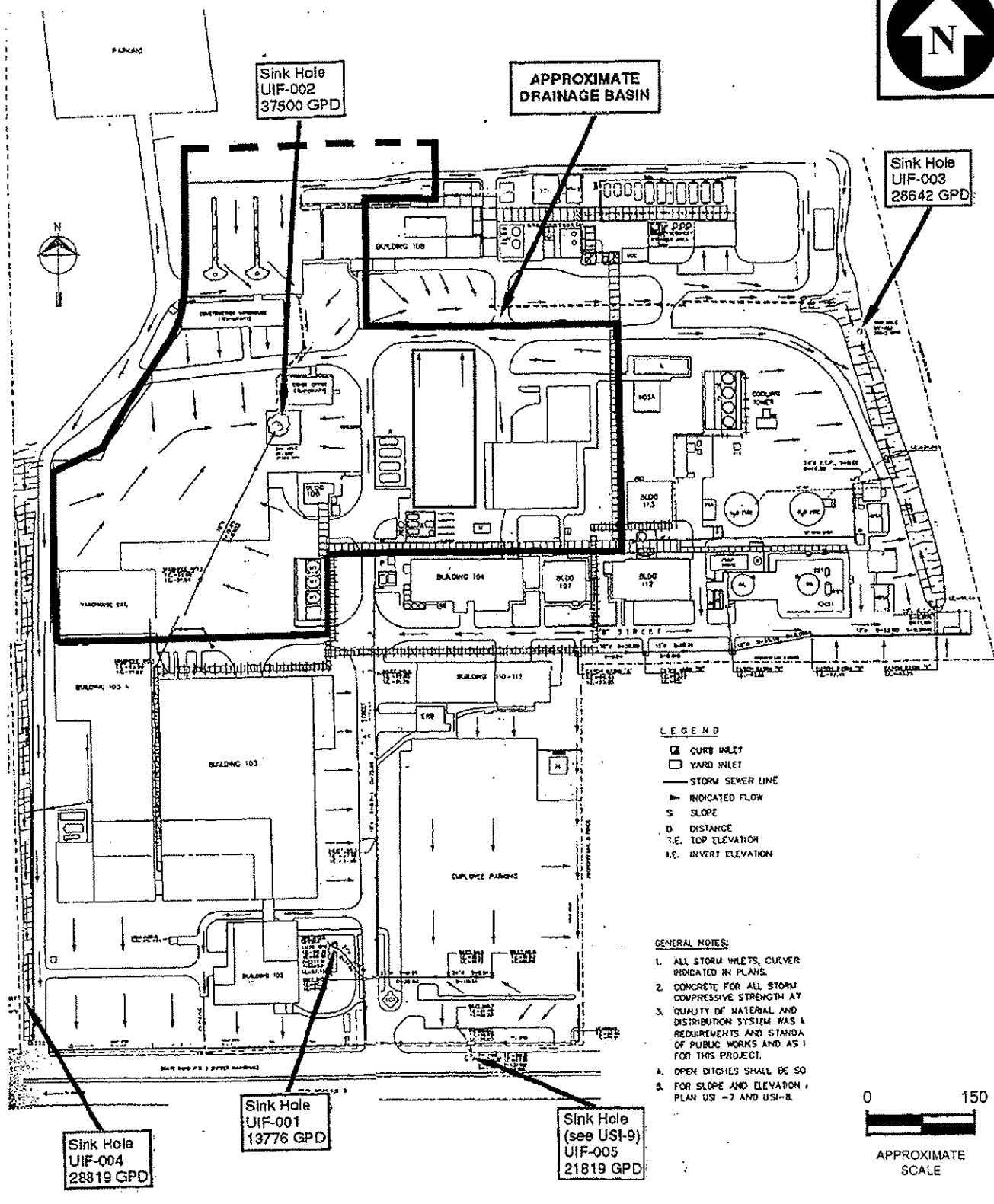
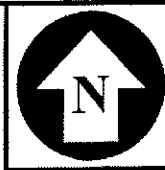


GEOLOGIC MAP

PFIZER PHARMACEUTICALS, LLC
BARCELONETA, PUERTO RICO

TRC
Figure 3.1-4

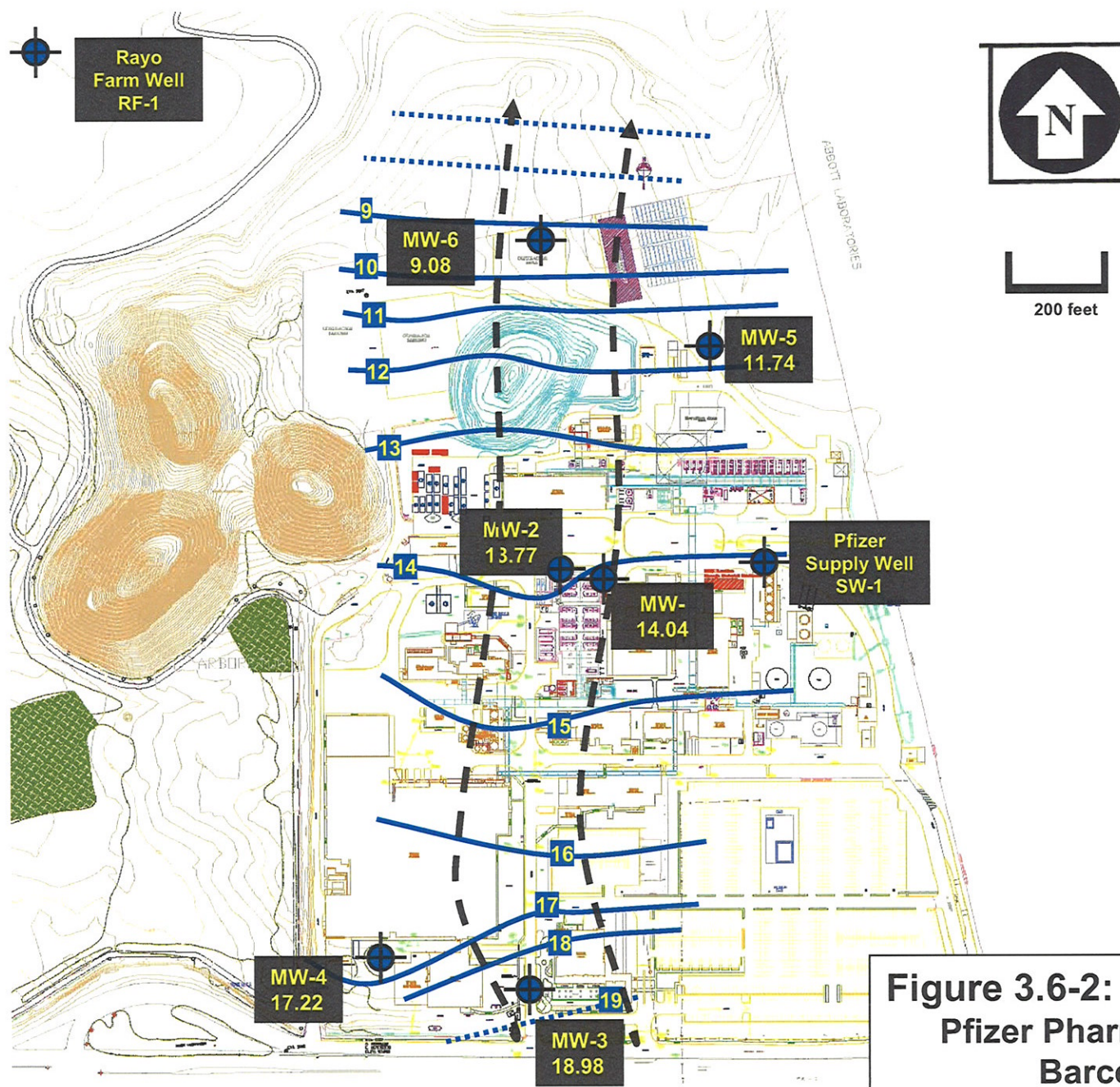




SURFACE WATER DRAINAGE MAP

PFIZER PHARMACEUTICALS, LLC
BARCELONETA, PUERTO RICO

TRC
Figure 3.6-1



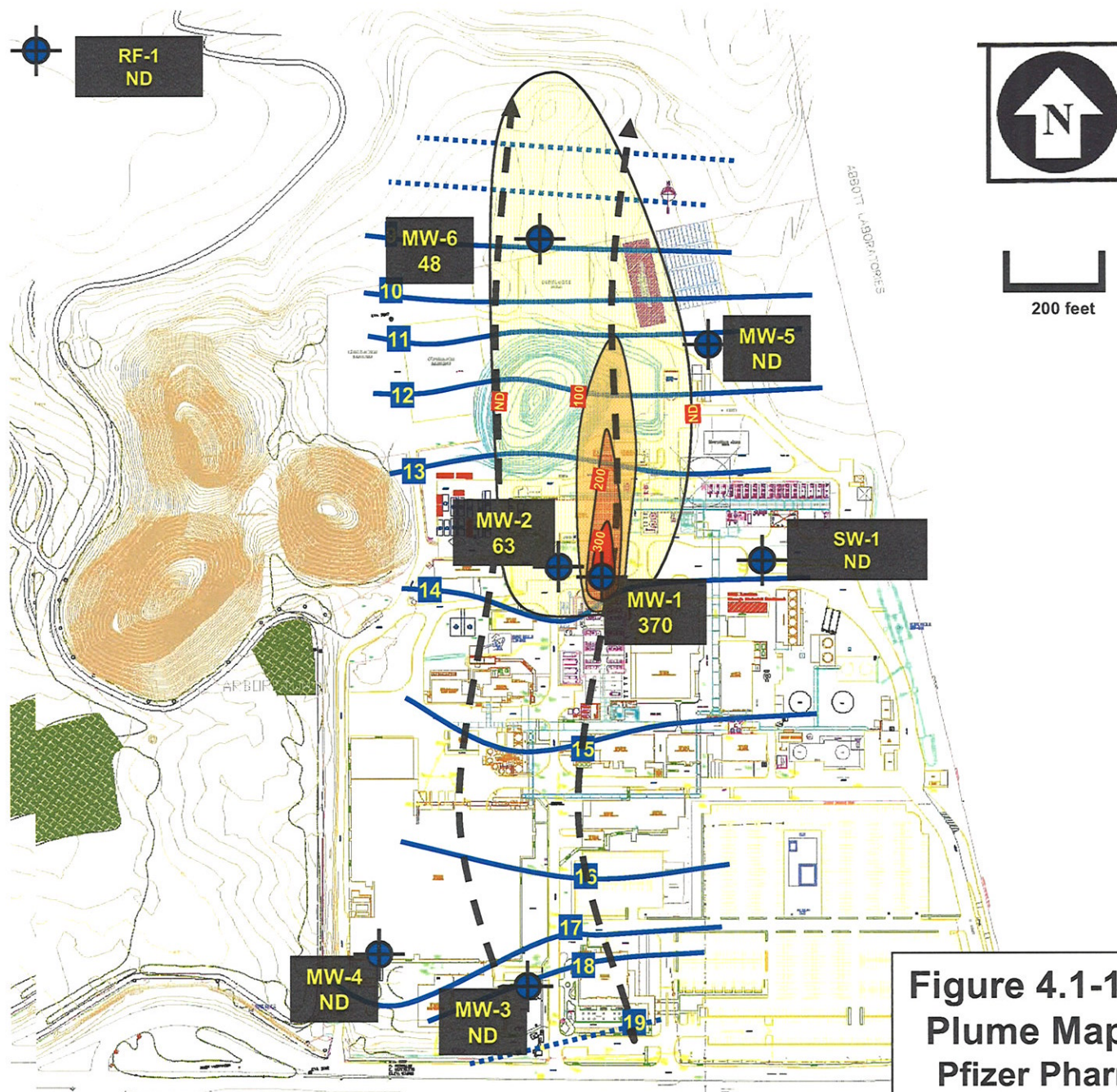


**Figure 4.1-1: Chlorobenzene Plume Map (October 2006)
Pfizer Pharmaceuticals, LLC
Barceloneta, PR**

**Figure 5.4-1: BIOSCRN Input
Model Screen
Chlorobenzene Plume Extent
Pfizer Pharmaceuticals, LLC
Barceloneta, PR**

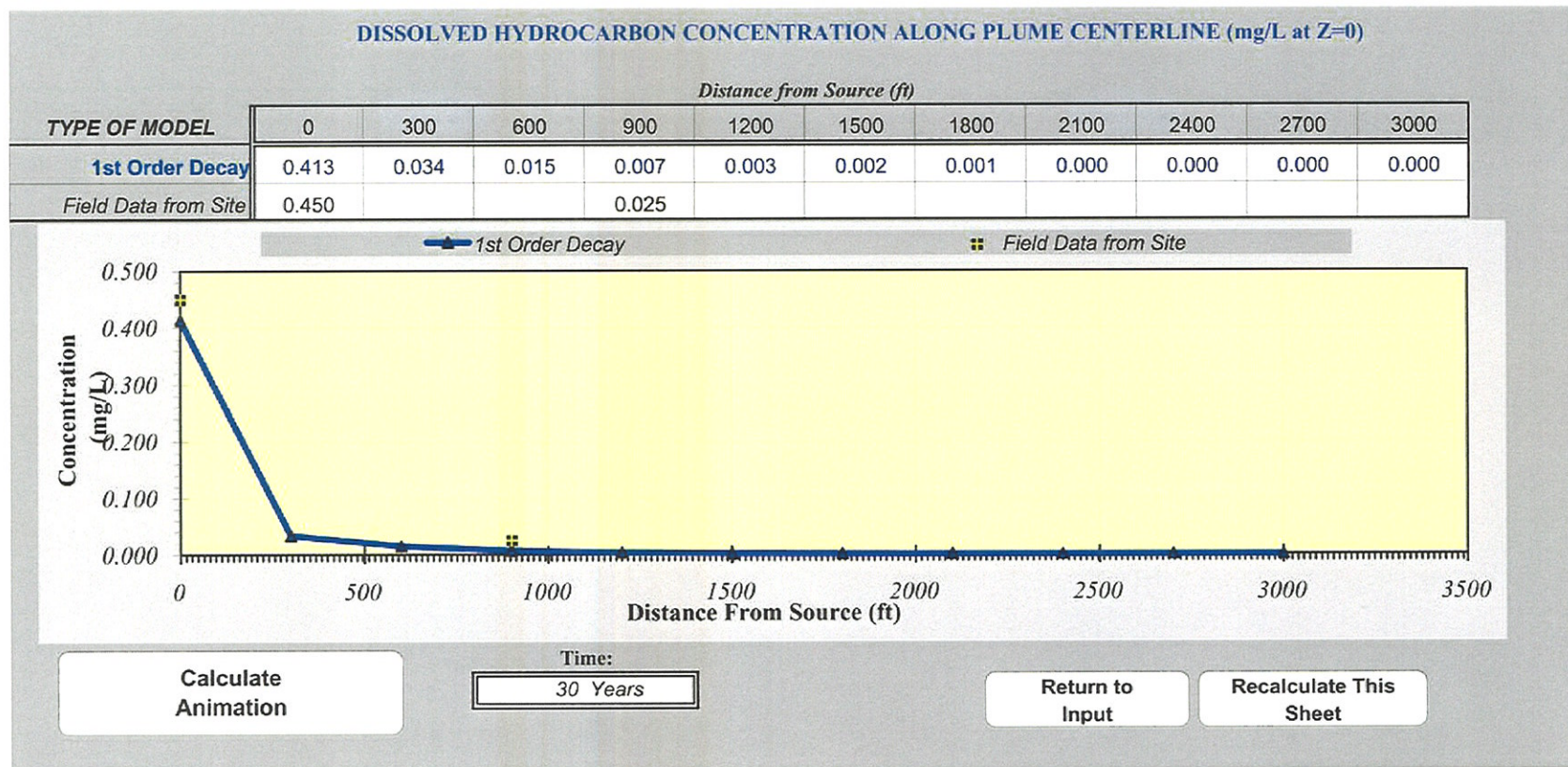


**Figure 5.4-2: BIOSCRN Input
Model Output
Chlorobenzene Plume Extent
Pfizer Pharmaceuticals, LLC
Barceloneta, PR**

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Data Input Instructions:

1. Enter value directly....or
 2. Calculate by filling in grey cells below. (To restore formulas, hit button below).
- Variable* 20 Value calculated by model. (Don't enter any data).

Pfizer
SWMU 11
Run Name

Modeled Area Length* (ft) 3000
Modeled Area Width* (ft) 300
Simulation Time* (yr) 30

5. GENERAL

Seepage Velocity* (ft/yr) 2586.6
Hydraulic Conductivity K (cm/sec) 1.5E-01
Hydraulic Gradient i (ft/ft) 0.005
Porosity n (-) 0.3

6. SOURCE DATA

Source Thickness in Sat. Zone* (ft) 50

Width* (ft)	Conc. (mg/L)*
150	0.005
75	0.076
0	0.45
75	0.076
150	0.005

Source Half-life (see Help):

Inst. React. <1 1 (yr)
Soluble Mass 6000 (Kg)
In Source NAPL Soil

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	0	300	600	900	1200	1500	1800	2100	2400	2700	3000
Dist. from Source (ft)	45										

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN CENTERLINE **RUN ARRAY** **Help** **Recalculate This Sheet**

View Output **View Output** **Paste Example Dataset** **Restore Formulas for Vs, Dispersivities, R, lambda, other**

1. HYDROGEOLOGY

Seepage Velocity* (ft/yr) 2586.6
Hydraulic Conductivity K (cm/sec) 1.5E-01
Hydraulic Gradient i (ft/ft) 0.005
Porosity n (-) 0.3

2. DISPERSION

Longitudinal Dispersion alpha x (ft) 24.5
Transverse Dispersion alpha y (ft) 2.4
Vertical Dispersion alpha z (ft) 0.0
Estimated Plume Length Lp (ft) 1000

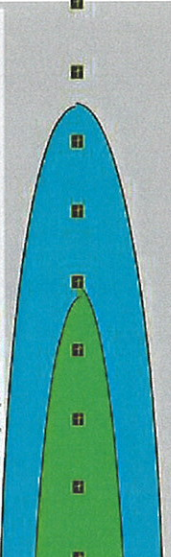
3. ADSORPTION

Retardation Factor* R (-) 18.0
Soil Bulk Density rho (kg/l) 1.7
Partition Coefficient Koc (L/kg) 300
Fraction Organic Carbon foc (-) 1.0E-2

4. BIODEGRADATION

1st Order Decay Coeff* lambda (per yr) 1.4E-1
Solute Half-Life t-half (year) 5.00
or Instantaneous Reaction Mode
Delta Oxygen* DO (mg/L) 1.65
Delta Nitrate* NO3 (mg/L) 0.7
Observed Ferrous Iron* Fe2+ (mg/L) 16.6
Delta Sulfate* SO4 (mg/L) 22.4
Observed Methane* CH4 (mg/L) 6.6

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



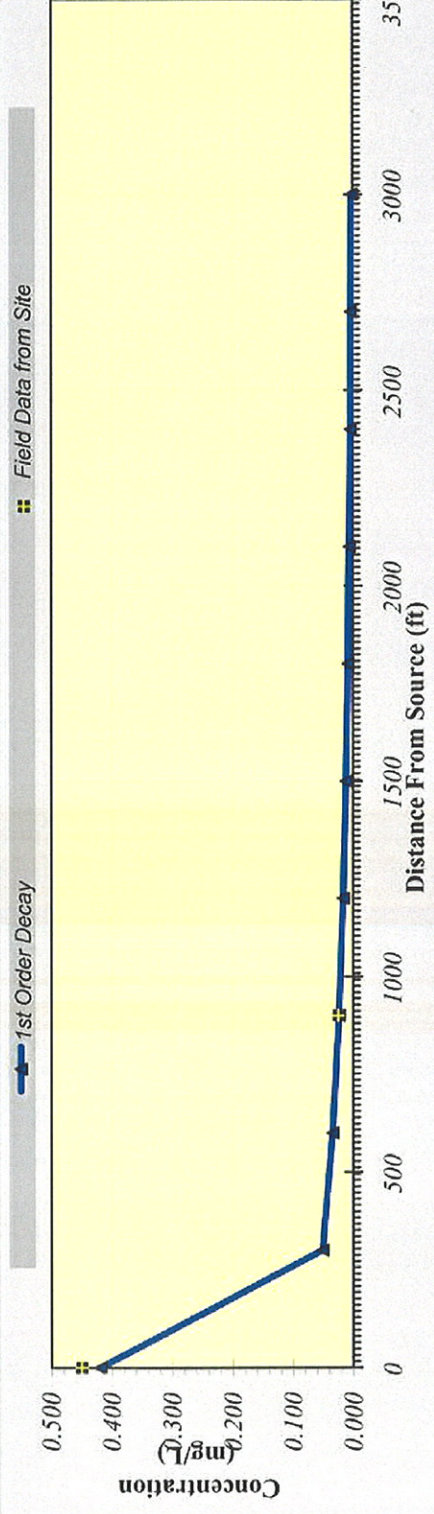
View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "q"

Figure 5.4-3: BIOSCRN Chlorobenzene Plume Extent Calibrated Model Screen Pfizer Pharmaceuticals, LLC Barceloneta, PR

DISSOLVED HYDROCARBON CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

TYPE OF MODEL	Distance from Source (ft)										
	0	300	600	900	1200	1500	1800	2100	2400	2700	3000
1st Order Decay	0.419	0.051	0.034	0.023	0.016	0.011	0.008	0.006	0.004	0.003	0.002
Field Data from Site	0.450			0.025							



Calculate Animation

Time: 30 Years

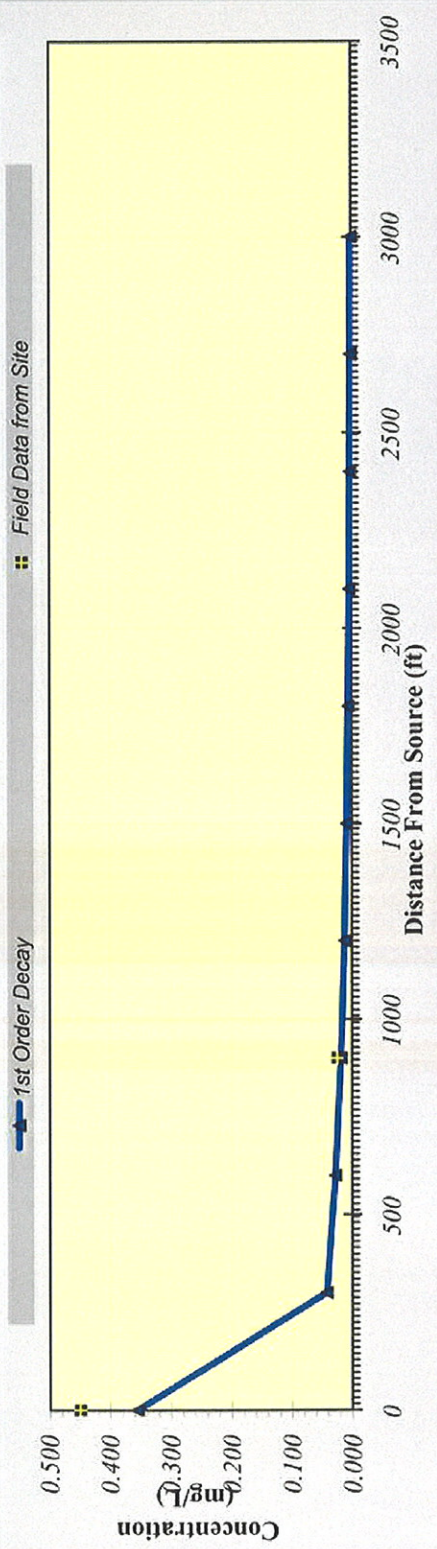
Return to Input

Recalculate This Sheet

Figure 5.4-4: BIOSCRN Chlorobenzene Plume Extent Calibrated Model Output
Pfizer Pharmaceuticals, LLC
Barceloneta, PR

DISSOLVED HYDROCARBON CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

TYPE OF MODEL	Distance from Source (ft)										
	0	300	600	900	1200	1500	1800	2100	2400	2700	3000
1st Order Decay	0.355	0.042	0.028	0.018	0.012	0.008	0.006	0.004	0.003	0.002	0.001
Field Data from Site	0.450			0.025							



Calculate Animation

Time:

100 Years

Return to Input

Recalculate This Sheet

Figure 5.4-5: BIOSCRN Model Chlorobenzene Plume Extent Prediction at 100 Years
Pfizer Pharmaceuticals, LLC
Barceloneta, PR

DRAFT
**RCRA FACILITY INVESTIGATION
SUPPLEMENTAL REPORT**
VOLUME 2: APPENDICES

***PFIZER PHARMACEUTICALS, LLC.
BARCELONETA, PUERTO RICO***

EPA I.D. No. PRD-090346909

March 2007

TRC ENVIRONMENTAL CORPORATION
650 Suffolk Street
Wannalancit Mills
Lowell, Massachusetts 01854
(978) 970-5600

Appendix A
Supplemental RFI
Boring Logs and Well Constructions



TRC Environmental
Foot of John Street
Lowell MA 01852
Telephone:
Fax:

BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-1

LOCATION Pfizer Plant, Barceloneta, P.R.

DATE DRILLED Started 1/15/2003 Completed 1/27/2003

DRILLING CONTRACTOR Safety Construction & Engineering

BOREHOLE DIAMETER 5.5"

DRILLING METHOD Dual Reverse Air Rotary

SCREEN TYPE/SLOT 2" PVC 0.010-slot

SAMPLING METHOD

FILTER PACK TYPE Silica Sand Filter Pack

GROUND ELEVATION NA

SEAL TYPE Silica Sand Filter Pack

TOP OF PVC NA

DEPTH TO WATER (feet below ground) 295.0'

LOGGED BY J.Feliciano

GROUND WATER ELEVATION

REMARKS East side of Tank Farm

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
1					6" layer of loose, coarse, gravel-size, volcanic rock fragments, (GRAVEL FILL).	0.0		
2					Stiff Clay (reworked native clay), yellowish brown to reddish brown, some gravel-size, angular limestone fragments, little gravel fill.			
3								
4						0.0		
5					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)			
6								
7								
8								
9								
10					Hard, pinkish white to pink, dense, Fossiliferous Limestone.	0.0		
11								
12					Hard to very hard, pinkish white to yellowish white Fossiliferous Limestone. Numerous small voids present.	0.0		
13								
14								
15								
16					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)	0.0		
17								
18					Potential Cavity from 16'-31'.			
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31					Some hard, pinkish white Chalky Limestone, fossiliferous.	0.0		
32					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)			
33								
34								
35					Cavity from 33'-48'.			



TRC Environmental
Foot of John Street
Lowell MA 01852
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BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-1

DATE DRILLED Started 1/15/2003 Completed 1/27/2003

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48						0.0		
49					Moderately hard to hard Fossiliferous Limestone, white to pale yellow.	0.0		
50					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)			
51								
52								
53								
54								
55								
56						0.0		
57					Moderately hard, pinkish white to yellowish white Chalk Limestone, fossiliferous, some coral fragments (poorly cemented).			
58								
59								
60								
61								
62								
63								
64						0.0		
65					Moderately hard, porous, Chalk Limestone, pinkish white to yellowish white.			
66								
67								
68						0.0		
69					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)			
70								
71								
72								
73								
74								
75								



TRC Environmental
Foot of John Street
Lowell MA 01852
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BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

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DATE DRILLED Started 1/15/2003 Completed 1/27/2003

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
76								
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								
89								
90								
91								
92								
93								
94								
95								
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								

Concrete
Aggregate and
Bentonite Mix



TRC Environmental
Foot of John Street
Lowell MA 01852
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BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-1

DATE DRILLED Started 1/15/2003 Completed 1/27/2003

DEPTH: (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
116								
117								
118								
119								
120								
121								
122								
123								
124								
125								
126								
127								
128								
129								
130								
131								
132								
133								
134								
135								
136								
137								
138								
139								
140								
141					Moderately hard to dense, partly friable Fossiliferous Sandy Limestone (Calcarenite), white to pale yellow, small voids.	0.0		
142								
143								
144								
145					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)	0.0		
146								
147								
148								
149								
150								
151								
152								
153								
154								
155								



TRC Environmental
Foot of John Street
Lowell MA 01852
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BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-1

DATE DRILLED Started 1/15/2003 Completed 1/27/2003

DEPTH, (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
156								
157								
158								
159								
160								
161								
162						0.0		
163					Frable, highly weathered, pale yellow, highly-solutionized, Fossiliferous Limestone (recemented limestone breccia). NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)	0.0		
164								
165								
166								
167								
168								
169								
170								
171								
172								
173						0.0		
174					Frable, highly weathered, pinkish white to yellowish white, highly-solutionized, Fossiliferous Limestone (recemented limestone breccia).			
175								
176					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)	0.0		
177								
178					Cavity from 176'-196'.			
179								
180								
181								
182								
183								
184								
185								
186								
187								
188								
189								
190								
191								
192								
193								
194								
195								



TRC Environmental
Foot of John Street
Lowell MA 01852
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BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-1

DATE DRILLED Started 1/15/2003 Completed 1/27/2003

DEPTH, (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
196					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)	0.0		
197								
198								
199								
200								
201								
202								
203								
204								
205								
206								
207								
208								
209								
210					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)	0.0		
211								
212								
213								
214								
215								
216								
217								
218								
219								
220								
221								
222								
223								
224								
225								
226								
227								
228								
229								
230								
231								
232								
233								
234								
235								

← Cement/Bentonite
Grout



TRC Environmental
Foot of John Street
Lowell MA 01852
Telephone:
Fax:

BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-1

DATE DRILLED Started 1/15/2003 Completed 1/27/2003

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
236								
237								
238								
239								
240						0.0		
241					Moderately hard to friable, highly solutionized, light pink and pale yellow, fossiliferous, re-cemented Limestone Breccia.			
242								
243								
244						0.0		
245					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)			
246								
247								
248								
249								
250								
251								
252								
253								
254								
255								
256								
257								
258								
259								
260								
261								
262								
263								
264								
265								
266								
267								
268								
269								
270								
271								
272								
273								
274								
275								



TRC Environmental
Foot of John Street
Lowell MA 01852
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BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-1

DATE DRILLED Started 1/15/2003 Completed 1/27/2003

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
276					Moderate to poor recovery of very hard, pale yellow to pink, Limestone with some oxidized concretions and partly friable to well cemented, pale yellow to pink Calcarenite.	0.0		
277								
278								
279								
280					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)	0.0		 ← Betonite Seal
281								
282								
283								
284								
285								
286								
287								
288								
289								
290								
291								
292								
293								
294								
295								
296								
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302								
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304								
305								
306								
307								
308								
309								
310								
311								
312								
313								
314								
315								



TRC Environmental
Foot of John Street
Lowell MA 01852
Telephone:
Fax:

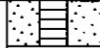
BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-1

DATE DRILLED Started 1/15/2003 Completed 1/27/2003

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
316					Bottom of Well at 316.2'.	0.0		



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BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-2

LOCATION Pfizer Plant, Barceloneta, P.R.

DATE DRILLED Started 1/28/2003 Completed 1/29/2003

DRILLING CONTRACTOR Safety Construction & Engineering

BOREHOLE DIAMETER 5.5"

DRILLING METHOD Dual Reverse Air Rotary

SCREEN TYPE/SLOT 2" PVC 0.010-slot

SAMPLING METHOD

FILTER PACK TYPE Silica Sand Filter Pack

GROUND ELEVATION NA

SEAL TYPE Silica Sand Filter Pack

TOP OF PVC NA

DEPTH TO WATER (feet below ground) 296.0'

LOGGED BY J.Feliciano

GROUND WATER ELEVATION

REMARKS Northwest corner of Tank Farm

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
1					6" layer of loose, coarse, gravel-size, volcanic rock fragments (GRAVEL FILL)	0.0		
2					Stiff Clay, trace to little fine to very fine sand, mixed with clayey sand, brownish red, trace dark manganese(?) stains			
3								
4					Friable, sandy Chalk, yellowish white to pale yellow.	0.0		
5								
6					Friable to moderately hard, sandy Chalk, pink.	0.0		
7								
8								
9								
10								
11								
12					Hard, moderately solutionized, Fossiliferous Limestone Breccia, pale yellow to yellow. Numerous small voids filled with precipitated calcite.	0.0		
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)	0.0		
25								
26								
27								
28								
29								
30								
31								
32					Some hard, pinkish white, calcite rich, dense Sandy Limestone, fossiliferous. Precipitated out calcite.	0.0		
33								
34								
35								



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BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-2

DATE DRILLED Started 1/28/2003 Completed 1/29/2003

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
36					NO RECOVERY (HARD ROCK).	0.0		
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE Limestone)	0.0		
49								
50								
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								
61								
62								
63								
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71								
72								
73								
74								
75								



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Foot of John Street
Lowell MA 01852
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BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-2

DATE DRILLED Started 1/28/2003 Completed 1/29/2003

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
76								
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								
89								
90								
91								
92								
93								
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102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								

Concrete
Aggregate and
Bentonite Mix



TRC Environmental
Foot of John Street
Lowell MA 01852
Telephone:
Fax:

BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-2

DATE DRILLED Started 1/28/2003 Completed 1/29/2003

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
116								
117								
118								
119								
120								
121								
122								
123								
124								
125								
126								
127								
128								
129								
130								
131								
132								
133								
134								
135								
136								
137								
138								
139								
140								
141								
142								
143								
144						0.0		
145					Minor recovery of soft, yellowish brown Clay and variable white to yellow to pink Limestone Fragements.			
146						0.0		
147					Moderately friable to hard, highly fossiliferous, dense Limestone Breccia, pale orange to yellowish white.			
148								
149								
150						0.0		
151					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)			
152								
153								
154								
155								



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BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-2

DATE DRILLED Started 1/28/2003 Completed 1/29/2003

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
156								
157								
158								
159								
160								
161								
162								
163								
164								
165								
166								
167								
168								
169								
170								
171								
172								
173								
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175								
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184								
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192								
193								
194								
195								



TRC Environmental
Foot of John Street
Lowell MA 01852
Telephone:
Fax:

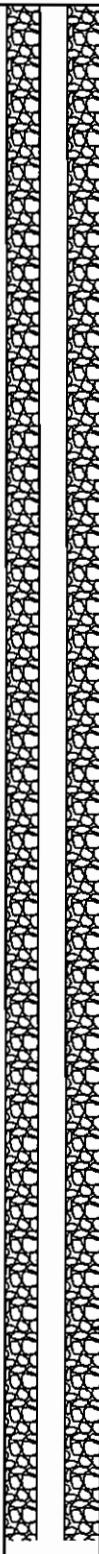
BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-2

DATE DRILLED Started 1/28/2003 Completed 1/29/2003

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
196					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)	0.0		
197					Pipes drop freely from 196' - 204'.			
198								
199								
200								
201								
202								
203								
204					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LIMESTONE)	0.0		
205					Very hard rock conditions.			
206								
207								
208					208' - Hard Pink Limestone fragments recovered in wash.			
209								
210								
211								
212								
213								
214								
215								
216								
217								
218								
219								
220								
221								
222								
223								
224								
225								
226								
227								
228								
229								
230								
231								
232								
233								
234								
235								

Cement/Bentonite Grout



TRC Environmental
Foot of John Street
Lowell MA 01852
Telephone:
Fax:

BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-2

DATE DRILLED Started 1/28/2003 Completed 1/29/2003

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
236								
237								
238								
239								
240								
241								
242								
243								
244								
245								
246								
247								
248					248' Harder Material			
249								
250						0.0		
251					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE Limestone).			
252								
253								
254								
255								
256								
257								
258								
259								
260								
261								
262								
263								
264								
265								
266								
267								
268								
269								
270								
271								
272								
273								
274								
275								



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Lowell MA 01852
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BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-2

DATE DRILLED Started 1/28/2003 Completed 1/29/2003

DEPTH (ft. BGS)	BLOW COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
276								
277								
278								
279								
280					NO RECOVERY (VOIDS AND/OR HIGHLY FRIABLE LESTONE)	0.0		
281								
282					Void from 282' - 285'.			
283								
284								
285								
286								
287								
288								Bentonite Seal
289								
290								
291								
292								
293								
294								
295								Silica Sand Filter Pack
296								
297								
298								
299								
300								
301								
302								
303								
304								
305								
306								
307								
308								
309								2" PVC 0.010-slot
310								
311								
312								
313								
314								
315								



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BORING/WELL CONSTRUCTION LOG

Pfizer Pharmaceutical

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-2

DATE DRILLED Started 1/28/2003 Completed 1/29/2003

DEPTH (ft. BGS)	BLOW, COUNTS	RECOVERY (feet)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	FID (ppm)	SAMPLE ID#	WELL DIAGRAM
316					Bottom of Well at 316.3'.	0.0		



TRC ENVIRONMENTAL
116 John Street, Boot Mills South
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Telephone: (978) 970-5600
Fax: (978) 453-1995

BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-3

LOCATION Southern end of facility.

DATE DRILLED 6/23/06-6/30/06

DRILLING CONTRACTOR Safety Construction Engineering

DRILLER FOREMAN Angel Soler

DRILLING METHOD Dual Tube

SCREEN TYPE/SLOT Schedule 40 PVC 10-slot

SAMPLING METHOD Photovac 20/20 PID

FILTER PACK TYPE #2 Filter Sand

GROUND ELEVATION

SEAL TYPE Bentonite Chips

TOP OF PVC

APPROXIMATE DEPTH TO WATER (Feet) 277

LOGGED BY M.Oliveira

GROUND WATER ELEVATION

REMARKS

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
1						Asphalt		
2						Light brown to brown, fine gravel with some shells. (Driller reported it was wet and likely fill material) with CLAY coating. Highly broken up due to drill method.		
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17						White LIMESTONE covered with brown to reddish brown clay. The rock is soft.		
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29						Brown to light brown CLAY covering broken shells and white limestone.		
30								
31								
32								
33						LIMESTONE with large to small voids. White to light pink in color, becoming more pink at the bottom.		
34								
35								
36								
37						Highly fossilized LIMESTONE (white) with large void spaces. Rust colored solution areas with lots of coral.		
38						Light brown to light pink, high pulverized LIMESTONE. Rust colored stains present on larger pieces which also have high percent dissolved zones.		
39								
40						Light brown to white LIMESTONE. Very solid cores returning with only little pulverized stone. Only little dissolved zones with trace rust coloration in them. Fossils noted.		
41								
42						Light brown to white LIMESTONE. Very solid cores returning with only little pulverized stone. Only little dissolved zones with trace rust coloration in them. Fossils noted. Some rust coloring.		
43								
44								
45						Light pink LIMESTONE with trace dissolved areas and some rust colored areas.		
46								
47								
48								
49								
50								
51								
52								
53						Light pink LIMESTONE with trace dissolved areas and some rust colored areas.		
54								
55								
56								
57						Light pink to white LIMESTONE with little dissolved area with rust coloration.		
58								
59								
60								
61						Orangy brown CLAY covering limestone. Some limestone pieces.		
62								
63								
64								
65								
66						Voids - No Returns.		
67								
68								
69								
70								

Cement
Bentonite
Grout



TRC ENVIRONMENTAL
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Lowell, MA 01852
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Fax: (978) 453-1995

BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-3

DATE DRILLED 6/23/06-6/30/06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
71								
72								
73								
74								
75								
76								
77						Voids - No returns.		
78								
79								
80								
81								
82						Small, highly pulverized LIMESTONE pieces (white and pink color) with dissolved areas covered with trace brown clay.		
83								
84								
85								
86								
87								
88								
89								
90								
91								
92								
93								
94								
95								
96						Large pink LIMESTONE pieces with ~ 30% white pieces, 70% pink. Trace rust coloration. Some dissolved areas.		
97						Large pink LIMESTONE pieces with ~ 30% white pieces, 70% pink. Trace rust coloration. Some dissolved areas. More pulverization.		
98								
99								
100								
101						Large pink LIMESTONE pieces with ~ 30% white pieces, 70% pink. Trace rust coloration. Some dissolved areas. More pulverization.		
102								
103								
104								
105						Large brown LIMESTONE pieces. Trace rust coloration. Some dissolved areas. More pulverization.		
106								
107								
108						Dark pink to reddish LIMESTONE with some calcite, very crystalline, trace void spaces, trace rust coloring, white coloration and yellow noted periodically.		
109								
110								
111								
112								
113								
114								
115								
116								
117						Light brown to light pink LIMESTONE ~ 80% highly pulverized, 20% large pieces, trace dissolved areas.		
118								
119								
120								
121						Light brown to light pink LIMESTONE ~ 80% highly pulverized, 20% large pieces, trace dissolved areas.		
122								
123								
124								
125								
126						Dark pink LIMESTONE with some black layers, trace dissolved areas.		
127								
128								
129								
130						Dark pink LIMESTONE with some black layers, trace dissolved areas.		
131								
132								
133								
134								
135								
136								
137								
138						Dark pink LIMESTONE with some black layers, trace dissolved areas.		
139								
140								
141								
142								
143								
144								
145								
146								
147								
148								
149								



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-3

DATE DRILLED 6/23/06-6/30/06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
151						Dark pink LIMESTONE with some black layers, trace dissolved areas.		
152								
153								
154								
155								
156								
157								
158								
159								
160								
161								
162								
163								
164								
165								
166								
167								
168								
169								
170								
171								
172								
173								
174								
175								
176								
177						Pink LIMESTONE with white layerings, some dissolved areas, little black pockmarks. Highly crystalline limestone.		
178								
179								
180								
181								
182								
183								
184								
185								
186								
187								
188								
189								
190								
191								
192								
193								
194						Orangy brown silty CLAY covering white limestone with trace dissolved areas.		
195								
196								
197								
198								
199								
200								
201						Material recovered from plugged rods - 7 feet of cores light brown with some white LIMESTONE, some dissolved areas with highly crystalline calcite deposits, dissolved areas are light brown to rust colored, with very crystalline contents, trace shells present.		
202						Approximated depth of collapse.		
203								
204								
205								
206								
207								
208								
209								
210								
211								
212								
213								
214								
215								
216								
217								
218								
219								
220								
221								
222								
223								
224								
225								
226								
227								
228								
229								

Native
Backfill/
Collapse/
Cavern



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-3

DATE DRILLED 6/23/06-6/30/06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
231						Second 3 feet of 7 feet. White to light pink LIMESTONE with some rust colored highly crystalline dissolved areas, little shells present bottom 1 foot turns back to light brown, then back to white to light pink, and has some shells present.		
232								
233								
234								
235								
236								
237								
238								
239								
240								
241								
242								
243								
244								
245								
246								
247								
248								
249								
250								
251								
252								
253								
254								
255								
256								
257								
258								
259								
260								
261								
262								
263								
264								
265								
266						Last 1 foot of 7. White to pink with trace LIMESTONE, little highly crystalline dissolved areas, with trace shells. ~50% of dissolved area has light brown rust coloration, trace white calcite deposits.		
267								
268								
269								
270								
271								
272								
273								
274								
275								
276								
277						(Piece plugged in end of rod): Pink to light pink LIMESTONE, soft with little dissolved areas, trace white calcium deposits, rust coloration in dissolved areas, dry.		
278								
279								
280								
281								
282								
283								
284								
285								
286								
287						White to light pink LIMESTONE, pulverized to boulder-sized, covered with light brown silt. with some dissolved areas, highly crystalline, some shells, fossils and light brown coloration, trace black colored areas, trace dark pink areas.		
288								
289								
290								
291						White to light pink LIMESTONE, pulverized to boulder-sized, covered with light brown silt. with some dissolved areas, highly crystalline, some shells, fossils and light brown coloration, trace black colored areas, trace dark pink areas. Becoming more pink with depth.		
292								
293								
294								
295						White to light pink LIMESTONE, pulverized to boulder-sized, covered with light brown silt. with some dissolved areas, highly crystalline, some shells, fossils and light brown coloration, trace black colored areas, trace dark pink areas. Becoming more pink with depth.		
296								
297								
298								
299						White to light pink LIMESTONE, pulverized to boulder-sized, covered with light brown silt. with some dissolved areas, highly crystalline, some shells, fossils and light brown coloration, trace black colored areas, trace dark pink areas. Becoming more white with depth.		
300								
301								
302								
303						White to light pink LIMESTONE, pulverized to boulder-sized, covered with light brown silt. with some dissolved areas, highly crystalline, some shells, fossils and light brown coloration, trace black colored areas, trace dark pink areas. Becoming more pulverized.		
304								
305								
306								
307						White to light pink LIMESTONE, pulverized to boulder-sized,		
308								
309								

Native
Backfill/
Collapse/
Cavern

2" PVC
Slotted
Screen,
10-slot

Bentonite
Seal



TRC ENVIRONMENTAL
116 John Street, Boott Mills South
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Fax: (978) 453-1995

BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-3

DATE DRILLED 6/23/06-6/30/06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
311						covered with light brown silt. with some dissolved areas, highly crystalline, some shells, fossils and light brown coloration, trace black colored areas, trace dark pink areas. Less pulverized - crystalline calcite deposits noted, and no shell fossils.		
312								
313								
314								
315								
316						Color change from pink and white to light brown LIMESTONE with little pink coloring and all cobble sized pieces.		
317								
318						Color change from pink and white to light brown LIMESTONE with little pink coloring and all cobble sized pieces.		
319								
320								
321						Highly pulverized light brown, white, and pink LIMESTONE, cobble sized rock with trace dissolved areas, little rust colored areas, trace fossils.		
322								
323								
324								
325								
326								
327								
328						Highly pulverized light brown, white, and pink LIMESTONE, cobble sized rock with trace dissolved areas, little rust colored areas, trace fossils. Becoming more pink. At 330 feet, entire thumbnail sized shell fossil.		
329								
330								
331								
332								
333								
334						Turns dark pink and highly fossilized with broken shells.		
335								
336								
337								
338								
339								
340								
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376								
377								



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-4

LOCATION

DATE DRILLED 6/5/06 - 6/22/06

DRILLING CONTRACTOR Safety Construction Engineering

DRILLER FOREMAN Angel Soler

DRILLING METHOD Dual Tube

SCREEN TYPE/SLOT Schedule 40 PVC 10-slot

SAMPLING METHOD Photovac 20/20 PID

FILTER PACK TYPE #2 Filter Sand

GROUND ELEVATION

SEAL TYPE Bentonite Chips

TOP OF PVC

APPROXIMATE DEPTH TO WATER (Feet)

LOGGED BY C. Foster

GROUND WATER ELEVATION

REMARKS

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
1						Red brown CLAY, some caliche and non-native gravel fill (Dug by hand).		
2								
3								
4								
5								
6						Red brown CLAY with some silt, some mottled tan coloration. Fine sand throughout matrix to 16 feet.		
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17						Red brown CLAY with dark brown and tan mottled sand.		
18								
19								
20								
21						Red brown CLAY. Some tan fine sand, some silt.		
22								
23								
24								
25								
26						Red brown CLAY, Some tan fine sand, some silt.		
27								
28								
29								
30								
31								
32						White to yellow LIMESTONE with high fossil content to 38 feet.		
33								
34								
35								
36								
37								
38								
39						No recovery.		
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53						White LIMESTONE chunks with pink crystallization. Low recovery.		
54								
55								
56								
57						Periodic recovery of LIMESTONE pieces to 64 feet.		
58								
59								
60								
61								
62								
63						Whitish to pink crushed LIMESTONE chunks.		
64								
65								
66								
67								
68								
69								
70						Hit a CLAY seam with some brown mottling and fine sand.		



TRC ENVIRONMENTAL
116 John Street, Boott Mills South
Lowell, MA 01852
Telephone: (978) 970-5600
Fax: (978) 453-1995

BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-4

DATE DRILLED 6/5/06 - 6/22/06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
71								
72								
73								
74								
75						White crushed LIMESTONE.		
76								
77						Red brown to dark brown CLAY.		
78								
79								
80								
81						Alternating units of CLAY and LIMESTONE with cavities. Periodic		
82						recovery of dark brown to red brown clay, some fine sand and		
83						pieces of limestone recovered to 96 feet.		
84								
85								
86								
87								
88								
89								
90								
91								
92								
93								
94								
95								
96								
97						No Recovery.		
98								
99								
100								
101						Red brown to light tan CLAY, some limestone pieces, some fine		
102						sand.		
103								
104								
105								
106								
107								
108								
109								
110								
111						Red brown to light tan CLAY, some limestone pieces, some fine		
112						sand.		
113								
114								
115								
116						Brownish tan CLAY, some silt, some sand.		
117								
118								
119								
120								
121						Dark brown to black rounded MANGANESE nodules and limestone		
122						pieces, fine sand, and gravel throughout.		
123								
124								
125								
126						No Recovery.		
127								
128								
129								
130								
131								
132								
133								
134								
135								
136								
137								
138								
139								
140								
141								
142						Majority of materials are washed out, CLAY and limestone pieces.		
143								
144								
145								
146								
147						CLAY, silt and fine sand all washed out materials with black,		
148						rounded manganese grains.		
149								

Concrete
Bentonite
Grout



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-4

DATE DRILLED 6/5/06 - 6/22/06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
151								
152								
153								
154								
155								
156								
157						CLAY materials plugged rods. Eventually all cuttings came out at once, took composite, estimated depth to 175 feet.		
158								
159								
160								
161								
162								
163								
164								
165								
166								
167								
168								
169								
170								
171								
172								
173								
174								
175								
176						No Recovery.		
177								
178								
179								
180								
181						Washed out CLAY, sand, and fine silt materials continue to 182 feet		
182								
183						Pink to yellow LIMESTONE, dense areas with fossilized zones and pieces with varying color, pink to white to dark brown.		
184								
185								
186								
187								
188								
189								
190								
191						Porous white calciferous LIMESTONE chunks with solution areas.		
192								
193								
194								
195								
196						Brittle yellow to brown LIMESTONE pieces.		
197								
198								
199								
200								
201						Yellowish brown LIMESTONE with dark gray (manganese?) areas.		
202								
203								
204								
205								
206						Solid white/ pure white LIMESTONE with some crystalline areas.		
207								
208								
209								
210								
211						Pink to yellow to white solid LIMESTONE with few porous areas.		
212								
213								
214								
215								
216						Brownish yellow, brittle, broken LIMESTONE pieces to 225 feet.		
217								
218								
219								
220								
221								
222								
223								
224								
225								
226						Solid non-porous LIMESTONE with areas of fossils.		
227								
228								
229								

Concrete
Bentonite
Grout



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-4

DATE DRILLED 6/5/06 - 6/22/06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
231								
232								
233								
234								
235								
236						Brownish pink LIMESTONE with more fossilized areas.		
237								
238								
239								
240								
241						Solid pink and brown LIMESTONE with shell content.		
242								
243								
244								
245								
246								
247								
248								
249								
250								
251						Solid pink and brown LIMESTONE with high shell (calcium carbonate) content. Some brownish areas.		
252								
253								
254								
255								
256						White to brown, very dense LIMESTONE.		
257								
258								
259								
260								
261						Areas of FOSSILS in rounded colonies with manganese nodules.		
262								
263								
264								
265								
266						Broken and rounded limestone pieces.		
267								
268								
269								
270								
271						Very dense, brown, hard LIMESTONE with no voids or pore spaces noted.		
272								
273								
274								
275								
276						Tan to brown LIMESTONE with few brittle zones and some fossil content.		
277								
278								
279								
280								
281						Very dense brownish tan LIMESTONE with shades of pink throughout.		
282								
283								
284								
285								
286						Tan to whitish LIMESTONE with brittle areas in pieces.		
287								
288								
289								
290								
291						Dense tan to pink and whitish LIMESTONE with few fossils.		
292								
293								
294								
295								
296						Dense tan to brown LIMESTONE.		
297								
298								
299								
300								
301						Periodic brittle LIMESTONE recovered.		
302								
303								
304								
305								
306						Open cavity, no recovery.		
307								
308								
309								

Concrete
Bentonite
Grout

Bentonite
Seal



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-4

DATE DRILLED 6/5/06 - 6/22/06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	P/D (ppm)	WELL DIAGRAM
311						Tan to dark brown LIMESTONE with some whitish areas. Brittle and fragmented.		
312								
313								
314								
315								
316						Dark tan to brown LIMESTONE with some pinkish areas.		
317								
318								
319								
320								
321						Dark brown and tan to white, brittle LIMESTONE with some voids.		
322								
323								
324								
325						Mostly white LIMESTONE chips recovered in cyclone.		
326								
327								
328								
329								
330								
331						Dark brown, tan, and pink LIMESTONE with trace areas showing fissures/solution areas.		
332								
333								
334								
335								
336						Dark brown to tan LIMESTONE with trace pinkish limestone throughout.		
337								
338								
339								
340								
341								
342								
343								
344								
345								

2" PVC
Slotted
Screen,
10-Slot

#2 Filter Sand

Bentonite
Seal

#2 Filter Sand



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000 BORING/WELL NUMBER MW-5
LOCATION Northeast corner of facility. DATE DRILLED 7/6-7/31-06
DRILLING CONTRACTOR Safety Construction Engineering DRILLER FOREMAN Angel Soler
DRILLING METHOD Dual Tube SCREEN TYPE/SLOT Schedule 40 PVC 10-slot
SAMPLING METHOD Photovac 20/20 PID FILTER PACK TYPE #2 Filter Sand
GROUND ELEVATION _____ SEAL TYPE Bentonite Chlps
TOP OF PVC _____ APPROXIMATE DEPTH TO WATER (Feet) 305
LOGGED BY C.Foster/M.Oliveira GROUND WATER ELEVATION _____
REMARKS 8-inch casing grouted to 214 feet, 2" PVC telescoped through 8-inch to 378 feet.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
1						Asphalt		
2						Dark Red Brown CLAY, some silt, trace fine sand, trace limestone/caliche.		
3								
4								
5								
6								
7								
8								
9								
10						Dark brown CLAY, some silt, trace fine sand. (Blanket deposits).		
11								
12								
13						Red to dark brown CLAY, some silt, trace fine sand.		
14								
15								
16						Dark brown CLAY, some silt, trace fine sand.		
17								
18								
19								
20						Dark brown to red brown CLAY, some silt, trace fine sand.		
21								
22								
23								
24								
25								
26						Dark brown to red brown CLAY, some silt, trace fine sand.		
27								
28								
29								
30								
31								
32								
33						Dark brown to red brown CLAY, some silt, trace fine sand.		
34								
35								
36								
37								
38						Dark brown to red brown CLAY, some silt, trace fine sand.		
39								
40								
41								
42								
43								
44								
45								
46						Dark red brown CLAY, some silt, trace fine sand.		
47								
48								
49								
50								
51								
52						Dark brown to red brown CLAY, some silt, trace fine sand - some tan mottling.		
53								
54								
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								
65								
66								
67								
68						Dark red brown CLAY, some silt, trace fine sand, trace tan mottling.		
69								
70								



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-5

DATE DRILLED 7/6-7/31-06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
71						Red brown to dark brown CLAY with some tan fine sand and mottling, some silt - lumpy.		
72								
73								
74								
75								
76								
77								
78								
79								
80								
81						Dark brown to red brown CLAY, trace silt, trace fine sand, tan mottling.		
82								
83								
84								
85								
86						Dark brown to red brown CLAY, trace silt, trace fine sand, tan mottling.		
87								
88								
89								
90								
91						Dark brown to red brown CLAY, trace silt, trace fine sand, tan mottling.		
92								
93								
94								
95								
96						Dark brown to red brown CLAY, trace silt, trace fine sand, tan mottling.		
97								
98								
99								
100								
101						Dark brown to red brown CLAY, trace silt, trace fine sand, tan mottling.		
102								
103								
104								
105								
106						Red brown to dark red brown CLAY with tan fine sand mottling.		
107								
108								
109								
110								
111								
112								
113								
114								
115								
116						LIMESTONE pieces, rock fragments hit at 115.		
117								
118								
119								
120								
121						LIMESTONE chunks, white and crystalline, yellow and solid.		
122								
123								
124								
125								
126						LIMESTONE pieces, porous to 128 feet.		
127								
128								
129						LIMESTONE pieces, porous, wet.		
130								
131						Resume red brown CLAY, some silt, some fine sand.		
132								
133								
134								
135								
136						Dark brown CLAY, some silt, trace fine sand.		
137								
138								
139								
140								
141						Dark brown CLAY, some silt, trace fine sand.		
142								
143								
144								
145								
146						Dark brown CLAY, some silt, trace fine sand.		
147								
148								
149								

Cement
Bentonite
Grout



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-5

DATE DRILLED 7/6-7/31-06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
151						Dark brown CLAY, some silt, trace fine sand.		
152								
153								
154								
155								
156								
157						Dark brown CLAY, trace fine sand, some silt.		
158								
159								
160								
161						Dark brown CLAY, trace fine sand, some silt.		
162								
163								
164								
165								
166								
167								
168								
169								
170								
171								
172								
173						Trace LIMESTONE recovered from 173 to 176, then solid limestone at 176 feet.		
174								
175								
176								
177								
178								
179								
180								
181						White, highly calcified LIMESTONE with some crystalline areas. Consistent 4" to 2" chunks to 190 feet.		
182								
183								
184								
185								
186								
187								
188								
189								
190								
191						No recovery.		
192								
193								
194								
195								
196								
197						White to pinkish LIMESTONE, dense, low fossil content. Several areas have broken pieces recovered while other solid pieces are returned to the cyclone.		
198								
199								
200								
201								
202								
203								
204								
205								
206								
207								
208								
209								
210								
211								
212								
213								
214								
215								
216								
217						White to yellow very dense calcium carbonate rich limestone with some areas of crystalline LIMESTONE. Few fossilized areas.		
218								
219								
220								
221						Yellow to white LIMESTONE with good recovery from cyclone. Dense and conglomerated, various colors.		
222								
223								
224								
225								
226								
227						Change to pinkish brown LIMESTONE, very dense with some porosity/vugs and porous/solution areas.		
228								
229								

← Cement
Bentonite
Grout



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-5

DATE DRILLED 7/6-7/31-06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
231						Pink to yellowish LIMESTONE with porous areas and fossils. High calcium carbonate percentage.		
232								
233								
234								
235								
236								
237						Tan to dark brown, very dense LIMESTONE with angular and rounded pieces.		
238								
239								
240								
241								
242						Very heterogenous material, tan to brown porous LIMESTONE with traces of clay in the voids.		
243								
244								
245								
246								
247						Dark brown to black round manganese nodules. Fossil communities and angular brittle tan to brown limestone fragments.		
248								
249								
250								
251						Change to harder yellow LIMESTONE with higher calcium percentage.		
252								
253								
254								
255								
256								
257								
258								
259								
260								
261								
262								
263								
264								
265								
266								
267								
268								
269								
270								
271								
272								
273								
274								
275								
276								
277						No Recovery.		
278								
279								
280								
281						Dense dark brown to black coated fossil communities. Dense but irregular LIMESTONE rounded and elongated pieces.		
282								
283								
284								
285								
286						Dense light orange to cream colored LIMESTONE with trace dissolved areas.		
287								
288								
289								
290								
291						Change to dense multicolored LIMESTONE conglomerate.		
292								
293								
294								
295								
296								
297						No Recovery.		
298								
299								
300								
301								
302								
303								
304								
305								
306								
307						Light orange to light pink dense LIMESTONE with trace dissolved areas.		
308								
309								

→ Cement
Bentonite
Grout



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-5

DATE DRILLED 7/6-7/31-06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
311						Light orange to light pink dense LIMESTONE with trace dissolved areas.		
312								
313								
314								
315								
316						No Recovery.		
317								
318								
319								
320								
321						Light pink to orange to white LIMESTONE with trace dissolved areas, trace fossils.		
322								
323								
324								
325								
326						White to light orange to light brown LIMESTONE, brittle and less dissolved areas.		
327								
328								
329								
330								
331						White to light orange to light brown LIMESTONE, brittle and less dissolved areas.		
332								
333								
334								
335								
336						White to light pink LIMESTONE with trace fossils and little dissolved areas.		
337								
338								
339								
340								
341						White to light pink to brown, dense LIMESTONE with little black coloration on the whiter pieces.		
342								
343								
344								
345								
346						Light pink to light orange brittle LIMESTONE with trace black coloration.		
347								
348								
349								
350								
351						Cream to light pink brittle LIMESTONE with trace void spaces and fossils, trace orange and black coloring.		
352								
353								
354								
355								
356						Cream to light pink brittle LIMESTONE with trace void spaces and fossils, trace orange and black coloring, but covered with orangey clay and silt due to drilling without using potable water.		
357								
358								
359								
360								
361						Cream to light pink brittle LIMESTONE with trace void spaces and fossils, trace orange and black coloring, more brittle than above.		
362								
363								
364								
365								
366						Light pink to light orange dense LIMESTONE with some black coloring, trace dissolved areas, trace fossils.		
367								
368								
369								
370								
371						Light brown dense LIMESTONE with some black coloring, trace fossils, almost no dissolved areas.		
372								
373								
374								
375								
376						Cream to light brown highly brittle LIMESTONE, sample is 80% pulverized.		
377								
378								
379								
380								
381						White to brown dense LIMESTONE with trace black coloring, trace dissolved areas, trace fossils.		
382								
383								
384								
385								
386						Cream to light orange brittle LIMESTONE with trace dissolved areas, trace fossils, trace black coloration.		
387								
388								
389								

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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-5

DATE DRILLED 7/6-7/31-06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
391						Very brittle cream colored LIMESTONE.		#2 Filter Sand
392								
393								
394								
395								
396								



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-6

LOCATION North side of contractor parking area.

DATE DRILLED 6/5/06 - 6/22/06

DRILLING CONTRACTOR Safety Construction Engineering

DRILLER FOREMAN Angel Sofer

DRILLING METHOD Dual Tube

SCREEN TYPE/SLOT Schedule 40 PVC 10-slot

SAMPLING METHOD Photovac 20/20 PID

FILTER PACK TYPE #2 Filter Sand

GROUND ELEVATION

SEAL TYPE Bentonite Chips

TOP OF PVC

APPROXIMATE DEPTH TO WATER (Feet) 317 - 319

LOGGED BY C. Foster

GROUND WATER ELEVATION

REMARKS

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
1						Hard LIMESTONE materials with yellow to white calcite minerals and few fossilized shells.		
2								
3								
4								
5								
6								
7								
8								
9								
10								
11						Pink LIMESTONE showing solution voids and porous areas with a rusty colored appearance within the void spaces.		
12								
13								
14								
15								
16						A highly crystalline calcite LIMESTONE with fewer rusty stained solution / dissolved areas noted.		
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31						Highly brittle LIMESTONE pieces with rusty staining and fewer occurrences of pure calcite minerals.		
32								
33								
34								
35								
36								
37								
38								
39								
40								
41						LIMESTONE color changes from pinkish to yellow to white and crystalline calcite minerals with periodic rust colored solution areas.		
42								
43								
44								
45								
46								
47								
48								
49								
50								
51						Materials returned to cyclone show multiple color changes and periodic rusty solution areas.		
52								
53								
54								
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								
65								
66								
67								
68								
69								
70								



TRC ENVIRONMENTAL
116 John Street, Boott Mills South
Lowell, MA 01852
Telephone: (978) 970-5600
Fax: (978) 453-1995

BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-6

DATE DRILLED 6/5/06 - 6/22/06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
71						Change to a more solid pinkish LIMESTONE with good recovery of 3		
72						inch by 6-8. inch long non-porous limestone and few calcite areas.		
73								
74								
75								
76						Hard pinkish LIMESTONE materials with a few rusty colored solution		
77						areas.		
78								
79								
80								
81						Yellow to white calcified LIMESTONE with high fossil content and		
82						pure calcite mineralized zones from 88 to 96 feet.		
83								
84								
85								
86								
87								
88								
89								
90								
91								
92								
93								
94								
95								
96								
97						Driller reports voids with few returns to cyclone. Trace returns are		
98						whitish to pulverized yellow LIMESTONE saturated and chalky by		
99						drilling water usage.		
100								
101								
102						Voids from 101 to 112 feet, no recovery.		
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113						Solid again with no returns to cyclone (materials lost in formation).		
114								
115						Voids from 114 to 134 feet, no returns to cyclone.		
116								
117								
118								
119								
120								
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122								
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124								
125								
126								
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128								
129								
130								
131								
132								
133								
134								
135								
136						From 134 to 136 feet trace materials recovered are yellow to white		
137						LIMESTONE with fossils. Note: materials may be from prior solid		
138						zones as high as 114 feet that were stuck in drill stem.		
139								
140								
141								
142								
143								
144								
145								
146								
147								
148								
149						Driller reports that drill stem is in very soft materials and or voids and		

← Native
Backfill/
Collapse/
Cavern



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DATE DRILLED 6/5/06 - 6/22/06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
151						advances easily. He noted some solid materials from 148 to 150		
152						feet but these were lost to the formation with no return to the surface		
153						in the cyclone		
154								
155								
156								
157								
158								
159								
160								
161						No solid returns from 160 to 252 feet. Drill rods advanced slowly		
162						through cavities without resistance. No recovery.		
163								
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227								
228								
229								

← Native
Backfill/
Collapse/
Cavern



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Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-6

DATE DRILLED 6/5/06 - 6/22/06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
231								
232								
233								
234								
235								
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No recovery from 252 to 276 feet where some yellow, saturated
chaiky returns are noted in the cyclone. These cuttings are
expected to be the result of the accumulated materials from
unknown depths that clogged in the pipe and were returned by the
use of air and water pressure.

Drill stem continues to advance with little resistance. Stop at 313
feet due to clogged drill stem.

Cement
Bentonite
Grout



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BORING/WELL CONSTRUCTION LOG

Pfizer RFI - Barceloneta, Puerto Rico

PROJECT NUMBER 37865-0010-00000

BORING/WELL NUMBER MW-6

DATE DRILLED 6/5/06 - 6/22/06

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	WELL DIAGRAM
311								
312								
313								
314								
315								
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387								
388								
389								

Drill stem was cleared and was plugged with a red brown CLAY that returned to the surface after contacting solid limestone at 336 feet. This material is thought to be the base of the void or crack that the drill stem encountered from 136 to 336 feet.

Solid LIMESTONE returns consisting of dark pink to brown dense limestone with no solution or porous areas. Driller reports that drill cuttings show marks from the bit from coring. Formation thought to be the top of the Aymamoh limestone aquifer unit.

Solid LIMESTONE returns consisting of dark pink to brown dense limestone with alternating area of porous and non-porous limestone returned to the cyclone. Driller reports significant increase of water production for the borehole from 356 to 376 feet. No drilling water was used to drill deeper at the request of TRC to promote more representative screening samples from the aquifer. Drill cuttings show marks from rotation coring activity by the bit. Color change noted in this zone to yellow and chalky returns noted between more solid cores. Some of the pieces show porous and dissolved areas.

Chalky yellowish LIMESTONE encountered. Driller reports soft lenses combined with the solid pieces returning to the cyclone. Fewer porous pieces are evident from 276 to 296 feet.

Native Backfill/
Collapse/
Cavern

Bentonite
Seal

#2 Filter Sand

2"PVC
Slotted

Appendix B

Data Validation Reports

TRC Environmental Corporation

MEMORANDUM

TO: Dale Weiss **DATE:** June 28, 2000
FROM: Elizabeth Denly **FILE:** Pfizerval.doc
27772-0010-00000
RE: Data Validation Review for Soil Samples **CC:**
Pfizer Pharmaceuticals,
Barceloneta, Puerto Rico

SUMMARY

Limited validation was performed on the data for 55 soil samples and two rinsate blanks collected at the Pfizer Pharmaceuticals site in Barceloneta, Puerto Rico. The samples were collected on March 22, 23, 24, 27, and 29, 2000 and submitted to Environmental Quality Laboratories, Inc (EQL) in Santurce, Puerto Rico for analysis. The samples were analyzed for the site-specific volatile organic compounds (VOCs) using SW-846 method 8260B.

The sample results were assessed using the "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (2/94). Modification of the Functional Guidelines was done to accommodate the non-CLP methodology.

In general, the data appear to be valid as reported and may be used for decision-making purposes. Selected data points were qualified as estimated because of nonconformance of certain QC criteria (see discussion below).

SAMPLES

Samples included in this review are listed below:

B-01 1-3	B-03 2-4	B-06 1-2	AB-25 7-9	B-08 4-6
B-01 3-5	B-03 4-6	B-06 2-4	AB-15 1-2	B-08 6-8
B-04 1-2	B-03 6-8	B-06 4-6	AB-15 2-4	B-09 1-2
B-04 2-4	B-03 8-10	B-06 6-8	AB-15 4-6	B-09 2-4
B-01 5-7	B-04 4-6	B-06 8-10	AB-15 6-8	B-09 4-6
B-01 7-9	B-04 6-8	B-20 1-2	AB-15 8-10	B-09 6-8
B-01 9-10	B-04 8-10	B-13 1-2	AB-15 10-12	B-09 8-10
B-02 1-2	B-05 1-2	AB-15 12-14	AB-25 9-11	RB-01 (rinsate blank)
B-02 2-4	B-05 2-4	AB-15 14-16	AB-25 11-13	RB-02 (rinsate blank)
B-02 4-6	B-05 4-6	AB-25 1-3	AB-25 13-15	
B-02 6-8	B-05 7-9	AB-25 3-5	B-08 1-2	
B-03 1-2	B-05 9-10.5	AB-25 5-7	B-08 2-4	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with TRC requests
 - Holding times
 - Gas chromatography/mass spectrometry (GC/MS) tunes
 - Initial and continuing calibrations
-

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- Method blanks/rinsate blanks/trip blanks
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) results
- Laboratory control sample (LCS) results
- Laboratory duplicate results
- Internal standard performance
- Field duplicate results
- Quantitation limits and sample results

DISCUSSION

Agreement of Analyses Conducted with TRC Requests

Sample reports were checked to verify that the results corresponded to analytical requests as designated on the chain-of-custody (COC). Sample B-02 1-2 was designated for MS/MSD analysis on the COC. It should be noted that the laboratory performed the MS/MSD analyses as requested; however, the laboratory did not analyze the sample as an unspiked sample. As a result, there are no results reported for this sample.

Holding Times

All samples were analyzed within the method-specified holding time.

GC/MS Tunes

The frequency and abundance of all bromofluorobenzene (BFB) tunes were within the QC acceptance criteria. The samples were analyzed within 12 hours from BFB tunes.

Initial and Continuing Calibrations

The percent relative standard deviations or correlation coefficients of all target analytes were within the QC acceptance criteria in the initial calibration associated with all samples in this report.

It should be noted that the linear regressions used in the calibration of methylene chloride and acetone forced the line through the origin which is not allowed under SW-846 (Section 7.5. of method 8000). It was the opinion of the validator that qualification of the data on this basis was not required.

The percent differences of all analytes were within the QC acceptance criteria in the continuing calibration standards associated with all samples in this report.

Method Blanks/Rinsate Blanks/Trip Blanks

Target analytes were not detected in the laboratory method blanks or rinsate blanks associated with all samples in this report. It should be noted that trip blanks were not submitted with any samples in this report. No validation action was taken on this basis.

Surrogate Spike Recoveries

Sample B-08 1-2 yielded 0 percent recovery (%R) of the surrogate dibromofluoromethane when analyzed at a 10-fold dilution. This sample was reanalyzed at 100-fold and 1000-fold dilutions which yielded acceptable surrogate recoveries. Positive results reported from the 10-fold dilution were qualified as estimated (J) and may be biased low. Nondetect results reported from the 10-fold dilution would be rejected if reported. Therefore, it was the

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opinion of the validator to report the nondetect results from the 100-fold dilution. Qualification of the nondetect results from the 100-fold dilution was not required.

MS/MSD Results

Sample B-02 1-2 was designated for MS/MSD analyses with this sample set. As stated earlier, the laboratory did not analyze this sample as an unspiked sample and %Rs could therefore not be calculated. Data generated from these MS/MSD analyses cannot be used to assess the accuracy of the analysis on the soil matrix from the Pfizer site. It should be noted that the relative percent differences (RPDs) of the spiked target analytes were within the QC acceptance limits in these analyses, indicating that the precision of the analysis with the soil matrix from the Pfizer site was acceptable.

The laboratory did, however, perform MS analyses on samples B-05 1-2 and B-13 1-2. The %Rs of the spiked target analytes were within the QC acceptance limits in the MS analyses.

LCS Results

An LCS and/or LCS duplicate was analyzed on each day of sample analysis. The %Rs of the target analytes were within the QC acceptance criteria in all LCS analyses. The RPDs of target analytes were within the QC acceptance criteria in the LCS/LCS duplicate analyses.

Laboratory Duplicate Results

The laboratory performed duplicate analyses on samples B-03 8-10, B-05 1-2, B-20 1-2, B-13 1-2, and AB-15 4-6. The RPDs of the detected analytes in all duplicate analyses were within the QC acceptance criteria.

Internal Standard Performance

The following table summarizes samples which yielded internal standard area counts which were outside of the QC acceptance limits.

Sample ID	Pentafluorobenzene IS1	1,4-Difluorobenzene IS2	Chlorobenzene-d5 IS3	1,4-Dichlorobenzene d4 IS4
B-04 4-6	ok	ok	ok	high
B-04 6-8	ok	ok	ok	high
B-04 8-10	ok	ok	ok	high
B-05 1-2	ok	ok	ok	high
B-05 1-2 DUP	ok	ok	ok	high
B-01 1-3	ok	ok	ok	high
B-01 5-7	ok	ok	ok	high
B-01 7-9	ok	ok	ok	high
B-01 9-10	ok	ok	ok	high
AB-15 1-2	ok	ok	ok	low
AB-15 14-16	ok	ok	ok	low
AB-25 1-3	ok	ok	ok	low
AB-15 4-6	ok	ok	ok	low
AB-15 4-6 DUP	ok	ok	ok	low
AB-25 13-15	ok	ok	low	ok
B-08 2-4	low	low	low	low

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Sample ID	Pentafluorobenzene IS1	1,4-Difluorobenzene IS2	Chlorobenzene-d5 IS3	1,4-Dichlorobenzene- d4 IS4
B-08 4-6	ok	low	ok	ok

Qualification of the data was not required for samples which yielded poor performance of IS4 only since this internal standard was not used to quantitate any of the target analytes for this project. Samples AB-25 13-15, B-08 2-4, and B-08 4-6 were qualified due to internal standard nonconformances. Both positive results and nondetects for the target analytes quantitated using the internal standard which failed the QC criteria were qualified as estimated (J/UJ) in these samples. The compounds affected by IS1, IS2, and IS3 are summarized below:

IS1: acetone, methylene chloride, chloroform

IS2: tetrahydrofuran, benzene, toluene

IS3: chlorobenzene, ethylbenzene, xylenes

Field Duplicate Results

There were no field duplicate pairs submitted with this sample set. No validation action was taken on this basis.

Quantitation Limits and Sample Results

Dilutions

Almost all samples in this data set were analyzed on dilution (as medium-level) due to the concentrations of target analytes which would have exceeded the calibration range if analyzed undiluted. The following samples were analyzed at more than one dilution factor due to the concentrations of tetrahydrofuran and/or acetone which exceeded the calibration range in the initial diluted analysis. The results of all diluted analyses for each sample were combined by the laboratory in order to report the lowest possible quantitation limits and all results within the calibration range.

Sample ID	Dilution Factors
B-02 4-6	100, 200
B-02 6-8	100, 400
B-04 2-4	40, 160
B-01 5-7	40, 400
B-01 7-9	40, 200
B-01 9-10	40, 400
B-08 1-2	10, 100, 1000
B-08 2-4	10, 100
B-08 4-6	10, 100, 1000
B-08 6-8	10, 100, 1000
B-09 1-2	100, 1000
B-09 2-4	100, 1000
B-09 4-6	100, 500
B-09 6-8	100, 1000
B-09 8-10	100, 1000

The laboratory elevated the quantitation limits accordingly for each sample based on the dilution performed.

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Verification of Sample Results

There were no spectra provided for positive results reported by the laboratory in any samples in this data set. The positive identifications of the detected analytes in all samples could therefore not be verified during validation. It should be noted that this information is being requested from the laboratory and therefore the ability to verify the reported detects may be possible at a later date.

The positive results reported for acetone in many samples may be questionable due to a significant difference in the retention time of acetone in the sample versus the associated continuing calibration standard. Since the spectrum of the peak identified as acetone was not submitted, the identification could not be confirmed. No validation action was taken on this basis but the end-user of the data may want to use the acetone results with caution until the positive results can be properly verified. This affects samples B-09 1-2, B-09 2-4, B-09 4-6, B-09 6-8, B-09 8-10, B-08 1-2, B-08 2-4, B-08 4-6, and B-08 6-8.

The laboratory did not provide the analytical injection logs, documentation of sample weights, the amount of methanol used for extraction, or the amount of the methanol extract analyzed. As a result, the dilution factors and thus sample calculations could not be verified during validation. It should be noted that this information is being requested from the laboratory and therefore the ability to check sample calculations may be possible at a later date.

Sample Result/Reporting Errors Noted During Validation

The following bullets summarize errors noted during the validation of data for this sample set.

- It should be noted that all sample results were reported on a wet weight basis. The laboratory was questioned on this practice and stated that dry weight correction is routinely not performed by their laboratory unless requested by the client. TRC was not aware of this laboratory policy and had assumed that all results would be dry weight corrected. No validation action was taken on this basis.
- The laboratory was not consistent in the reporting of significant figures. All results were changed during validation to include two significant figures. These revised results were manually entered on the sample report forms.
- Acetone or m&p-xylenes were reported at the wrong detection limit in several samples. The table below summarizes the samples and compounds affected. The correct detection limit was entered on the associated sample report form during validation.

Sample ID	Compound Affected	Laboratory Reported Detection Limit (µg/kg)	Correct Detection Limit (µg/kg)
B-01 3-5	Acetone	500	5000
B-9 1-2	m&p-Xylenes	100	200
B-9 2-4	m&p-Xylenes	100	200
B-9 4-6	m&p-Xylenes	100	200
B-9 6-8	m&p-Xylenes	100	200
B-9 8-10	m&p-Xylenes	100	200

- The laboratory did not report positive results for compounds which were present below the quantitation limit. However, it is the opinion of the validator that since significant dilutions were performed on most samples, these results may be useful to the end-user of the data. The following table summarizes samples and compounds affected. These results were manually entered on the associated sample report form during validation. These results were qualified as estimated (J) due to quantitation below the quantitation limit.

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Sample ID	Compound	Concentration Detected
B-04 2-4	m&p-xylenes	350 J
B-8 2-4	Methylene chloride	19 J
B-9 2-4	Acetone	890 J
B-9 4-6	Acetone	890 J
B-9 6-8	Acetone	480 J

- Sample B-01 9-10: Benzene was detected in this sample above the detection limit at 430 µg/kg but was not reported on the sample report form by the laboratory. This result was manually entered on the sample report form during validation.
- Sample AB-15 12-14: Methylene chloride was detected in this sample above the detection limit at 22 µg/kg but was not reported on the sample report form by the laboratory. This result was manually entered on the sample report form during validation.
- Sample AB-15 14-16: Methylene chloride was detected in this sample at 20 µg/kg but was not reported on the sample report form by the laboratory. This result was manually entered on the sample report form during validation.
- Sample B-8 2-4: The laboratory reported methylene chloride on the sample report form at 19 µg/kg. This result should be flagged with a "J" since it was below the quantitation limit (20 µg/kg). The "J" qualifier was manually entered on the report form during validation.
- Sample B-05 2-4: The laboratory did not provide a sample report form for this sample. The following table summarizes the results of this sample. This sample report form is being requested from the laboratory.

Compound	Result (µg/kg)
Acetone	100 U
Benzene	10 U
Chlorobenzene	10 U
Chloroform	10 U
Tetrahydrofuran	230
Ethylbenzene	10 U
Methylene chloride	20 U
Toluene	10 U
o-Xylene	20 U
m&p-Xylenes	20 U

MEMORANDUM

CC: D. Weiss/TRC

1

TRC Environmental Corporation

12. Sample AB-25 1-3 (28024): Methylene chloride should be flagged with a "J" on the sample report form since it is present below the detection limit.
13. The detection limit of m&p-xylenes in samples B-9 1-2 (28556), B-9 2-4 (28557), B-9 4-6 (28558), B-9 6-8 (28559), and B-9 8-10 (28560) should be 200, not 100 µg/kg.
14. Please provide a sample report form for sample B-05 2-4 (27338). This was not in the data package received by TRC.
15. Section 7.5.2 of SW-846 method 8000 states that if linear regressions are used for calibration, the line must not be forced through the origin. Note that the lab forced the line through the origin for methylene chloride and acetone in the initial calibration. Please comment.

Order # : See Below
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B -01 1-3
Soil- Grab

Collected: 03/22/00
Sample # : 27096

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	<5,000	µg/Kg	03/28/00	IPM
Benzene	<500	500	µg/Kg	03/28/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/28/00	IPM
Chloroform	<500	500	µg/Kg	03/28/00	IPM
Tetrahydrofuran	2100 ~~2,000~~	500	µg/Kg	03/28/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/28/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/28/00	IPM
Toluene	<500	500	µg/Kg	03/28/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/28/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/28/00	IPM

Sample: 01
Job: 01-01

B -01 3-5
Soil- Grab

Collected: 03/22/00
Sample # : 27108

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	~~5000~~ <500	500	µg/Kg	03/29/00	IPM
Benzene	780 ~~775~~	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	11,000 ~~11,200~~	500	µg/Kg	03/29/00	IPM
Ethylbenzene	3,700	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	5200 ~~6,215~~	500	µg/Kg	03/29/00	IPM
o-Xylene	3100 ~~2,005~~	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	16,000 ~~16,500~~	1,000	µg/Kg	03/29/00	IPM

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B -04 1-2
Soil- Grab

Collected: 03/22/00
Sample #: 27109

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100,000	100,000	µg/Kg	03/28/00	IPM
Benzene	23,000 ~~28,100~~	10,000	µg/Kg	03/28/00	IPM
Chlorobenzene	<10,000	10,000	µg/Kg	03/28/00	IPM
Chloroform	<10,000	10,000	µg/Kg	03/28/00	IPM
Tetrahydrofuran	<10,000	10,000	µg/Kg	03/28/00	IPM
Ethylbenzene	94,000 ~~93,800~~	10,000	µg/Kg	03/28/00	IPM
Methylene chloride	<20,000	20,000	µg/Kg	03/28/00	IPM
Toluene	130,000 ~~131,000~~	10,000	µg/Kg	03/28/00	IPM
o-Xylene	57,000 ~~56,000~~	20,000	µg/Kg	03/28/00	IPM
m,p - Xylenes	360,000 ~~362,000~~	20,000	µg/Kg	03/28/00	IPM

Sample: 01
Job: 01-01

B -04 2-4
Soil- Grab

Collected: 03/22/00
Sample #: 27110

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<2,000	2,000	µg/Kg	03/30/00	IPM
Benzene	<200	200	µg/Kg	03/30/00	IPM
Chlorobenzene	<200	200	µg/Kg	03/30/00	IPM
Chloroform	<200	200	µg/Kg	03/30/00	IPM
Tetrahydrofuran	4,900	200	µg/Kg	03/30/00	IPM
Ethylbenzene	<200	200	µg/Kg	03/30/00	IPM
Methylene chloride	<400	400	µg/Kg	03/30/00	IPM
Toluene	<200	200	µg/Kg	03/30/00	IPM
o-Xylene	<400	400	µg/Kg	03/30/00	IPM
m,p - Xylenes	<400	400	µg/Kg	03/30/00	IPM

350 J

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

RB -01
DI Water - Grab

Collected: 03/24/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Volatile Organic Compounds (8260)					
Acetone	<10	10	µg/L	02/04/00	JDA
Acrolein	<50	50	µg/L	02/04/00	JDA
Acrylonitrile	<50	50	µg/L	02/04/00	JDA
Benzene	<1.0	1.0	µg/L	02/04/00	JDA
Bromobenzene	<1.0	1.0	µg/L	02/04/00	JDA
Bromochloromethane	<1.0	1.0	µg/L	02/04/00	JDA
Bromodichloromethane	<1.0	1.0	µg/L	02/04/00	JDA
Bromoform	<1.0	1.0	µg/L	02/04/00	JDA
Bromomethane	<1.0	1.0	µg/L	02/04/00	JDA
2-Butanone	<3.0	3.0	µg/L	02/04/00	JDA
n-Butylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
sec-Butylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
tert-Butylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
Carbon Disulfide	3.84	1.0	µg/L	02/04/00	JDA
Carbon Tetrachloride	<1.0	1.0	µg/L	02/04/00	JDA
Chlorobenzene	<1.0	1.0	µg/L	02/04/00	JDA
Chloroethane	<1.0	1.0	µg/L	02/04/00	JDA
2-Chloroethyl vinyl ether	<1.0	1.0	µg/L	02/04/00	JDA
Chloroform	<1.0	1.0	µg/L	02/04/00	JDA
Chloromethane	<1.0	1.0	µg/L	02/04/00	JDA
2-Chlorotoluene	<2.0	2.0	µg/L	02/04/00	JDA
4-Chlorotoluene	<1.0	1.0	µg/L	02/04/00	JDA
Dibromochloromethane	<1.0	1.0	µg/L	02/04/00	JDA
1,2-Dibromo-3 chloropropane	<1.0	1.0	µg/L	02/04/00	JDA
1,2-Dibromoethane	<1.0	1.0	µg/L	02/04/00	JDA
Dibromomethane	<2.0	2.0	µg/L	02/04/00	JDA
1,2-Dichlorobenzene	<1.0	1.0	µg/L	02/04/00	JDA
1,3-Dichlorobenzene	<1.0	1.0	µg/L	02/04/00	JDA



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<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Volatile Organic Compounds (8260) Cont.					
1,4-Dichlorobenzene	<1.0	1.0	µg/L	02/04/00	JDA
Dichlorodifluoromethane	<1.0	1.0	µg/L	02/04/00	JDA
1,1-Dichloroethane	<1.0	1.0	µg/L	02/04/00	JDA
1,2-Dichloroethane	<1.0	1.0	µg/L	02/04/00	JDA
1,1-Dichloroethene	<1.0	1.0	µg/L	02/04/00	JDA
cis-1,2-Dichloroethene	<1.0	1.0	µg/L	02/04/00	JDA
trans-1,2-Dichloroethene	<1.0	1.0	µg/L	02/04/00	JDA
1,2-Dichloropropane	<1.0	1.0	µg/L	02/04/00	JDA
1,3-Dichloropropane	<1.0	1.0	µg/L	02/04/00	JDA
2,2-Dichloropropane	<2.0	2.0	µg/L	02/04/00	JDA
1,1-Dichloropropene	<1.0	1.0	µg/L	02/04/00	JDA
cis-1,3-Dichloropropene	<1.0	1.0	µg/L	02/04/00	JDA
trans-1,3-Dichloropropene	<1.0	1.0	µg/L	02/04/00	JDA
Ethylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
Hexachlorobutadiene	<1.0	1.0	µg/L	02/04/00	JDA
2-Hexanone	<5.0	5.0	µg/L	02/04/00	JDA
Iodomethane	<2.0	2.0	µg/L	02/04/00	JDA
Isopropylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
p-Isopropyltoluene	<1.0	1.0	µg/L	02/04/00	JDA
Methylene chloride	<2.0	2.0	µg/L	02/04/00	JDA
4-Methyl-2-pentanone	<2.0	2.0	µg/L	02/04/00	JDA
Naphthalene	<1.0	1.0	µg/L	02/04/00	JDA
n-Propylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
Styrene	<1.0	1.0	µg/L	02/04/00	JDA
1,1,1,2-Tetrachloroethane	<1.0	1.0	µg/L	02/04/00	JDA
1,1,2,2-Tetrachloroethane	<1.0	1.0	µg/L	02/04/00	JDA
Tetrachloroethene	<1.0	1.0	µg/L	02/04/00	JDA
Toluene	<1.0	1.0	µg/L	02/04/00	JDA
1,2,3-Trichlorobenzene	<1.0	1.0	µg/L	02/04/00	JDA
1,2,4-Trichlorobenzene	<1.0	1.0	µg/L	02/04/00	JDA
1,1,1-Trichloroethane	<1.0	1.0	µg/L	02/04/00	JDA
1,1,2-Trichloroethane	<1.0	1.0	µg/L	02/04/00	JDA
Trichloroethene	<1.0	1.0	µg/L	02/04/00	JDA
Trichlorofluoromethane	<1.0	1.0	µg/L	02/04/00	JDA
1,2,3-Trichloropropane	<1.0	1.0	µg/L	02/04/00	JDA
1,2,4-Trimethylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
1,3,5-Trimethylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
Vinyl Acetate	<3.0	3.0	µg/L	02/04/00	JDA
Vinyl Chloride	<1.0	1.0	µg/L	02/04/00	JDA
o-Xylene	<2.0	2.0	µg/L	02/04/00	JDA
m-Xylene	<1.0	1.0	µg/L	02/04/00	JDA
p-Xylene	<1.0	1.0	µg/L	02/04/00	JDA
Tetrahydrofuran	<1.0	1.0	µg/L	02/04/00	JDA



Order #: 27321
04/03/00

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 01 5-7
Soil- Grab

Collected: 03/22/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<2,000	2,000	µg/Kg	03/30/00	IPM
Benzene	<200	200	µg/Kg	03/30/00	IPM
Chlorobenzene	<200	200	µg/Kg	03/30/00	IPM
Chloroform	<200	200	µg/Kg	03/30/00	IPM
Tetrahydrofuran	14,000 ~~13,900~~	2,000	µg/Kg	03/30/00	IPM
Ethylbenzene	<200	200	µg/Kg	03/30/00	IPM
Methylene chloride	<400	400	µg/Kg	03/30/00	IPM
Toluene	<200	200	µg/Kg	03/30/00	IPM
o-Xylene	<400	400	µg/Kg	03/30/00	IPM
m,p - Xylenes	<400	400	µg/Kg	03/30/00	IPM



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Order #: 27322
04/03/00

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 01 7-9
Soil- Grab

Collected: 03/22/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<2,000	2,000	µg/Kg	03/30/00	IPM
Benzene	<200	200	µg/Kg	03/30/00	IPM
Chlorobenzene	<200	200	µg/Kg	03/30/00	IPM
Chloroform	<200	200	µg/Kg	03/30/00	IPM
Tetrahydrofuran	14,000 ~~44,500~~	1,000	µg/Kg	03/30/00	IPM
Ethylbenzene	<200	200	µg/Kg	03/30/00	IPM
Methylene chloride	<400	400	µg/Kg	03/30/00	IPM
Toluene	<200	200	µg/Kg	03/30/00	IPM
o-Xylene	<400	400	µg/Kg	03/30/00	IPM
m,p - Xylenes	406	400	µg/Kg	03/30/00	IPM



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Order # : 27323
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 01 9-10
Soil- Grab

Collected: 03/22/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<2,000	2,000	µg/Kg	03/30/00	IPM
Benzene	430 ~~<200~~	200	µg/Kg	03/30/00	IPM
Chlorobenzene	<200	200	µg/Kg	03/30/00	IPM
Chloroform	<200	200	µg/Kg	03/30/00	IPM
Tetrahydrofuran	28,000 ~~29,500~~	2,000	µg/Kg	03/30/00	IPM
Ethylbenzene	490 ~~480~~	200	µg/Kg	03/30/00	IPM
Methylene chloride	<400	400	µg/Kg	03/30/00	IPM
Toluene	820 ~~810~~	200	µg/Kg	03/30/00	IPM
o-Xylene	740 ~~742~~	400	µg/Kg	03/30/00	IPM
m,p - Xylenes	3100 ~~3070~~	400	µg/Kg	03/30/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 02 2-4
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	6080 ~~6,055~~	500	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 02 4-6
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	12,500 ~~12,480~~	1,000	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 02 6-8
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	16,500	2,000	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 03 1-2
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/28/00	IPM
Benzene	<500	500	µg/Kg	03/28/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/28/00	IPM
Chloroform	<500	500	µg/Kg	03/28/00	IPM
Tetrahydrofuran	5600 ~~5,675~~	500	µg/Kg	03/28/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/28/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/28/00	IPM
Toluene	<500	500	µg/Kg	03/28/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/28/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/28/00	IPM



Order # : 27330
04/03/00

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 03 2-4
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/28/00	IPM
Benzene	<500	500	µg/Kg	03/28/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/28/00	IPM
Chloroform	<500	500	µg/Kg	03/28/00	IPM
Tetrahydrofuran	4800 ~~4,815~~	500	µg/Kg	03/28/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/28/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/28/00	IPM
Toluene	<500	500	µg/Kg	03/28/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/28/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/28/00	IPM



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Order #: 27331
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 03 4-6
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<500	500	µg/Kg	03/30/00	IPM
Benzene	<50	50	µg/Kg	03/30/00	IPM
Chlorobenzene	<50	50	µg/Kg	03/30/00	IPM
Chloroform	<50	50	µg/Kg	03/30/00	IPM
Tetrahydrofuran	130 ~~129~~	50	µg/Kg	03/30/00	IPM
Ethylbenzene	<50	50	µg/Kg	03/30/00	IPM
Methylene chloride	<100	100	µg/Kg	03/30/00	IPM
Toluene	<50	50	µg/Kg	03/30/00	IPM
o-Xylene	<100	100	µg/Kg	03/30/00	IPM
m,p - Xylenes	<100	100	µg/Kg	03/30/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 03 6-8
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/28/00	IPM
Benzene	<500	500	µg/Kg	03/28/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/28/00	IPM
Chloroform	<500	500	µg/Kg	03/28/00	IPM
Tetrahydrofuran	3000 ~~2,000~~	500	µg/Kg	03/28/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/28/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/28/00	IPM
Toluene	<500	500	µg/Kg	03/28/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/28/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/28/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 03 8-10
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/28/00	IPM
Benzene	<500	500	µg/Kg	03/28/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/28/00	IPM
Chloroform	<500	500	µg/Kg	03/28/00	IPM
Tetrahydrofuran	2200 ~~2,210~~	500	µg/Kg	03/28/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/28/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/28/00	IPM
Toluene	<500	500	µg/Kg	03/28/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/28/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/28/00	IPM



Order #: 27334
04/03/00

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 04 4-6
Sol/- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	3600 ~~9,575~~	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 04 6-8
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	2600 2,655	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



ENVIRONMENTAL QUALITY LABORATORIES, INC.

P.O. BOX 11458, SAN JUAN, P.R. 00910-1458 • TEL: (787) 725-5333 • FAX (787) 724-3110



TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 04 8-10
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	1800 ~~1,765~~	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 05 1-2
Soll- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	8700 ~~9,700~~	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 05 4-6
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	110 ~~114~~	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



Order #: 27340
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 05 7-9
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	7,700	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



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Order #: 27341
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 05 9-10.5
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	9000 ~~8,075~~	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



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Order #: 27342
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 06 1-2
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	9800 ~~0,775~~	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



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P.O. BOX 11458, SAN JUAN, P.R. 00910-1458 • TEL: (787) 725-5333 • FAX (787) 724-3110



Order #: 27343
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 06 2-4
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	6300 ~~6,270~~	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



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Order #: 27344
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 06 4-6
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	4200 ~~4,170~~	500	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



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Order # : 27345
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 06 6-8
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	1,600	500	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



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P.O. BOX 11458, SAN JUAN, P.R. 00910-1458 • TEL: (787) 725-5333 • FAX (787) 724-3110



Order # : 27346
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 06 8-10
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	110 ~~112~~	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 20 1-2
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	4300 ~~4,200~~	500	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B -13 1-2
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	4800 ~~4,755~~	500	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



Order #: 28022
04/11/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 - 12 - 14
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	22 <10	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



ENVIRONMENTAL QUALITY LABORATORIES, INC.

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Order # : 28023
04/11/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 - 14 - 16
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	20 ~~<10~~	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 25 -1 - 3
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	19 ~~49.4~~	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



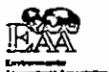
TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 25 - 3 - 5
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 25 - 5 - 7
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 25 - 7 - 9
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 - 1 - 2
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 -2 - 4
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 - 4 - 6
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 - 6 - 8
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 - 8 - 10
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 - 10 - 12
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 25 - 9 - 11
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

RB - 02
Liquid- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<10	10	µg/L	03/31/00	IPM
Benzene	<1.0	1.0	µg/L	03/31/00	IPM
Chlorobenzene	<1.0	1.0	µg/L	03/31/00	IPM
Chloroform	<1.0	1.0	µg/L	03/31/00	IPM
Tetrahydrofuran	<1.0	1.0	µg/L	03/31/00	IPM
Ethylbenzene	<1.0	1.0	µg/L	03/31/00	IPM
Methylene chloride	<2.0	2.0	µg/L	03/31/00	IPM
Toluene	<1.0	1.0	µg/L	03/31/00	IPM
o-Xylene	<2.0	2.0	µg/L	03/31/00	IPM
m,p - Xylenes	<2.0	2.0	µg/L	03/31/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 25 - 11 - 13
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 25 - 13 - 15
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10 <i>uJ</i>	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10 <i>uJ</i>	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20 <i>uJ</i>	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20 <i>uJ</i>	20	µg/Kg	04/01/00	IPM



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Order #: 28552
04/11/00

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 08 - 1 - 2
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	2900 ~~2,934~~	100	µg/Kg	04/01/00	IPM
Benzene	43 ~~43.1~~	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	8400 ~~8,360~~	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	12 ~~11.9~~	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	60	20	µg/Kg	04/01/00	IPM



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Order #: 28553
04/11/00

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 08 - 2 - 4
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	1100 ~~1,070~~ J	100	µg/Kg	04/01/00	IPM
Benzene	<10 uJ	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10 uJ	10	µg/Kg	04/01/00	IPM
Chloroform	<10 uJ	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	680 ~~887~~ J	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10 uJ	10	µg/Kg	04/01/00	IPM
Methylene chloride	19 J ~~20 uJ~~	20	µg/Kg	04/01/00	IPM
Toluene	<10 uJ	10	µg/Kg	04/01/00	IPM
o-Xylene	<20 uJ	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20 uJ	20	µg/Kg	04/01/00	IPM



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Order #: 28554
04/11/00

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 08 - 4 - 6
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	3900 ~~2,948~~	100	µg/Kg	04/01/00	IPM
Benzene	<10 uJ	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	11,000 ~~10,680~~ J	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10 uJ	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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Order #: 28555
04/11/00

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 08 - 6 - 8
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	4700 ~~1,090~~	100	µg/Kg	04/01/00	IPM
Benzene	75 ~~74.8~~	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	12,000 ~~11,980~~	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 09 - 1 - 2
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	4300 ~~4,320~~	1,000	µg/Kg	04/03/00	IPM
Benzene	140 ~~144~~	100	µg/Kg	04/03/00	IPM
Chlorobenzene	<100	100	µg/Kg	04/03/00	IPM
Chloroform	<100	100	µg/Kg	04/03/00	IPM
Tetrahydrofuran	9200 ~~9,220~~	100	µg/Kg	04/03/00	IPM
Ethylbenzene	<100	100	µg/Kg	04/03/00	IPM
Methylene chloride	<200	200	µg/Kg	04/03/00	IPM
Toluene	<100	100	µg/Kg	04/03/00	IPM
o-Xylene	<200	200	µg/Kg	04/03/00	IPM
m,p - Xylenes	<100 ~~200~~	100	µg/Kg	04/03/00	IPM



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Order #: 28557
04/11/00

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 09 - 2 - 4
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	890 J ~~4,000~~	1,000	µg/Kg	04/03/00	IPM
Benzene	<100	100	µg/Kg	04/03/00	IPM
Chlorobenzene	<100	100	µg/Kg	04/03/00	IPM
Chloroform	<100	100	µg/Kg	04/03/00	IPM
Tetrahydrofuran	8700 ~~8,740~~	100	µg/Kg	04/03/00	IPM
Ethylbenzene	<100	100	µg/Kg	04/03/00	IPM
Methylene chloride	<200	200	µg/Kg	04/03/00	IPM
Toluene	<100	100	µg/Kg	04/03/00	IPM
o-Xylene	<200	200	µg/Kg	04/03/00	IPM
m,p - Xylenes	<100 200	100	µg/Kg	04/03/00	IPM



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Order # : 28558
04/11/00

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 09 - 4 - 6
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	890 J ~~1,000~~	1,000	µg/Kg	04/03/00	IPM
Benzene	<100	100	µg/Kg	04/03/00	IPM
Chlorobenzene	<100	100	µg/Kg	04/03/00	IPM
Chloroform	<100	100	µg/Kg	04/03/00	IPM
Tetrahydrofuran	4200 ~~1,250~~	100	µg/Kg	04/03/00	IPM
Ethylbenzene	<100	100	µg/Kg	04/03/00	IPM
Methylene chloride	<200	200	µg/Kg	04/03/00	IPM
Toluene	<100	100	µg/Kg	04/03/00	IPM
o-Xylene	<200	200	µg/Kg	04/03/00	IPM
m,p - Xylenes	<100 200	100	µg/Kg	04/03/00	IPM



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Order #: 28559
04/11/00

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 09 - 6 - 8
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	480 J ~~4,000~~	1,000	µg/Kg	04/03/00	IPM
Benzene	<100	100	µg/Kg	04/03/00	IPM
Chlorobenzene	<100	100	µg/Kg	04/03/00	IPM
Chloroform	<100	100	µg/Kg	04/03/00	IPM
Tetrahydrofuran	8400 ~~8,000~~	100	µg/Kg	04/03/00	IPM
Ethylbenzene	<100	100	µg/Kg	04/03/00	IPM
Methylene chloride	<200	200	µg/Kg	04/03/00	IPM
Toluene	<100	100	µg/Kg	04/03/00	IPM
o-Xylene	<200	200	µg/Kg	04/03/00	IPM
m,p - Xylenes	<100 200	100	µg/Kg	04/03/00	IPM



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Order # : 28560
04/11/00

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 09 - 8 - 10
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	5,222	1,000	µg/Kg	04/03/00	IPM
Benzene	<100	100	µg/Kg	04/03/00	IPM
Chlorobenzene	<100	100	µg/Kg	04/03/00	IPM
Chloroform	<100	100	µg/Kg	04/03/00	IPM
Tetrahydrofuran	16,490	100	µg/Kg	04/03/00	IPM
Ethylbenzene	<100	100	µg/Kg	04/03/00	IPM
Methylene chloride	<200	200	µg/Kg	04/03/00	IPM
Toluene	<100	100	µg/Kg	04/03/00	IPM
o-Xylene	<200	200	µg/Kg	04/03/00	IPM
m,p - Xylenes	<100 200	100	µg/Kg	04/03/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS



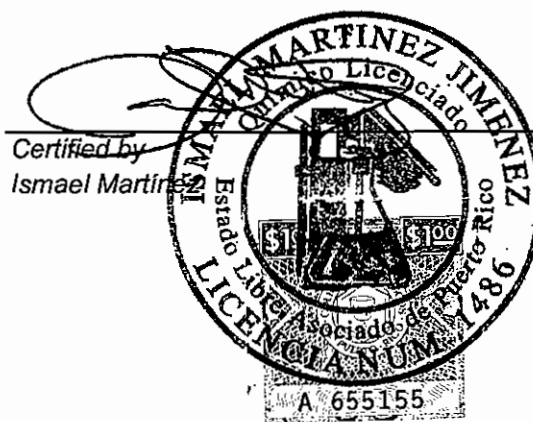
DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

Order #: 27324
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

Revised: 05/10/00

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 02 1-2 MS		



Order # : 27324
04/03/00

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TEST RESULTS BY SAMPLE

Sample: 01 B - 02 1-2 MS
Job: 01-01 Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Benzene	95		%	03/28/00	IPM
Chlorobenzene	101		%	03/28/00	IPM
Toluene	102		%	03/28/00	IPM

TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS



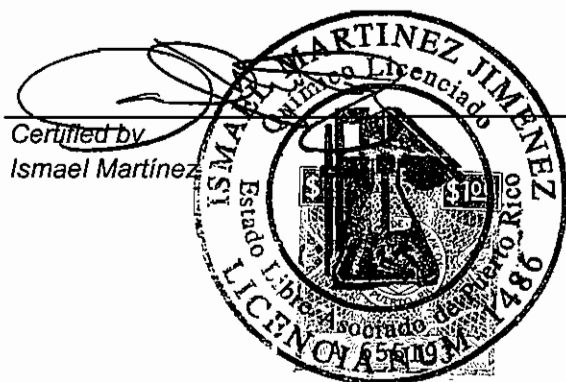
DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

Order #: 27325
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

Revised: 05/10/00

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 02 1-2 MSD		



Order # : 27325
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 02 1-2 MSD
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Benzene	92		%	03/28/00	IPM
Chlorobenzene	100		%	03/28/00	IPM
Toluene	94		%	03/28/00	IPM

TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS



DS #: 2000-02581
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

Order #: See Below
Work ID: Soil - Grab
Date Received: 03/23/00
Date Complete: 04/03/00
Client Code: 1330-01

Duplicate: 05/10/00

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B -01 1-3	03	B -04 1-2
02	B -01 3-5	04	B -04 2-4

Certified by
Ismael Martínez



TEST RESULTS BY SAMPLE

Sample: 01 B -01 1-3 Collected: 03/22/00
Job: 01-01 Soil- Grab Sample # : 27096

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	<5,000	µg/Kg	03/28/00	IPM
Benzene	<500	500	µg/Kg	03/28/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/28/00	IPM
Chloroform	<500	500	µg/Kg	03/28/00	IPM
Tetrahydrofuran	2,090	500	µg/Kg	03/28/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/28/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/28/00	IPM
Toluene	<500	500	µg/Kg	03/28/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/28/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/28/00	IPM

Sample: 01 B -01 3-5 Collected: 03/22/00
Job: 01-01 Soil- Grab Sample # : 27108

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<500	500	µg/Kg	03/29/00	IPM
Benzene	775	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	11,200	500	µg/Kg	03/29/00	IPM
Ethylbenzene	3,700	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	5,215	500	µg/Kg	03/29/00	IPM
o-Xylene	3,065	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	16,500	1,000	µg/Kg	03/29/00	IPM

TEST RESULTS BY SAMPLE

Sample: 01 B -04 1-2 Collected: 03/22/00
Job: 01-01 Soil- Grab Sample # : 27109

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100,000	100,000	µg/Kg	03/28/00	IPM
Benzene	23,100	10,000	µg/Kg	03/28/00	IPM
Chlorobenzene	<10,000	10,000	µg/Kg	03/28/00	IPM
Chloroform	<10,000	10,000	µg/Kg	03/28/00	IPM
Tetrahydrofuran	<10,000	10,000	µg/Kg	03/28/00	IPM
Ethylbenzene	93,800	10,000	µg/Kg	03/28/00	IPM
Methylene chloride	<20,000	20,000	µg/Kg	03/28/00	IPM
Toluene	131,000	10,000	µg/Kg	03/28/00	IPM
o-Xylene	56,900	20,000	µg/Kg	03/28/00	IPM
m,p - Xylenes	362,000	20,00	µg/Kg	03/28/00	IPM

Sample: 01 B -04 2-4 Collected: 03/22/00
Job: 01-01 Soil- Grab Sample # : 27110

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<2,000	2,000	µg/Kg	03/30/00	IPM
Benzene	<200	200	µg/Kg	03/30/00	IPM
Chlorobenzene	<200	200	µg/Kg	03/30/00	IPM
Chloroform	<200	200	µg/Kg	03/30/00	IPM
Tetrahydrofuran	4,900	200	µg/Kg	03/30/00	IPM
Ethylbenzene	<200	200	µg/Kg	03/30/00	IPM
Methylene chloride	<400	400	µg/Kg	03/30/00	IPM
Toluene	<200	200	µg/Kg	03/30/00	IPM
o-Xylene	<400	400	µg/Kg	03/30/00	IPM
m,p - Xylenes	<400	400	µg/Kg	03/30/00	IPM

TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS



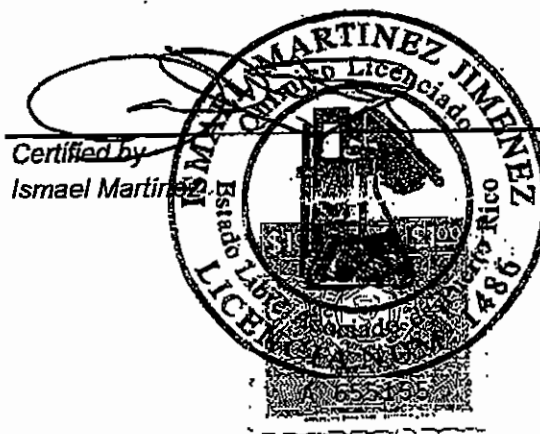
DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

Order #: 27324
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

Revised: 05/10/00

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 02 1-2 MS		



Post-it® Fax Note	7071	Date	5/12	# of pages	7
To	Christian	From	Fuente		
Co./Dept.	TRC	Co.	EQ Lab.		
Phone #		Phone #			
Fax #	1(978) 753-1995	Fax #	724-3110		

Order # : 27324
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 02 1-2 MS
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Benzene	95		%	03/28/00	IPM
Chlorobenzene	101		%	03/28/00	IPM
Toluene	102		%	03/28/00	IPM

TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

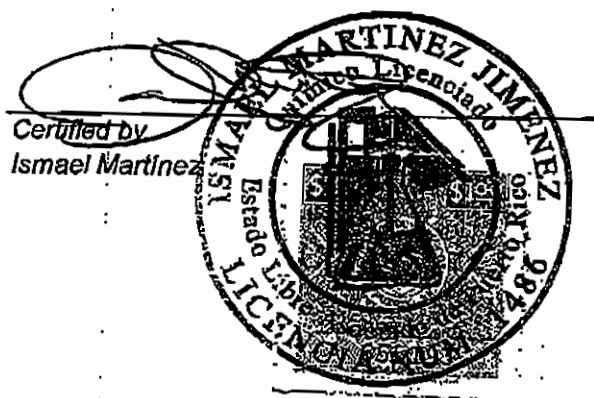


Order # : 27325
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

Revised: 05/10/00

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 02 1-2 MSD		



Order # : 27325
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 02 1-2 MSD
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Benzene	92		%	03/28/00	IPM
Chlorobenzene	100		%	03/28/00	IPM
Toluene	94		%	03/28/00	IPM

TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

DS #: 2000-02581
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals



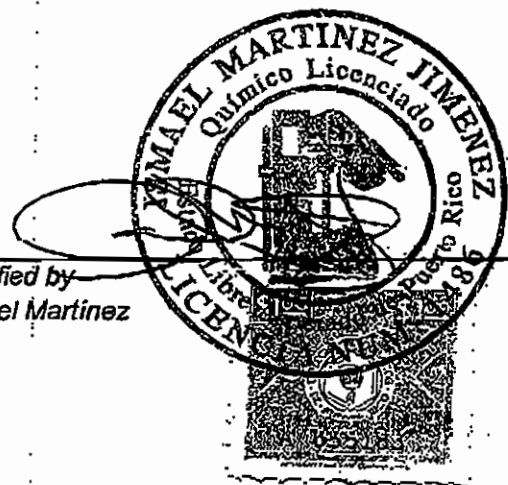
Order #: See Below
Work ID: Soil - Grab
Date Received: 03/23/00
Date Complete: 04/03/00
Client Code: 1330-01

Duplicate: 05/10/00

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B-01 1-3	03	B-04 1-2
02	B-01 3-5	04	B-04 2-4

Certified by
Ismael Martinez



Order # : See Below
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B -01 1-3
Soil- Grab

Collected: 03/22/00
Sample # : 27096

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
2 Acetone	<5,000	<5,000	µg/Kg	03/28/00	IPM
4 Benzene	<500	500	µg/Kg	03/28/00	IPM
5 Chlorobenzene	<500	500	µg/Kg	03/28/00	IPM
9 Chloroform	<500	500	µg/Kg	03/28/00	IPM
8 Tetrahydrofuran	2,090	500	µg/Kg	03/28/00	IPM
6 Ethylbenzene	<500	500	µg/Kg	03/28/00	IPM
① Methylene chloride	<1,000	1,000	µg/Kg	03/28/00	IPM
3 Toluene	<500	500	µg/Kg	03/28/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/28/00	IPM
7 m,p - Xylenes	<1,000	1,000	µg/Kg	03/28/00	IPM

Sample: 01
Job: 01-01

B -01 3-5
Soil- Grab

Collected: 03/22/00
Sample # : 27108

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<500	500	µg/Kg	03/29/00	IPM
Benzene	775	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	11,200	500	µg/Kg	03/29/00	IPM
Ethylbenzene	3,700	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	5,215	500	µg/Kg	03/29/00	IPM
o-Xylene	3,065	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	16,500	1,000	µg/Kg	03/29/00	IPM

Order # : See Below
04/03/00

Page 3

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B -04 1-2
Soil- Grab

Collected: 03/22/00
Sample # : 27109

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
2 Acetone	<100,000	100,000	µg/Kg	03/28/00	IPM
4 Benzene	23,100	10,000	µg/Kg	03/28/00	IPM
5 Chlorobenzene	<10,000	10,000	µg/Kg	03/28/00	IPM
9 Chloroform	<10,000	10,000	µg/Kg	03/28/00	IPM
8 Tetrahydrofuran	<10,000	10,000	µg/Kg	03/28/00	IPM
6 Ethylbenzene	93,800	10,000	µg/Kg	03/28/00	IPM
1 Methylene chloride	<20,000	20,000	µg/Kg	03/28/00	IPM
3 Toluene	131,000	10,000	µg/Kg	03/28/00	IPM
o-Xylene	56,900	20,000	µg/Kg	03/28/00	IPM
7 m,p - Xylenes	362,000	20,000	µg/Kg	03/28/00	IPM

Sample: 01
Job: 01-01

B -04 2-4
Soil- Grab

Collected: 03/22/00
Sample # : 27110

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<2,000	2,000	µg/Kg	03/30/00	IPM
Benzene	<200	200	µg/Kg	03/30/00	IPM
Chlorobenzene	<200	200	µg/Kg	03/30/00	IPM
Chloroform	<200	200	µg/Kg	03/30/00	IPM
Tetrahydrofuran	4,900	200	µg/Kg	03/30/00	IPM
Ethylbenzene	<200	200	µg/Kg	03/30/00	IPM
Methylene chloride	<400	400	µg/Kg	03/30/00	IPM
Toluene	<200	200	µg/Kg	03/30/00	IPM
o-Xylene	<400	400	µg/Kg	03/30/00	IPM
m,p - Xylenes	<400	400	µg/Kg	03/30/00	IPM

TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28028
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 15 - 1 - 2		



ENVIRONMENTAL QUALITY LABORATORIES, INC.

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 - 1 - 2
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

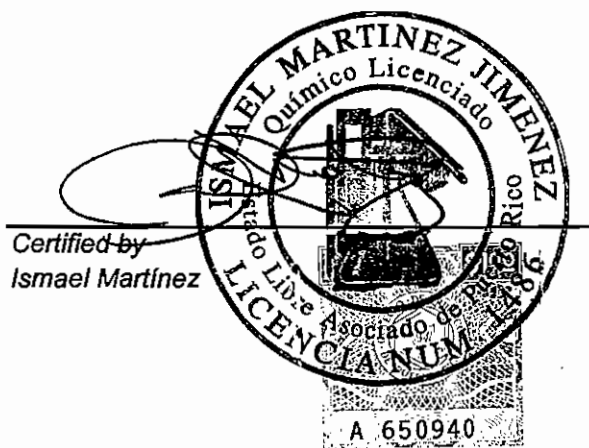
ATTN: MR. DALE WEISS

Order #: 28029
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 15 - 2 - 4		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 -2 - 4
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

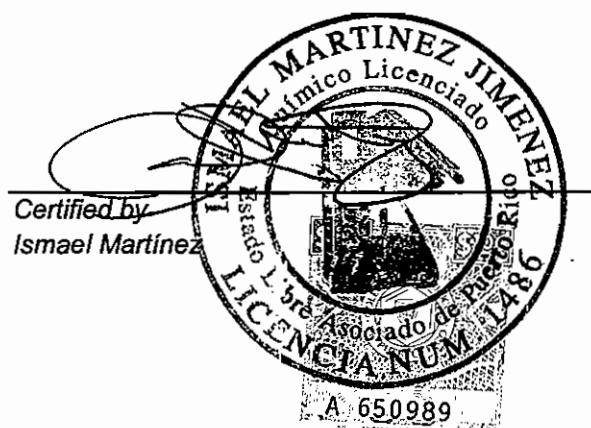
ATTN: MR. DALE WEISS

Order #: 28030
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 15 - 4 - 6		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 -4 - 6
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

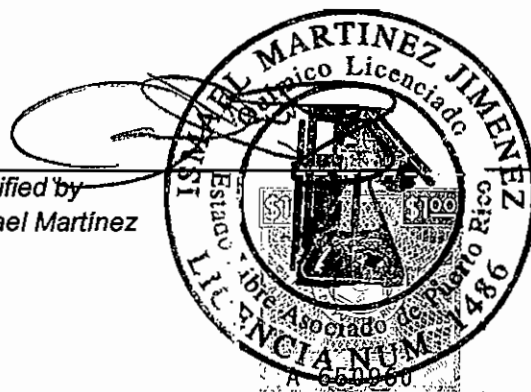
Order #: 28031
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 15 - 6 - 8		

Certified by
Ismael Martinez



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 - 6 - 8
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28032
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 15 - 8 - 10		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 - 8 - 10
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

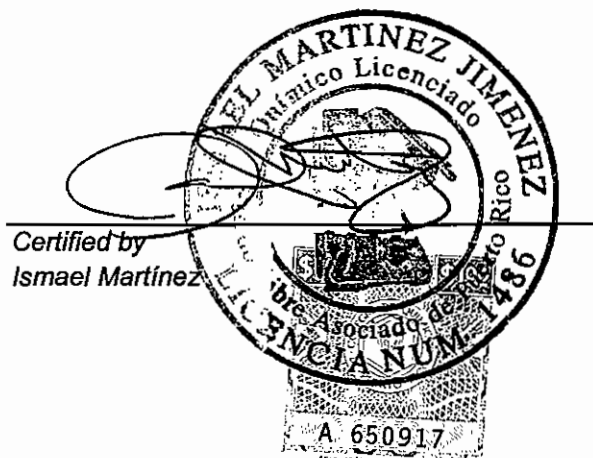
ATTN: MR. DALE WEISS

Order #: 28033
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 15 - 10 - 12		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 - 10 - 12
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28022
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 15 -12 - 14		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 -12 - 14
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<10	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28023
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 15 - 14 - 16		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 15 -14 - 16
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<10	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



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TRC
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LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28024
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 25 - 1 - 3		



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TEST RESULTS BY SAMPLE

Sample: 01 AB - 25 -1 - 3
Job: 01-01 Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	19.4	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

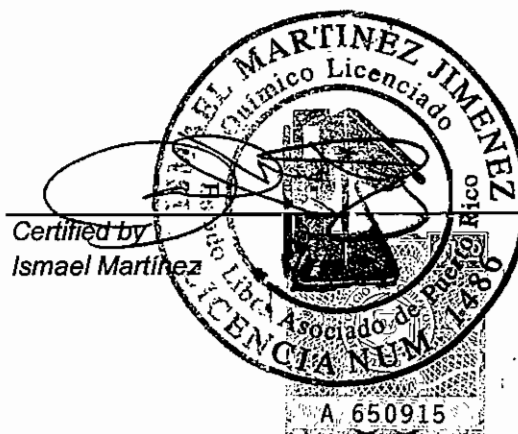
ATTN: MR. DALE WEISS

Order #: 28025
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 25 -3 - 5		



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TEST RESULTS BY SAMPLE

Sample: 01 AB - 25 -3 - 5
Job: 01-01 Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



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ATTN: MR. DALE WEISS

Order # : 28026
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 25 - 5 - 7		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 25 -5 - 7
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



TRC
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LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28027
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 25 - 7 - 9		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 25 - 7 - 9
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28034
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 25 - 9 - 11		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 25 - 9 - 11
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

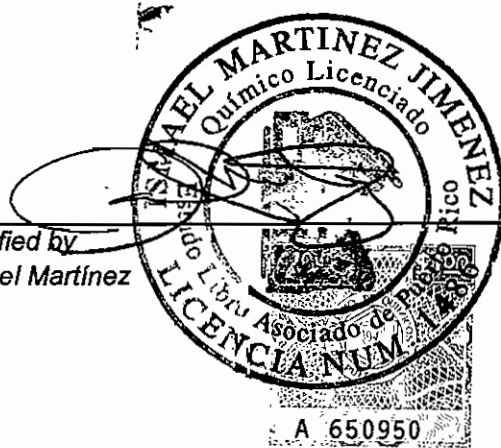
Order #: 28036
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 25 - 11 - 13		

Certified by
Ismael Martínez



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 25 - 11 - 13
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

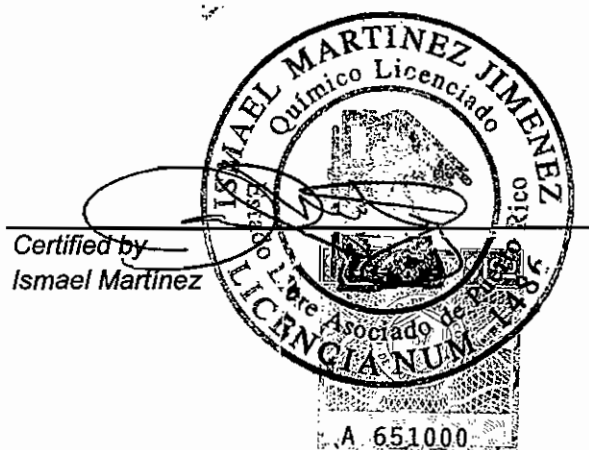
ATTN: MR. DALE WEISS

Order #: 28037
Work ID: Soil - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	AB - 25 - 13 - 15		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

AB - 25 - 13 - 15
Soil- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	<10	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

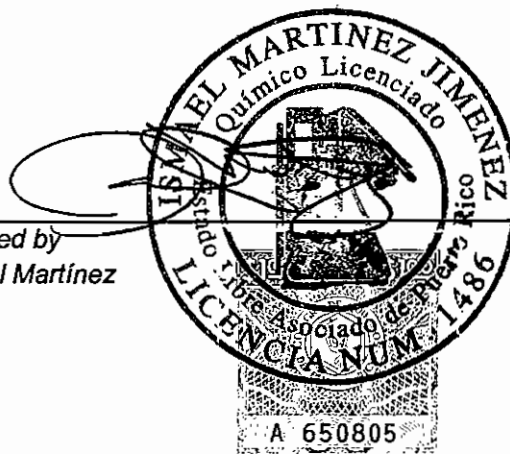
Order #: 27321
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 01 5-7		

Certified by
Ismael Martínez



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 01 5-7
Soil- Grab

Collected: 03/22/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<2,000	2,000	µg/Kg	03/30/00	IPM
Benzene	<200	200	µg/Kg	03/30/00	IPM
Chlorobenzene	<200	200	µg/Kg	03/30/00	IPM
Chloroform	<200	200	µg/Kg	03/30/00	IPM
Tetrahydrofuran	13,900	2,000	µg/Kg	03/30/00	IPM
Ethylbenzene	<200	200	µg/Kg	03/30/00	IPM
Methylene chloride	<400	400	µg/Kg	03/30/00	IPM
Toluene	<200	200	µg/Kg	03/30/00	IPM
o-Xylene	<400	400	µg/Kg	03/30/00	IPM
m,p - Xylenes	<400	400	µg/Kg	03/30/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 27322
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 01 7-9		

Certified by
Ismael Martinez



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 01 7-9
Soil- Grab

Collected: 03/22/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<2,000	2,000	µg/Kg	03/30/00	IPM
Benzene	<200	200	µg/Kg	03/30/00	IPM
Chlorobenzene	<200	200	µg/Kg	03/30/00	IPM
Chloroform	<200	200	µg/Kg	03/30/00	IPM
Tetrahydrofuran	14,500	1,000	µg/Kg	03/30/00	IPM
Ethylbenzene	<200	200	µg/Kg	03/30/00	IPM
Methylene chloride	<400	400	µg/Kg	03/30/00	IPM
Toluene	<200	200	µg/Kg	03/30/00	IPM
o-Xylene	<400	400	µg/Kg	03/30/00	IPM
m,p - Xylenes	406	400	µg/Kg	03/30/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

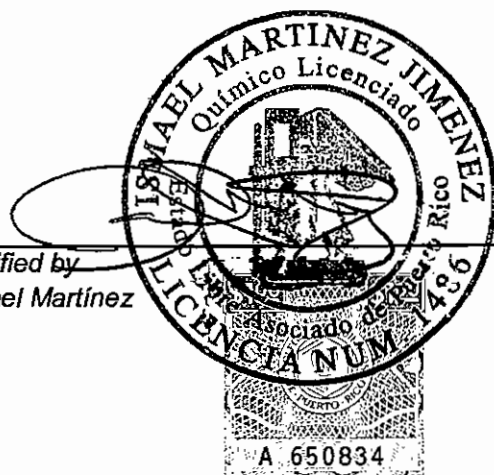
Order #: 27323
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 01 9-10		

Certified by
Ismael Martínez



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 01 9-10
Soil- Grab

Collected: 03/22/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<2,000	2,000	µg/Kg	03/30/00	IPM
Benzene	<200	200	µg/Kg	03/30/00	IPM
Chlorobenzene	<200	200	µg/Kg	03/30/00	IPM
Chloroform	<200	200	µg/Kg	03/30/00	IPM
Tetrahydrofuran	28,500	2,000	µg/Kg	03/30/00	IPM
Ethylbenzene	486	200	µg/Kg	03/30/00	IPM
Methylene chloride	<400	400	µg/Kg	03/30/00	IPM
Toluene	818	200	µg/Kg	03/30/00	IPM
o-Xylene	742	400	µg/Kg	03/30/00	IPM
m,p - Xylenes	3,070	400	µg/Kg	03/30/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 27324
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 02 1-2 MS		

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Order # : 27324
04/03/00

Page 2

TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 02 1-2 MS
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Benzene	95	500	%	03/28/00	IPM
Chlorobenzene	101	500	%	03/28/00	IPM
Toluene	102	500	%	03/28/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

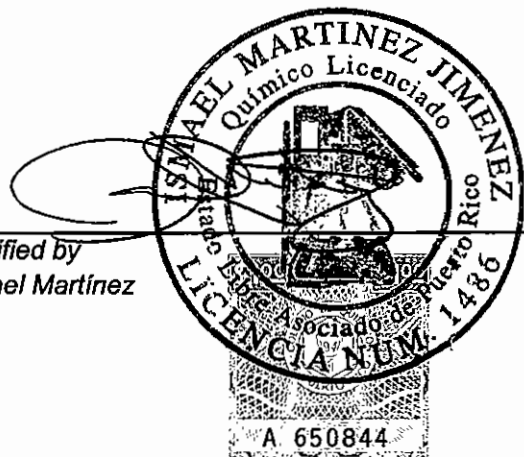
Order #: 27326
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 02 2-4		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 02 2-4
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	6,035	500	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 27327
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 02 4-6		

Certified by
Ismael Martinez



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 02 4-6
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	12,480	1,000	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 27328
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 02 6-8		

Certified by
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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 02 6-8
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	16,400	2,000	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

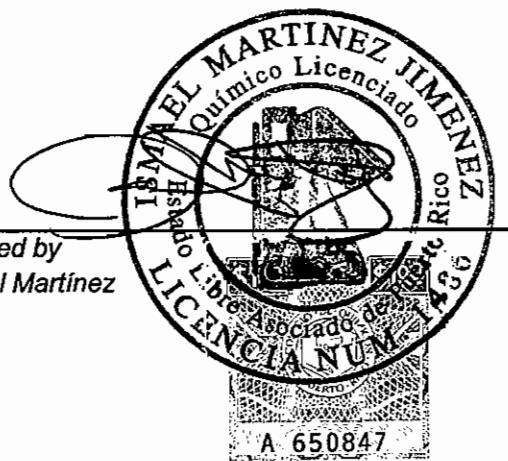
Order #: 27329
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 03 1-2		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 03 1-2
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/28/00	IPM
Benzene	<500	500	µg/Kg	03/28/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/28/00	IPM
Chloroform	<500	500	µg/Kg	03/28/00	IPM
Tetrahydrofuran	5,575	500	µg/Kg	03/28/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/28/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/28/00	IPM
Toluene	<500	500	µg/Kg	03/28/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/28/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/28/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

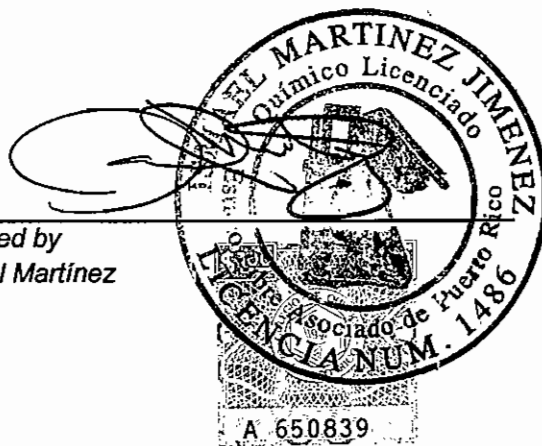
Order #: 27330
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 03 2-4		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 03 2-4
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/28/00	IPM
Benzene	<500	500	µg/Kg	03/28/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/28/00	IPM
Chloroform	<500	500	µg/Kg	03/28/00	IPM
Tetrahydrofuran	4,815	500	µg/Kg	03/28/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/28/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/28/00	IPM
Toluene	<500	500	µg/Kg	03/28/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/28/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/28/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

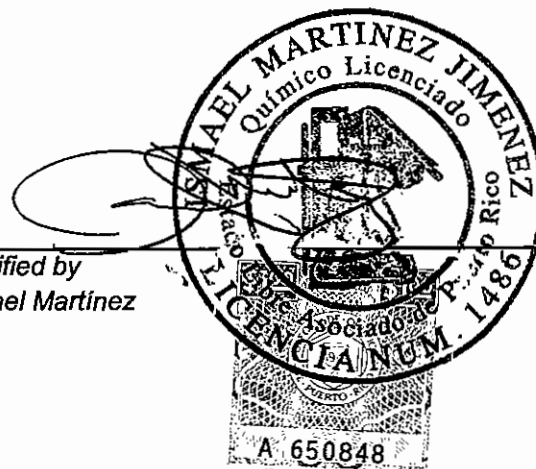
Order #: 27331
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 03 4-6		

Certified by
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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 03 4-6
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<500	500	µg/Kg	03/30/00	IPM
Benzene	<50	50	µg/Kg	03/30/00	IPM
Chlorobenzene	<50	50	µg/Kg	03/30/00	IPM
Chloroform	<50	50	µg/Kg	03/30/00	IPM
Tetrahydrofuran	129	50	µg/Kg	03/30/00	IPM
Ethylbenzene	<50	50	µg/Kg	03/30/00	IPM
Methylene chloride	<100	100	µg/Kg	03/30/00	IPM
Toluene	<50	50	µg/Kg	03/30/00	IPM
o-Xylene	<100	100	µg/Kg	03/30/00	IPM
m,p - Xylenes	<100	100	µg/Kg	03/30/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 27332
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 03 6-8		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 03 6-8
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/28/00	IPM
Benzene	<500	500	µg/Kg	03/28/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/28/00	IPM
Chloroform	<500	500	µg/Kg	03/28/00	IPM
Tetrahydrofuran	3,005	500	µg/Kg	03/28/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/28/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/28/00	IPM
Toluene	<500	500	µg/Kg	03/28/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/28/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/28/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

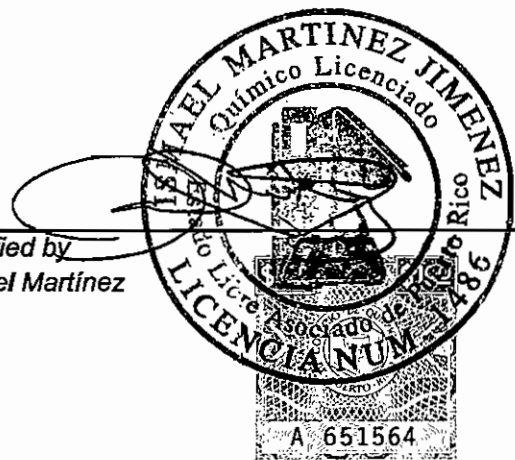
Order #: 27333
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 03 8-10		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 03 8-10
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/28/00	IPM
Benzene	<500	500	µg/Kg	03/28/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/28/00	IPM
Chloroform	<500	500	µg/Kg	03/28/00	IPM
Tetrahydrofuran	2,210	500	µg/Kg	03/28/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/28/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/28/00	IPM
Toluene	<500	500	µg/Kg	03/28/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/28/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/28/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

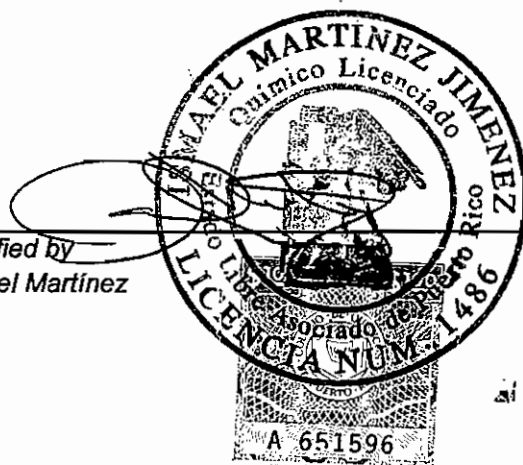
Order #: 27334
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 04 4-6		

Certified by
Ismael Martínez



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 04 4-6
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	3,575	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 27335
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 04 6-8		

Certified by
Ismael Martinez



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P.O. BOX 11458, SAN JUAN, P.R. 00910-1458 • TEL: (787) 725-5333 • FAX (787) 724-3110



TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 04 6-8
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	2,655	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 27336
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 04 8-10		

Certified by _____
Ismael Martinez



ENVIRONMENTAL QUALITY LABORATORIES, INC.

P.O. BOX 11458, SAN JUAN, P.R. 00910-1458 • TEL: (787) 725-5333 • FAX (787) 724-3110



TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 04 8-10
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	1,765	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 27337
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 05 1-2		

Certified by
Ismael Martinez



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 05 1-2
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	8,705	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

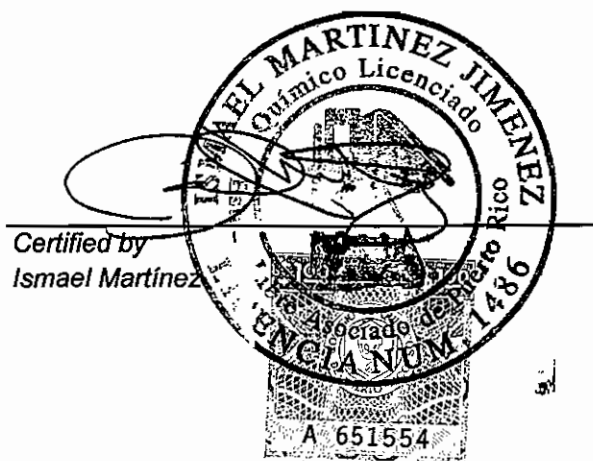
ATTN: MR. DALE WEISS

Order #: 27339
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 05 4-6		



TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 05 4-6
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	114	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

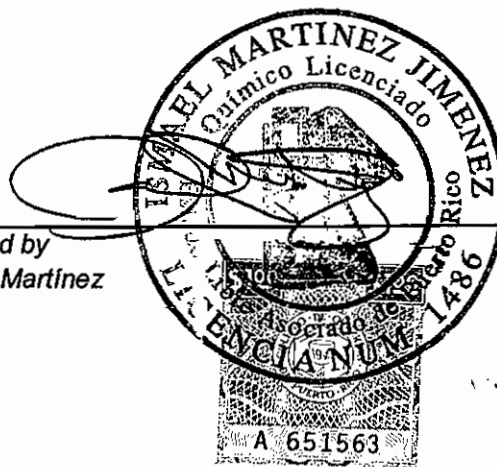
Order #: 27339
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 05 4-6		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 05 4-6
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	114	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



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LOWELL, MA 01852

ATTN: MR. DALE WEISS

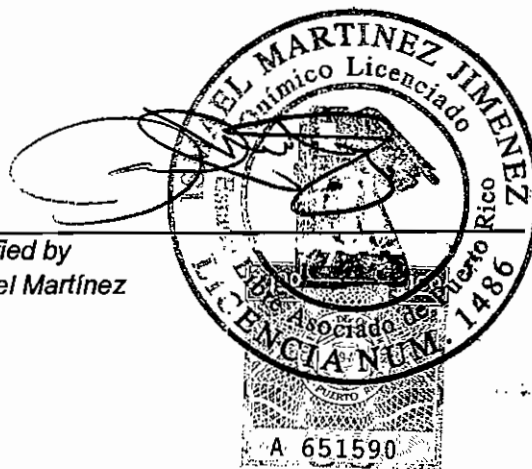
Order #: 27340
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 05 7-9		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 05 7-9
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	7,700	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

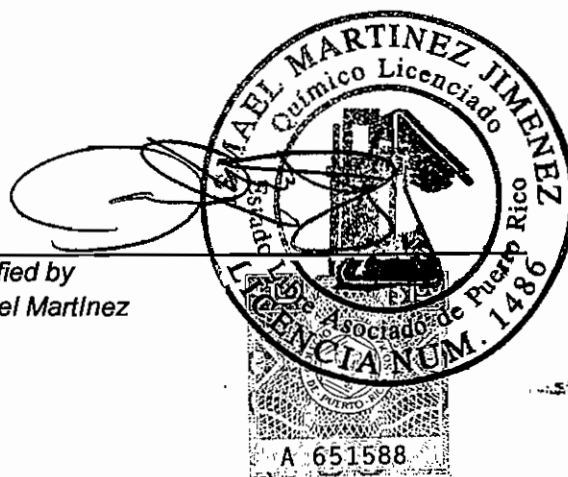
Order #: 27341
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 05 9-10.5		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 05 9-10.5
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	8,975	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

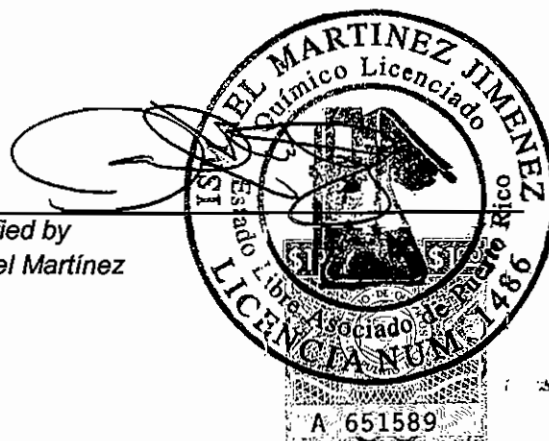
Order #: 27342
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 06 1-2		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 06 1-2
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	9,775	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

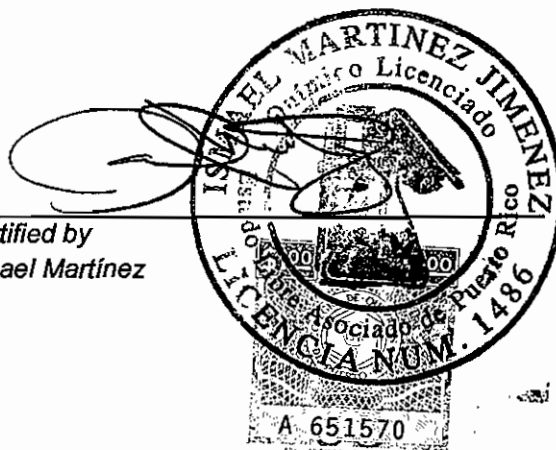
Order #: 27343
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 06 2-4		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 06 2-4
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/29/00	IPM
Benzene	<500	500	µg/Kg	03/29/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/29/00	IPM
Chloroform	<500	500	µg/Kg	03/29/00	IPM
Tetrahydrofuran	6,270	500	µg/Kg	03/29/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/29/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/29/00	IPM
Toluene	<500	500	µg/Kg	03/29/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/29/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/29/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

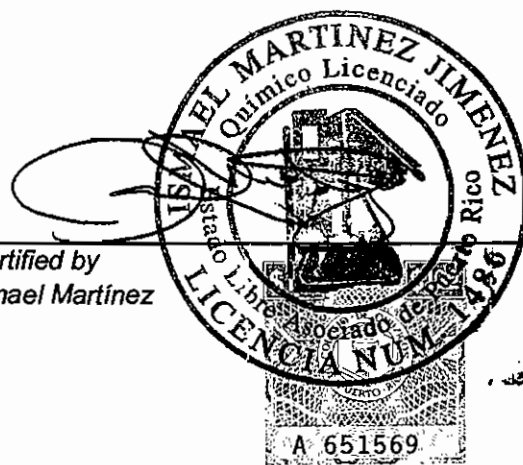
Order #: 27344
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 06 4-6		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 06 4-6
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	4,170	500	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 27345
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 06 6-8		

Certified by
Ismael Martínez



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 06 6-8
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	1,600	500	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

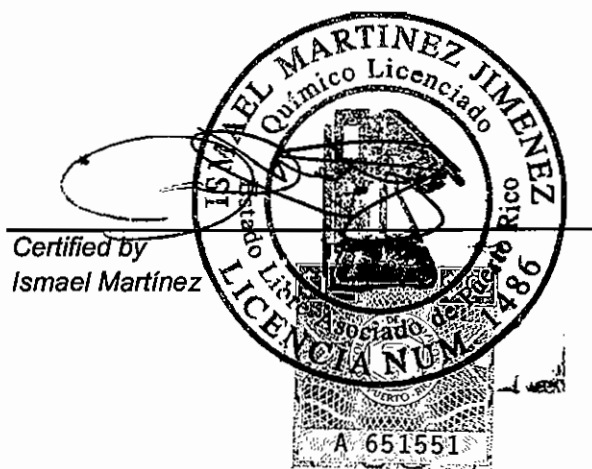
ATTN: MR. DALE WEISS

Order #: 27346
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 06 8-10		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 06 8-10
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<100	100	µg/Kg	03/31/00	IPM
Benzene	<10	10	µg/Kg	03/31/00	IPM
Chlorobenzene	<10	10	µg/Kg	03/31/00	IPM
Chloroform	<10	10	µg/Kg	03/31/00	IPM
Tetrahydrofuran	112	10	µg/Kg	03/31/00	IPM
Ethylbenzene	<10	10	µg/Kg	03/31/00	IPM
Methylene chloride	<20	20	µg/Kg	03/31/00	IPM
Toluene	<10	10	µg/Kg	03/31/00	IPM
o-Xylene	<20	20	µg/Kg	03/31/00	IPM
m,p - Xylenes	<20	20	µg/Kg	03/31/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28552
Work ID: Solid - Grab
Date Received: 03/30/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02722
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 08 - 1 - 2		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 08 - 1 - 2
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	2,934	100	µg/Kg	04/01/00	IPM
Benzene	43.1	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	8,360	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	11.9	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	60	20	µg/Kg	04/01/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28553
Work ID: Solid - Grab
Date Received: 03/30/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02722
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 08 - 2 - 4		

Certified by
Ismael Martinez



ENVIRONMENTAL QUALITY LABORATORIES, INC.

P.O. BOX 11458, SAN JUAN, P.R. 00910-1458 • TEL: (787) 725-5333 • FAX (787) 724-3110



TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 08 - 2 - 4
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	1,076	100	µg/Kg	04/01/00	IPM
Benzene	<10	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	681	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28554
Work ID: Solid - Grab
Date Received: 03/30/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02722
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 08 - 4 - 6		

Certified by
Ismael Martínez



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 08 - 4 - 6
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	3,948 3,948	100	µg/Kg	04/01/00	IPM
Benzene	<10 01	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	10,680 10,680	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28555
Work ID: Solid - Grab
Date Received: 03/30/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02722
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 08 - 6 - 8		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 08 - 6 - 8
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	4,696	100	µg/Kg	04/01/00	IPM
Benzene	74.8	10	µg/Kg	04/01/00	IPM
Chlorobenzene	<10	10	µg/Kg	04/01/00	IPM
Chloroform	<10	10	µg/Kg	04/01/00	IPM
Tetrahydrofuran	11,980	10	µg/Kg	04/01/00	IPM
Ethylbenzene	<10	10	µg/Kg	04/01/00	IPM
Methylene chloride	<20	20	µg/Kg	04/01/00	IPM
Toluene	<10	10	µg/Kg	04/01/00	IPM
o-Xylene	<20	20	µg/Kg	04/01/00	IPM
m,p - Xylenes	<20	20	µg/Kg	04/01/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

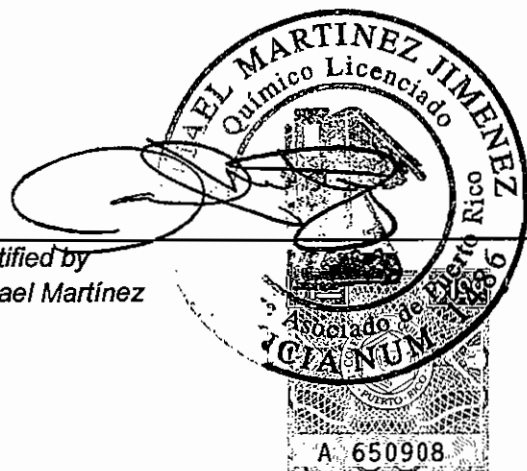
Order # : 28556
Work ID: Solid - Grab
Date Received: 03/30/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02722
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 09 - 1 - 2		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 09 - 1 - 2
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	4,320	1,000	µg/Kg	04/03/00	IPM
Benzene	144	100	µg/Kg	04/03/00	IPM
Chlorobenzene	<100	100	µg/Kg	04/03/00	IPM
Chloroform	<100	100	µg/Kg	04/03/00	IPM
Tetrahydrofuran	9,220	100	µg/Kg	04/03/00	IPM
Ethylbenzene	<100	100	µg/Kg	04/03/00	IPM
Methylene chloride	<200	200	µg/Kg	04/03/00	IPM
Toluene	<100	100	µg/Kg	04/03/00	IPM
o-Xylene	<200	200	µg/Kg	04/03/00	IPM
m,p - Xylenes	<100	100	µg/Kg	04/03/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

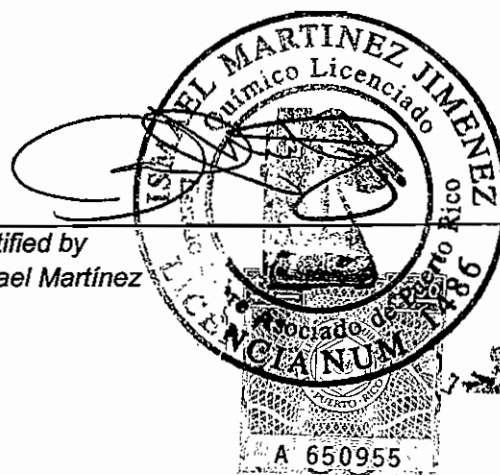
Order #: 28557
Work ID: Solid - Grab
Date Received: 03/30/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02722
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 09 - 2 - 4		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 09 - 2 - 4
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<1,000	1,000	µg/Kg	04/03/00	IPM
Benzene	<100	100	µg/Kg	04/03/00	IPM
Chlorobenzene	<100	100	µg/Kg	04/03/00	IPM
Chloroform	<100	100	µg/Kg	04/03/00	IPM
Tetrahydrofuran	8,740	100	µg/Kg	04/03/00	IPM
Ethylbenzene	<100	100	µg/Kg	04/03/00	IPM
Methylene chloride	<200	200	µg/Kg	04/03/00	IPM
Toluene	<100	100	µg/Kg	04/03/00	IPM
o-Xylene	<200	200	µg/Kg	04/03/00	IPM
m,p - Xylenes	<100	100	µg/Kg	04/03/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

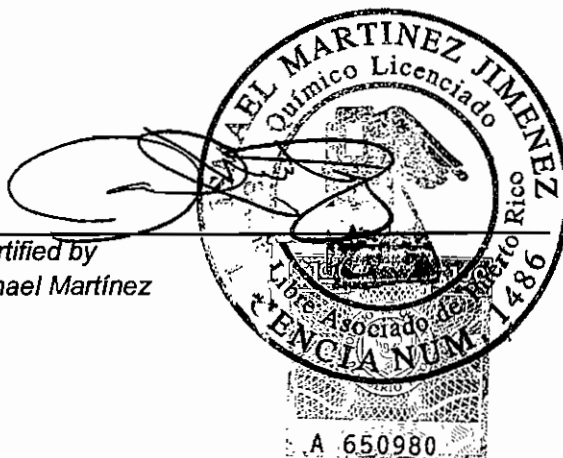
Order #: 28558
Work ID: Solid - Grab
Date Received: 03/30/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02722
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 09 - 4 - 6		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 09 - 4 - 6
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<1,000	1,000	µg/Kg	04/03/00	IPM
Benzene	<100	100	µg/Kg	04/03/00	IPM
Chlorobenzene	<100	100	µg/Kg	04/03/00	IPM
Chloroform	<100	100	µg/Kg	04/03/00	IPM
Tetrahydrofuran	4,250	100	µg/Kg	04/03/00	IPM
Ethylbenzene	<100	100	µg/Kg	04/03/00	IPM
Methylene chloride	<200	200	µg/Kg	04/03/00	IPM
Toluene	<100	100	µg/Kg	04/03/00	IPM
o-Xylene	<200	200	µg/Kg	04/03/00	IPM
m,p - Xylenes	<100	100	µg/Kg	04/03/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

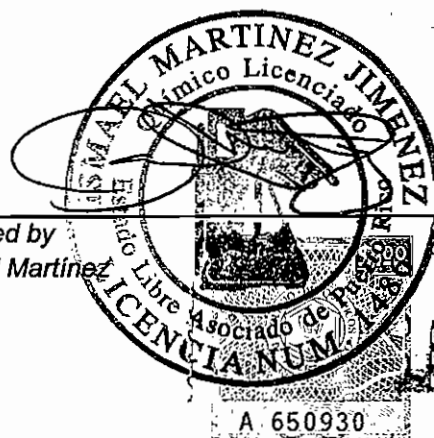
Order #: 28559
Work ID: Solid - Grab
Date Received: 03/30/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02722
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 09 - 6 - 8		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 09 - 6 - 8
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<1,000	1,000	µg/Kg	04/03/00	IPM
Benzene	<100	100	µg/Kg	04/03/00	IPM
Chlorobenzene	<100	100	µg/Kg	04/03/00	IPM
Chloroform	<100	100	µg/Kg	04/03/00	IPM
Tetrahydrofuran	8,390	100	µg/Kg	04/03/00	IPM
Ethylbenzene	<100	100	µg/Kg	04/03/00	IPM
Methylene chloride	<200	200	µg/Kg	04/03/00	IPM
Toluene	<100	100	µg/Kg	04/03/00	IPM
o-Xylene	<200	200	µg/Kg	04/03/00	IPM
m,p - Xylenes	<100	100	µg/Kg	04/03/00	IPM



TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28560
Work ID: Solid - Grab
Date Received: 03/30/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02722
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 09 - 8 - 10		

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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 09 - 8 - 10
Solid - Grab

Collected: 03/29/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	5,222	1,000	µg/Kg	04/03/00	IPM
Benzene	<100	100	µg/Kg	04/03/00	IPM
Chlorobenzene	<100	100	µg/Kg	04/03/00	IPM
Chloroform	<100	100	µg/Kg	04/03/00	IPM
Tetrahydrofuran	16,490	100	µg/Kg	04/03/00	IPM
Ethylbenzene	<100	100	µg/Kg	04/03/00	IPM
Methylene chloride	<200	200	µg/Kg	04/03/00	IPM
Toluene	<100	100	µg/Kg	04/03/00	IPM
o-Xylene	<200	200	µg/Kg	04/03/00	IPM
m,p - Xylenes	<100	100	µg/Kg	04/03/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 27348
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B-13 1-2		



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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B -13 1-2
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	4,755	500	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

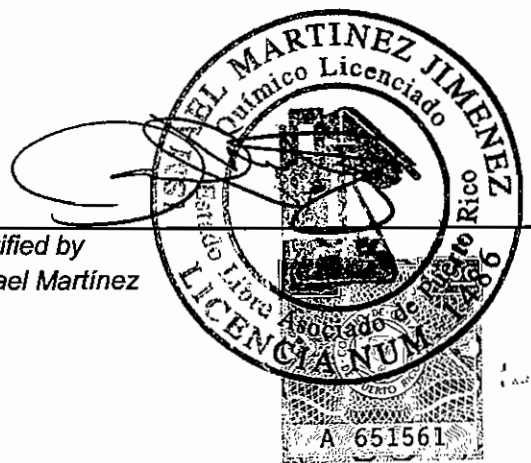
Order #: 27347
Work ID: Soil - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	B - 20 1-2		

Certified by
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TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

B - 20 1-2
Soil- Grab

Collected: 03/23/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<5,000	5,000	µg/Kg	03/30/00	IPM
Benzene	<500	500	µg/Kg	03/30/00	IPM
Chlorobenzene	<500	500	µg/Kg	03/30/00	IPM
Chloroform	<500	500	µg/Kg	03/30/00	IPM
Tetrahydrofuran	4,280	500	µg/Kg	03/30/00	IPM
Ethylbenzene	<500	500	µg/Kg	03/30/00	IPM
Methylene chloride	<1,000	1,000	µg/Kg	03/30/00	IPM
Toluene	<500	500	µg/Kg	03/30/00	IPM
o-Xylene	<1,000	1,000	µg/Kg	03/30/00	IPM
m,p - Xylenes	<1,000	1,000	µg/Kg	03/30/00	IPM



TEST RESULTS BY SAMPLE

Sample: 01
Job: 01-01

RB - 02
Liquid- Grab

Collected: 03/27/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Acetone	<10	10	µg/L	03/31/00	IPM
Benzene	<1.0	1.0	µg/L	03/31/00	IPM
Chlorobenzene	<1.0	1.0	µg/L	03/31/00	IPM
Chloroform	<1.0	1.0	µg/L	03/31/00	IPM
Tetrahydrofuran	<1.0	1.0	µg/L	03/31/00	IPM
Ethylbenzene	<1.0	1.0	µg/L	03/31/00	IPM
Methylene chloride	<2.0	2.0	µg/L	03/31/00	IPM
Toluene	<1.0	1.0	µg/L	03/31/00	IPM
o-Xylene	<2.0	2.0	µg/L	03/31/00	IPM
m,p - Xylenes	<2.0	2.0	µg/L	03/31/00	IPM



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 28035
Work ID: Liquid - Grab
Date Received: 03/28/00
Date Complete: 04/11/00
Client Code: 1330-01

DS #: 2000-02686
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	RB - 02		



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TRC
100 FOOT OF JOHN STREET
LOWELL, MA 01852

ATTN: MR. DALE WEISS

Order #: 27320
Work ID: DI Water - Grab
Date Received: 03/24/00
Date Complete: 04/03/00
Client Code: 1330-01

DS #: 2000-02598
Samples collected by Client
Limit = Detection Limit
Facility: Pfizer Pharmaceuticals

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	RB -01		

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TEST RESULTS BY SAMPLE

Sample: 01 RB -01
Job: 01-01 DI Water - Grab

Collected: 03/24/00

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Volatile Organic Compounds (8260)					
Acetone	<10	10	µg/L	02/04/00	JDA
Acrolein	<50	50	µg/L	02/04/00	JDA
Acrylonitrile	<50	50	µg/L	02/04/00	JDA
Benzene	<1.0	1.0	µg/L	02/04/00	JDA
Bromobenzene	<1.0	1.0	µg/L	02/04/00	JDA
Bromochloromethane	<1.0	1.0	µg/L	02/04/00	JDA
Bromodichloromethane	<1.0	1.0	µg/L	02/04/00	JDA
Bromoform	<1.0	1.0	µg/L	02/04/00	JDA
Bromomethane	<1.0	1.0	µg/L	02/04/00	JDA
2-Butanone	<3.0	3.0	µg/L	02/04/00	JDA
n-Butylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
sec-Butylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
tert-Butylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
Carbon Disulfide	3.84	1.0	µg/L	02/04/00	JDA
Carbon Tetrachloride	<1.0	1.0	µg/L	02/04/00	JDA
Chlorobenzene	<1.0	1.0	µg/L	02/04/00	JDA
Chloroethane	<1.0	1.0	µg/L	02/04/00	JDA
2-Chloroethyl vinyl ether	<1.0	1.0	µg/L	02/04/00	JDA
Chloroform	<1.0	1.0	µg/L	02/04/00	JDA
Chloromethane	<1.0	1.0	µg/L	02/04/00	JDA
2-Chlorotoluene	<2.0	2.0	µg/L	02/04/00	JDA
4-Chlorotoluene	<1.0	1.0	µg/L	02/04/00	JDA
Dibromochloromethane	<1.0	1.0	µg/L	02/04/00	JDA
1,2-Dibromo-3 chloropropane	<1.0	1.0	µg/L	02/04/00	JDA
1,2-Dibromoethane	<1.0	1.0	µg/L	02/04/00	JDA
Dibromomethane	<2.0	2.0	µg/L	02/04/00	JDA
1,2-Dichlorobenzene	<1.0	1.0	µg/L	02/04/00	JDA
1,3-Dichlorobenzene	<1.0	1.0	µg/L	02/04/00	JDA



<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Volatile Organic Compounds (8260) Cont.					
1,4-Dichlorobenzene	<1.0	1.0	µg/L	02/04/00	JDA
Dichlorodifluoromethane	<1.0	1.0	µg/L	02/04/00	JDA
1,1-Dichloroethane	<1.0	1.0	µg/L	02/04/00	JDA
1,2-Dichloroethane	<1.0	1.0	µg/L	02/04/00	JDA
1,1-Dichloroethene	<1.0	1.0	µg/L	02/04/00	JDA
cis-1,2-Dichloroethene	<1.0	1.0	µg/L	02/04/00	JDA
trans-1,2-Dichloroethene	<1.0	1.0	µg/L	02/04/00	JDA
1,2-Dichloropropane	<1.0	1.0	µg/L	02/04/00	JDA
1,3-Dichloropropane	<1.0	1.0	µg/L	02/04/00	JDA
2,2-Dichloropropane	<2.0	2.0	µg/L	02/04/00	JDA
1,1-Dichloropropene	<1.0	1.0	µg/L	02/04/00	JDA
cis-1,3-Dichloropropene	<1.0	1.0	µg/L	02/04/00	JDA
trans-1,3-Dichloropropene	<1.0	1.0	µg/L	02/04/00	JDA
Ethylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
Hexachlorobutadiene	<1.0	1.0	µg/L	02/04/00	JDA
2-Hexanone	<5.0	5.0	µg/L	02/04/00	JDA
Iodomethane	<2.0	2.0	µg/L	02/04/00	JDA
Isopropylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
p-Isopropyltoluene	<1.0	1.0	µg/L	02/04/00	JDA
Methylene chloride	<2.0	2.0	µg/L	02/04/00	JDA
4-Methyl-2-pentanone	<2.0	2.0	µg/L	02/04/00	JDA
Naphthalene	<1.0	1.0	µg/L	02/04/00	JDA
n-Propylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
Styrene	<1.0	1.0	µg/L	02/04/00	JDA
1,1,1,2-Tetrachloroethane	<1.0	1.0	µg/L	02/04/00	JDA
1,1,2,2-Tetrachloroethane	<1.0	1.0	µg/L	02/04/00	JDA
Tetrachloroethene	<1.0	1.0	µg/L	02/04/00	JDA
Toluene	<1.0	1.0	µg/L	02/04/00	JDA
1,2,3-Trichlorobenzene	<1.0	1.0	µg/L	02/04/00	JDA
1,2,4-Trichlorobenzene	<1.0	1.0	µg/L	02/04/00	JDA
1,1,1-Trichloroethane	<1.0	1.0	µg/L	02/04/00	JDA
1,1,2-Trichloroethane	<1.0	1.0	µg/L	02/04/00	JDA
Trichloroethene	<1.0	1.0	µg/L	02/04/00	JDA
Trichlorofluoromethane	<1.0	1.0	µg/L	02/04/00	JDA
1,2,3-Trichloropropane	<1.0	1.0	µg/L	02/04/00	JDA
1,2,4-Trimethylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
1,3,5-Trimethylbenzene	<1.0	1.0	µg/L	02/04/00	JDA
Vinyl Acetate	<3.0	3.0	µg/L	02/04/00	JDA
Vinyl Chloride	<1.0	1.0	µg/L	02/04/00	JDA
o-Xylene	<2.0	2.0	µg/L	02/04/00	JDA
m-Xylene	<1.0	1.0	µg/L	02/04/00	JDA
p-Xylene	<1.0	1.0	µg/L	02/04/00	JDA
Tetrahydrofuran	<1.0	1.0	µg/L	02/04/00	JDA



TRC Environmental Corporation

MEMORANDUM

TO: Dale Weiss
FROM: Elizabeth Denly
RE: Data Validation Review for Groundwater Samples
Pfizer Pharmaceuticals,
Barceloneta, Puerto Rico

DATE: December 22, 2006
FILE: Pfizervlid_October 2006_GW.doc
37865-0010-00000
CC:

SUMMARY

Limited validation was performed on the data for seven groundwater samples and one trip blank collected at the Pfizer Pharmaceuticals site in Barceloneta, Puerto Rico. The samples were collected on October 9 and 10, 2006 and submitted to Pace Analytical Laboratory (Pace) in San German, Puerto Rico for analysis. The samples were analyzed for volatile organic compounds (VOCs) using SW-846 method 8260B.

The sample results were assessed using the "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (10/99). Modification of the Functional Guidelines was done to accommodate the non-CLP methodology.

In general, the data appear to be valid as reported and may be used for decision-making purposes. The nondetect results for chloroethane were qualified as estimated (UJ) in all samples due to a calibration nonconformance. The positive results for 1,2-dibromo-3-chloropropane in samples MW-03 and TB-10 were qualified as nondetects due to method blank contamination. These results are still usable for project objectives. This qualification has a minor effect on the data usability.

SAMPLES

Samples included in this review are listed below:

MW-01
MW-02
MW-03
MW-04
MW-05
MW-06
DUPLICATE-01 (field duplicate of MW-01)
TB-10 (trip blank)

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with TRC requests
- Holding times and sample preservation
- Gas chromatography/mass spectrometry (GC/MS) tunes
- Initial and continuing calibrations

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- Method blanks/trip blanks
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) results
- Laboratory control sample (LCS) results
- Internal standard performance
- Field duplicate results
- Quantitation limits and sample results

DISCUSSION

Agreement of Analyses Conducted with TRC Requests

Sample reports were checked to verify that the results corresponded to analytical requests as designated on the chain-of-custody. No discrepancies were noted.

Holding Times and Sample Preservation

All samples were analyzed within the method-specified holding time. No anomalies were noted in regards to sample preservation.

GC/MS Tunes

The frequency and abundance of all bromofluorobenzene (BFB) tunes were within the acceptance criteria. The samples were analyzed within 12 hours from BFB tunes.

Initial and Continuing Calibrations

The percent relative standard deviations (%RSDs) of acetone (108), methylene chloride (55.8), and tetrahydrofuran (41.1) were outside of the acceptance criteria in the initial calibration associated with all samples. Qualification of the data was not required as only positive results are affected and no positive results were reported for these compounds in the samples. The average response factor for chloroethane (0.028) was below the acceptance criteria in the initial calibration associated with all samples. Based on the opinion of the validator, the nondetect results for chloroethane were qualified as estimated (UJ) in all samples. This qualification was performed in lieu of rejection since the laboratory used the secondary ion (49) for quantitation of this compound instead of the primary ion (64) which contributed to the lower response, the %RSD of this compound was acceptable demonstrating acceptable linearity at the lower concentrations, and since the laboratory used a non-CLP method, for which the data validation guidelines were originally intended.

The percent differences (%Ds) of chloroethane (25.8) and acetone (60.5) were outside of the acceptance criteria in the continuing calibration standard associated with the diluted analyses of samples MW-01 and DUPLICATE-01. Since the diluted analyses were used solely to report the results of chlorobenzene, qualification of the data on the basis of the %D nonconformances was not required.

Method Blanks/Trip Blanks

1,2-Dibromo-3-chloropropane was detected in the laboratory method blank and trip blank associated with all samples in this report. The presence of blank contamination indicates the potential for false positive results in the samples. An Action Level (AL) was calculated based on 5x the maximum concentration detected. The following table summarizes the blank contamination and AL.

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Compound	Maximum Concentration Detected (µg/L)	Action Level (µg/L)
1,2-Dibromo-3-chloropropane	1.8	9.0

Sample results were qualified as follows:

- Sample results > quantitation limit (QL) but ≤ AL were qualified as nondetect (U) at the reported concentration.
- Sample results ≤ QL and < AL were qualified as nondetect (U) at the QL.
- Sample results > AL were not qualified.

Based on the Action Level, the positive results for 1,2-dibromo-3-chloropropane in samples MW-03 and TB-10 were qualified as nondetects at the reported concentrations. It should be noted that the positive results for 1,2-dibromo-3-chloropropane were not originally reported by the laboratory as a QL of 5 µg/L was originally reported. As discussed in the Quantitation Limits and Sample Results section, the QL for this compound was revised. The raw data were subsequently reviewed to determine if there were positive results above the revised QL.

Surrogate Spike Recoveries

Surrogate recoveries were within the acceptance criteria in all sample analyses.

MS/MSD Results

Sample MW-06 was designated for MS/MSD analyses with this sample set. However, the laboratory instead performed MS/MSD analyses on sample MW-04. The percent recoveries and relative percent differences (RPDs) of all compounds were within the acceptance criteria.

LCS Results

The percent recoveries of acetone (148 and 150) exceeded the acceptance criteria in both LCS analyses. Since acetone was not detected in any of the samples in this data set, qualification of the data was not required.

Internal Standard Performance

Internal standards were within the acceptance criteria in all samples.

Field Duplicate Results

Samples MW-01 and DUPLICATE-01 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected analytes, both of which were within the acceptance limit.

Compound	MW-01 (µg/L)	DUPLICATE -01 (µg/L)	RPD (%)
Chloroform	8.5	8.4	1.2
Chlorobenzene	360	370	2.7

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Quantitation Limits and Sample Results

Samples MW-01 and DUPLICATE-01 were analyzed at two-fold dilutions due to the concentrations of chlorobenzene which were above the calibration range in the initial undiluted analyses. The laboratory combined the results of both the diluted and undiluted analyses in order to report the lowest possible quantitation limits and all results within the calibration range.

Quantitation limits were reviewed to ensure the project action levels (i.e., maximum contaminant levels [MCLs]) were achieved. The following table summarizes the MCLs which were not achieved.

Compound	Original Quantitation Limit ($\mu\text{g/L}$)	MCL ($\mu\text{g/L}$)
1,2-Dibromo-3-chloropropane	5	0.2
1,2-Dibromoethane	5	0.05
Vinyl chloride	5	2

It should be noted that the laboratory's initial calibration was performed down to 1 $\mu\text{g/L}$ for the above-listed compounds. Therefore, as per SW-846, the quantitation limit was revised to reflect the lowest initial calibration standard. The revised quantitation limits for 1,2-dibromo-3-chloropropane and 1,2-dibromoethane were still above the MCLs.

Mr. Dale S. Weiss
TRC
Boott Mills South
116 John Street
Lowell, MA 01852

Client Site: Pfizer Closure
Client Ref.: Pfizer REF 078650010

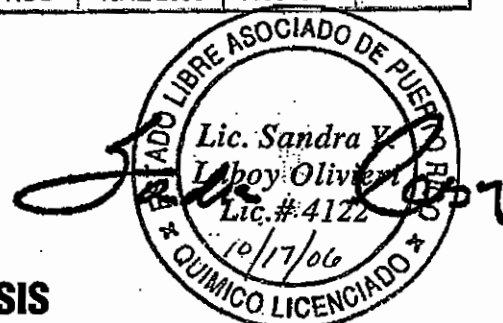
Lab Project ID: 06-3559
Lab Sample ID: 0610-0777
Client Sample ID: TB-10
Sample Matrix: Aqueous

Date Sampled: 10/09/2006
Date Received: 10/11/2006

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B(1)	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Benzene 5	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromodichloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromoform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Butanone	8260B(1)	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
n-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Carbon Tetrachloride 5	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chlorobenzene 100	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Cumene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane 0.2	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromoethane 0.05	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichlorobenzene 600	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,4-Dichlorobenzene 25	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloroethane 5	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethene 2	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

(Continued)



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Lab Sample ID: 0610-0777
Client Sample ID: TB-10

Volatiles (Cont.)

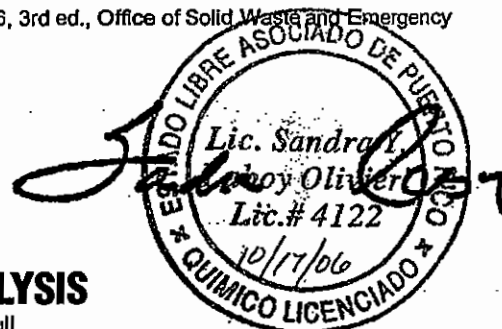
cis-1,2-Dichloroethene	70	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	100	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloropropane	5	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichloropropane		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2,2-Dichloropropane		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloropropene		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Ethylbenzene	700	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexachlorobutadiene		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexane		8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
2-Hexanone		8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
4-Isopropyl toluene		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Methyl tert-butyl ether		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Methyl-2-pentanone		8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Methylene chloride	5	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Naphthalene		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
n-Propylbenzene		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Styrene	100	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrachloroethene	5	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrahydrofuran		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Toluene	1000	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	70	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	200	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	5	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichloroethene	5	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichlorofluoromethane		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichloropropane		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Vinyl chloride	2	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
m,p-Xylene	1000	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
o-Xylene		8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Dale S. Weiss
TRC
Boott Mills South
116 John Street
Lowell, MA 01852

Client Site: Pfizer Closure
Client Ref.: Pfizer RFI 378650010

Lab Project ID: 06-3559
Lab Sample ID: 0610-0778
Client Sample ID: MW-04
Sample Matrix: Aqueous

Date Sampled: 10/09/2006
Date Received: 10/11/2006

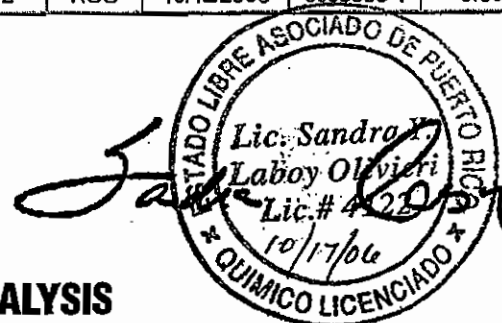
Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B(1)	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromodichloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromoform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Butanone	8260B(1)	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
n-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Cumene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

(Continued)

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Lab Sample ID: 0610-0778

Client Sample ID: MW-04

Volatiles (Cont.)

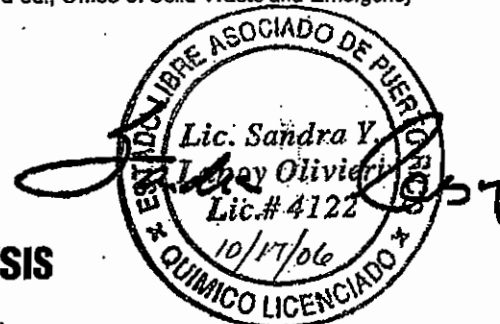
cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

REPORT OF LABORATORY ANALYSIS

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Mr. Dale S. Weiss
TRC
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116 John Street
Lowell, MA 01852

Client Site: Pfizer Closure
Client Ref.: Pfizer REF 378650010

Lab Project ID: 06-3559
Lab Sample ID: 0610-0779
Client Sample ID: MW-03
Sample Matrix: Aqueous

Date Sampled: 10/09/2006
Date Received: 10/11/2006

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B(1)	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromodichloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromoform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Butanone	8260B(1)	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
n-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Cumene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

(Continued)

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Lab Sample ID: 0610-0779

Client Sample ID: MW-03

Volatiles (Cont.)

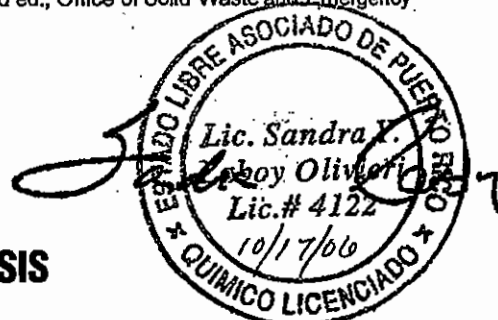
cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Client Site: Pfizer Closure
Client Ref.: Pfizer RFI 378650010

Lab Project ID: 06-3559
Lab Sample ID: 0610-0780
Client Sample ID: MW-05
Sample Matrix: Aqueous

Date Sampled: 10/09/2006
Date Received: 10/11/2006

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B(1)	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromodichloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromoform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Butanone	8260B(1)	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
n-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Cumene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

(Continued)

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Lab Sample ID: 0610-0780
Client Sample ID: MW-05

Volatiles (Cont.)

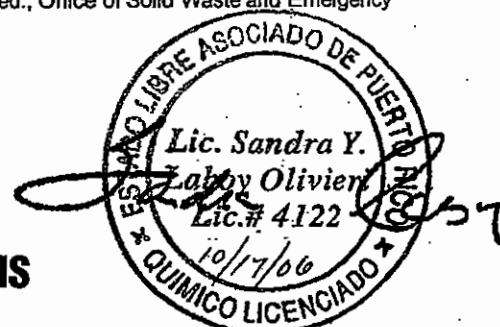
cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Dale S. Weiss
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116 John Street
Lowell, MA 01852

Client Site: Pfizer Closure
Client Ref.: Pfizer R51378650010

Lab Project ID: 06-3559
Lab Sample ID: 0610-0781
Client Sample ID: MW-06
Sample Matrix: Aqueous

Date Sampled: 10/10/2006
Date Received: 10/11/2006

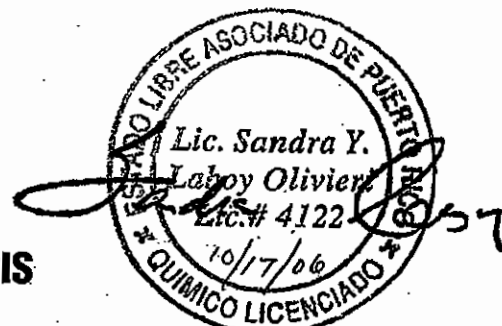
Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B(1)	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromodichloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromoform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Butanone	8260B(1)	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
n-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chlorobenzene	8260B(1)	0.048	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Cumene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

(Continued)

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Lab Sample ID: 0610-0781

Client Sample ID: MW-06

Volatiles (Cont.)

cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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116 John Street
Lowell, MA 01852

Lab Project ID: 06-3559
Lab Sample ID: 0610-0782
Client Sample ID: MW-01
Sample Matrix: Aqueous

Date Sampled: 10/10/2006
Date Received: 10/11/2006

Client Site: Pfizer Closure
Client Ref.: Pfizer RFI 378650010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B(1)	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromodichloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromoform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Butanone	8260B(1)	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
n-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chlorobenzene	8260B(1)	0.36	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroform	8260B(1)	0.0085	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Cumene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

(Continued)

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Lab Sample ID: 0610-0782
Client Sample ID: MW-01

Volatiles (Cont.)

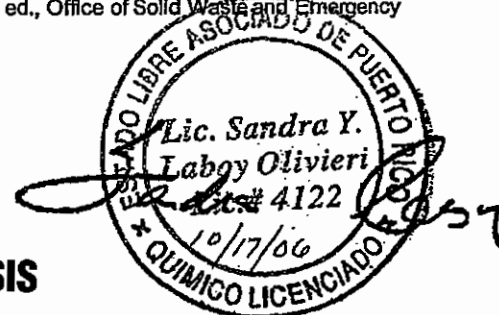
cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

REPORT OF LABORATORY ANALYSIS

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Mr. Dale S. Weiss
TRC
Boott Mills South
116 John Street
Lowell, MA 01852

Client Site: Pfizer Closure
Client Ref.: Pfizer REF 378650010

Lab Project ID: 06-3559
Lab Sample ID: 0610-0783
Client Sample ID: MW-02
Sample Matrix: Aqueous

Date Sampled: 10/10/2006
Date Received: 10/11/2006

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B(1)	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
Benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromodichloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromoform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
2-Butanone	8260B(1)	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
n-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chlorobenzene	8260B(1)	0.063	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloroform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Cumene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Dibromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Dibromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050

(Continued)

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Lab Sample ID: 0610-0783
Client Sample ID: MW-02

Volatiles (Cont.)

cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Client Site: Pfizer Closure
Client Ref.: Pfizer REF 378650010

Lab Project ID: 06-3559
Lab Sample ID: 0610-0784
Client Sample ID: Duplicate-01
Sample Matrix: Aqueous

Date Sampled: 10/10/2006
Date Received: 10/11/2006

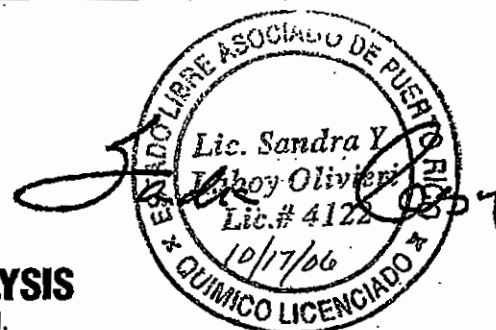
Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B(1)	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
Benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromodichloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromoform	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
2-Butanone	8260B(1)	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
n-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chlorobenzene	8260B(1)	0.37	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloroform	8260B(1)	0.0084	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Cumene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Dibromochloromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Dibromomethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B(1)	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050

(Continued)

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Lab Sample ID: 0610-0784
Client Sample ID: Duplicate-01

Volatiles (Cont.)

cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Approved by: Jade Lopez

Date: 10/17/06

REPORT OF LABORATORY ANALYSIS

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October 16, 2006

Mr. Dale S. Weiss
TRC
Boott Mills South
116 John Street
Lowell, MA 01852

Dear Mr. Weiss:

Enclosed are analytical results for samples submitted to Pace Analytical by TRC. The samples were received on October 11, 2006. Please reference Pace project number 06-3559 when inquiring about this report.

Client Site: Pfizer Closure
Client Ref.: Pfizer RFI 378650010

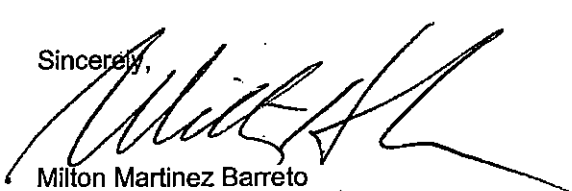
Pace Sample Identification	Client Sample Identification
0610-0777	TB-10
0610-0778	MW-04
0610-0779	MW-03
0610-0780	MW-05

Pace Sample Identification	Client Sample Identification
0610-0781	MW-06
0610-0782	MW-01
0610-0783	MW-02
0610-0784	Duplicate-01

General Comments:

Please call me if you have any questions regarding the information contained within this report.

Sincerely,


Milton Martinez Barreto
Project Manager

MMB: mmb

Enclosures

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Mr. Dale S. Weiss
TRC
Boott Mills South
116 John Street
Lowell, MA 01852

Lab Project ID: 06-3559
Lab Sample ID: 0610-0777
Client Sample ID: TB-10
Sample Matrix: Aqueous

Date Sampled: 10/09/2006
Date Received: 10/11/2006

Client Site: Pfizer Closure
Client Ref.: Pfizer RFI 378650010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromodichloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromoform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Butanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
n-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Cumene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

(Continued)



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Lab Sample ID: 0610-0777

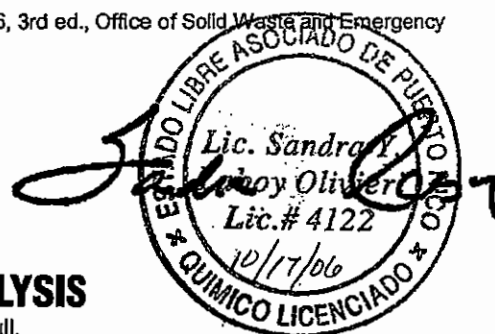
Client Sample ID: TB-10

Volatiles (Cont.)

cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.



REPORT OF LABORATORY ANALYSIS

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Mr. Dale S. Weiss
TRC
Boott Mills South
116 John Street
Lowell, MA 01852

Client Site: Pfizer Closure
Client Ref.: Pfizer RFI 378650010

Lab Project ID: 06-3559
Lab Sample ID: 0610-0778
Client Sample ID: MW-04
Sample Matrix: Aqueous

Date Sampled: 10/09/2006
Date Received: 10/11/2006

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromodichloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromoform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Butanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
n-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Cumene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

(Continued)

Sandra X
Lic. Sandra X
Laboy Olivieri
Lic. # 4026
10/17/06
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QUIMICO LICENCIADO

REPORT OF LABORATORY ANALYSIS

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Lab Sample ID: 0610-0778
Client Sample ID: MW-04

Volatiles (Cont.)

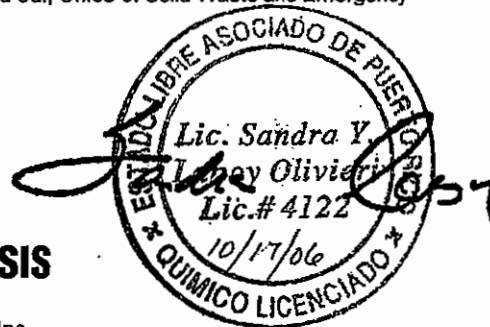
cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Dale S. Weiss
TRC
Boott Mills South
116 John Street
Lowell, MA 01852

Lab Project ID: 06-3559
Lab Sample ID: 0610-0779
Client Sample ID: MW-03
Sample Matrix: Aqueous

Date Sampled: 10/09/2006
Date Received: 10/11/2006

Client Site: Pfizer Closure
Client Ref.: Pfizer RFI 378650010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromodichloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromoform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Butanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
n-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Cumene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

(Continued)

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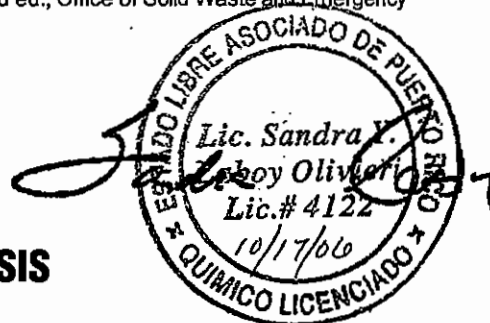
Lab Sample ID: 0610-0779
Client Sample ID: MW-03

Volatiles (Cont.)

cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.



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Mr. Dale S. Weiss
TRC
Boott Mills South
116 John Street
Lowell, MA 01852

Client Site: Pfizer Closure
Client Ref.: Pfizer REI:378650010

Lab Project ID: 06-3559
Lab Sample ID: 0610-0780
Client Sample ID: MW-05
Sample Matrix: Aqueous

Date Sampled: 10/09/2006
Date Received: 10/11/2006

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromodichloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromoform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Butanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
n-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Cumene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

(Continued)

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Lab Sample ID: 0610-0780
Client Sample ID: MW-05

Volatiles (Cont.)

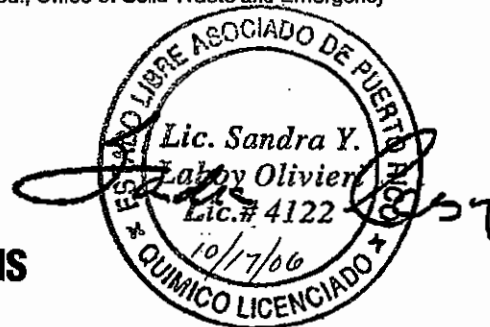
cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

REPORT OF LABORATORY ANALYSIS

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116 John Street
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Client Site: Pfizer Closure
Client Ref.: Pfizer RFI 378650010

Lab Project ID: 06-3559
Lab Sample ID: 0610-0781
Client Sample ID: MW-06
Sample Matrix: Aqueous

Date Sampled: 10/10/2006
Date Received: 10/11/2006

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Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromodichloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromoform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Butanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
n-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chlorobenzene	8260B ⁽¹⁾	0.048	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Cumene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

(Continued)

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Lab Sample ID: 0610-0781
Client Sample ID: MW-06

Volatiles (Cont.)

cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

REPORT OF LABORATORY ANALYSIS

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Lowell, MA 01852

Client Site: Pfizer Closure
Client Ref.: Pfizer RFI 378650010

Lab Project ID: 06-3559
Lab Sample ID: 0610-0782
Client Sample ID: MW-01
Sample Matrix: Aqueous

Date Sampled: 10/10/2006
Date Received: 10/11/2006

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromodichloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromoform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Bromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Butanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
n-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chlorobenzene	8260B ⁽¹⁾	0.36	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloroform	8260B ⁽¹⁾	0.0085	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Chloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Cumene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dibromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

(Continued)

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Lab Sample ID: 0610-0782
Client Sample ID: MW-01

Volatiles (Cont.)

cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/12/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/12/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Lic. Sandra Y. Laboy Olivieri
4122
10/17/06
QUIMICO LICENCIADO

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Client Site: Pfizer Closure
Client Ref.: Pfizer RFI 378650010

Lab Project ID: 06-3559
Lab Sample ID: 0610-0783
Client Sample ID: MW-02
Sample Matrix: Aqueous

Date Sampled: 10/10/2006
Date Received: 10/11/2006

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
Benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromodichloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromoform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
2-Butanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
n-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chlorobenzene	8260B ⁽¹⁾	0.063	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloroform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Cumene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Dibromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Dibromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050

(Continued)



REPORT OF LABORATORY ANALYSIS

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Lab Sample ID: 0610-0783
Client Sample ID: MW-02

Volatiles (Cont.)

cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

REPORT OF LABORATORY ANALYSIS

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Mr. Dale S. Weiss
TRC
Boott Mills South
116 John Street
Lowell, MA 01852

Client Site: Pfizer Closure
Client Ref.: Pfizer REF 378650010

Lab Project ID: 06-3559
Lab Sample ID: 0610-0784
Client Sample ID: Duplicate-01
Sample Matrix: Aqueous

Date Sampled: 10/10/2006
Date Received: 10/11/2006

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
Benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromodichloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromoform	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Bromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
2-Butanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
n-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
sec-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
tert-Butyl benzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Carbon Tetrachloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chlorobenzene	8260B ⁽¹⁾	0.37	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloroform	8260B ⁽¹⁾	0.0084	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Chloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
2-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
4-Chlorotoluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Cumene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dibromo-3-chloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Dibromochloromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dibromoethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Dibromomethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,3-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,4-Dichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Dichlorodifluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050

(Continued)

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Lab Sample ID: 0610-0784
Client Sample ID: Duplicate-01

Volatiles (Cont.)

cis-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
trans-1,2-Dichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,3-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
2,2-Dichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
cis-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
trans-1,3-Dichloropropene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Ethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Hexachlorobutadiene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Hexane	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
2-Hexanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
4-Isopropyl toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Methyl tert-butyl ether	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
4-Methyl-2-pentanone	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
Methylene chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Naphthalene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
n-Propylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Styrene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,1,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Tetrachloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Tetrahydrofuran	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Toluene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,3-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,4-Trichlorobenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,1-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,1,2-Trichloroethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Trichloroethene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Trichlorofluoromethane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,3-Trichloropropane	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,2,4-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
1,3,5-Trimethylbenzene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
Vinyl chloride	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050
m,p-Xylene	8260B ⁽¹⁾	<0.010	0.010	mg/L	RGG	10/13/2006	0005895-1	<0.010
o-Xylene	8260B ⁽¹⁾	<0.0050	0.0050	mg/L	RGG	10/13/2006	0005895-1	<0.0050

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Approved by: Jade Lopez

Date: 10/17/06



REPORT OF LABORATORY ANALYSIS

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Page: 7 of 7	
0949207	
REGULATORY AGENCY	
☐ NPDES	☐ GROUND WATER
☐ UST	☐ DRINKING WATER
	☒ RCRA
	☐ Other _____
SITE LOCATION	☐ GA ☐ IL ☐ IN ☐ MI ☐ MN ☐ NC
	☐ OH ☐ SC ☐ WI
	☒ OTHER <i>VA</i>

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company	TRC	Report To:	SANK	Attention:	SANK
Address	116 John Street	Copy To:		Company Name:	
	Lowell MA 01852			Address:	
Email To:	dweiss@trcsolutions.com	Purchase Order No.:		Pace Quote Reference:	
Phone	978-970-5600	Project Name:	Pfizer RFI	Pace Project Manager:	
Requested Due Date/TAT:	STANDARD	Project Number:	378650010	Pace Profile #:	

[illegible]

Additional Comments:	RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITION				
Sample MW-6 triple volume vials used Sample Analysis is 8260B vials TTHF.	CUMMINGS		10/11/06		1000		C/S		10/16/06		1000						
	Z. Z. Z.		10/11/06		1230		Z. Z. Z.		10/11/06		1230						
	Z. Z. Z.		10/11/06		20:17												
	SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Charles H.C. Foster SIGNATURE: <i>[Signature]</i>												Temp in °C Received on ice Custody Sealed Cooler Samples Intact				
													DATE Signed (MM/DD/YY) 10/11/06				

ORIGINAL

SEE REVERSE SIDE FOR INSTRUCTIONS

Spike ID's:

Surrogate ID's:	CCV Spike ID's:	Internal Standard	LCS/MS/MSD ID's:	ICV
ws1 voa-gc/ms-s-3-019	cc1 voa-gc/ms-s-3-021	is1 voa-gc/ms-s-3-020	m1	gcms-s-3-022
ws2 n/a	cc2 n/a	is2 n/a	m2	ms2 n/a
ss1 n/a	cc3 n/a	is3 n/a	m3	ms3 n/a
ss2 n/a	cc4 n/a	is4 n/a	m4	ms4 n/a

Sample

Project #	Lab. Sample Number	pH	Batch #	File Name	Matrix	Weight (g)/ Volume (mL)	DF	Run Date/Time	Comments
1	n/a	blank	n/a	0101001.D	Water	5mL	1	10/12/06 14:49	
2	n/a	blank	n/a	0102002.D	Water	5mL	1	10/12/06 15:19	Tune
3	n/a	ccv	n/a	0103003.D	Water	5mL	1	10/12/06 15:49	
4	n/a	mb	5894/5895	0201001.D	Soil	10.01g	1	10/12/06 16:36	Run# 10744
5	n/a	lcs	5894/5895	0301002.D	Soil	5.01g	1	10/12/06 17:07	
6	06-3558	0776	n/a	5894/5895	Soil	9.99g	1	10/12/06 17:37	
7	06-3558	0776ms	n/a	5894/5895	Soil	4.99g	1	10/12/06 18:08	
8	06-3558	0776msd	n/a	5894/5895	Soil	4.99g	1	10/12/06 18:38	
9	n/a	mb	n/a	5895	Water	5mL	1	10/12/06 19:09	
10	n/a	lcs	n/a	5895	Water	5mL	1	10/12/06 19:40	
11	06-3559	0777	<2	5895	Water	5mL	1	10/12/06 20:10	
12	06-3559	0778	<2	5895	Water	5mL	1	10/12/06 20:41	
13	06-3559	0778ms	<2	5895	Water	5mL	1	10/12/06 21:11	
14	06-3559	0778msd	<2	5895	Water	5mL	1	10/12/06 21:42	
15	06-3559	0779	<2	5895	Water	5mL	1	10/12/06 22:12	
16	06-3559	0780	<2	5895	Water	5mL	1	10/12/06 22:43	
17	06-3559	0781	<2	5895	Water	5mL	1	10/12/06 23:13	
18	06-3559	0782	<2	5895	Water	5mL	1	10/12/06 23:44	RR 2X Chlorobenzene
19	06-3559	0783	<2	5895	Water	5mL	1	10/13/06 0:14	Run# 10745
20	06-3559	0784	<2	5895	Water	5mL	1	10/13/06 0:45	RR 2X Chlorobenzene

10/12/06

Data File Name 0801007.D

Date Acquired 12 Oct 2006 7:40 pm

Method File VOAMS1

Sample Name lcs,,,2

<u>Name</u>	<u>Amount</u>	<u>True Value</u>	<u>% Recovery</u>	<u>Control Limits</u>	<u>Flags</u>
dibromofluoromethane	46.01	50	92	70 - 130	Pass
1,2-dichloroethane-d4	42.53	50	85	70 - 130	Pass
toluene-d8	45.52	50	91	70 - 130	Pass
p-bromofluorobenzene	43.90	50	88	70 - 130	Pass
1,1-dichloroethene	88.66	100	89	70 - 130	Pass
benzene	90.22	100	90	70 - 130	Pass
trichloroethene	89.52	100	90	70 - 130	Pass
toluene	95.07	100	95	70 - 130	Pass
chlorobenzene	86.80	100	87	70 - 130	Pass

Spike Recovery and RPD Summary Report - WATER

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
Title : Mass Spec VOA
Last Update : Tue Oct 10 10:31:41 2006
Response via : Initial Calibration

Non-Spiked Sample: 1001009.D

Spike Sample	Spike Duplicate Sample
File ID : 1101010.D	1102011.D
Sample : 3559-0778ms,,,3	3559-0778msd,,,3
Acq Time: 12 Oct 2006 9:11 pm	12 Oct 2006 9:42 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	Limits % Rec
1,1-dichloroethene	0.0	100	101	96	101	96	5	20	70-130
benzene	0.0	100	102	97	102	97	5	20	70-130
trichloroethene	0.0	100	97	94	97	94	3	20	70-130
toluene	0.0	100	106	102	106	102	4	20	70-130
chlorobenzene	0.1	100	90	88	90	88	2	20	70-130

- Fails Limit Check

MS100906.M

Fri Oct 13 14:19:25 2006

VOA

BFB

Data File : J:\98MSV01.I\101206.B\0102002.D

Acq On : 12 Oct 2006 3:19 pm

Sample : blank

Misc :

MS Integration Params: RTEINT.P

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

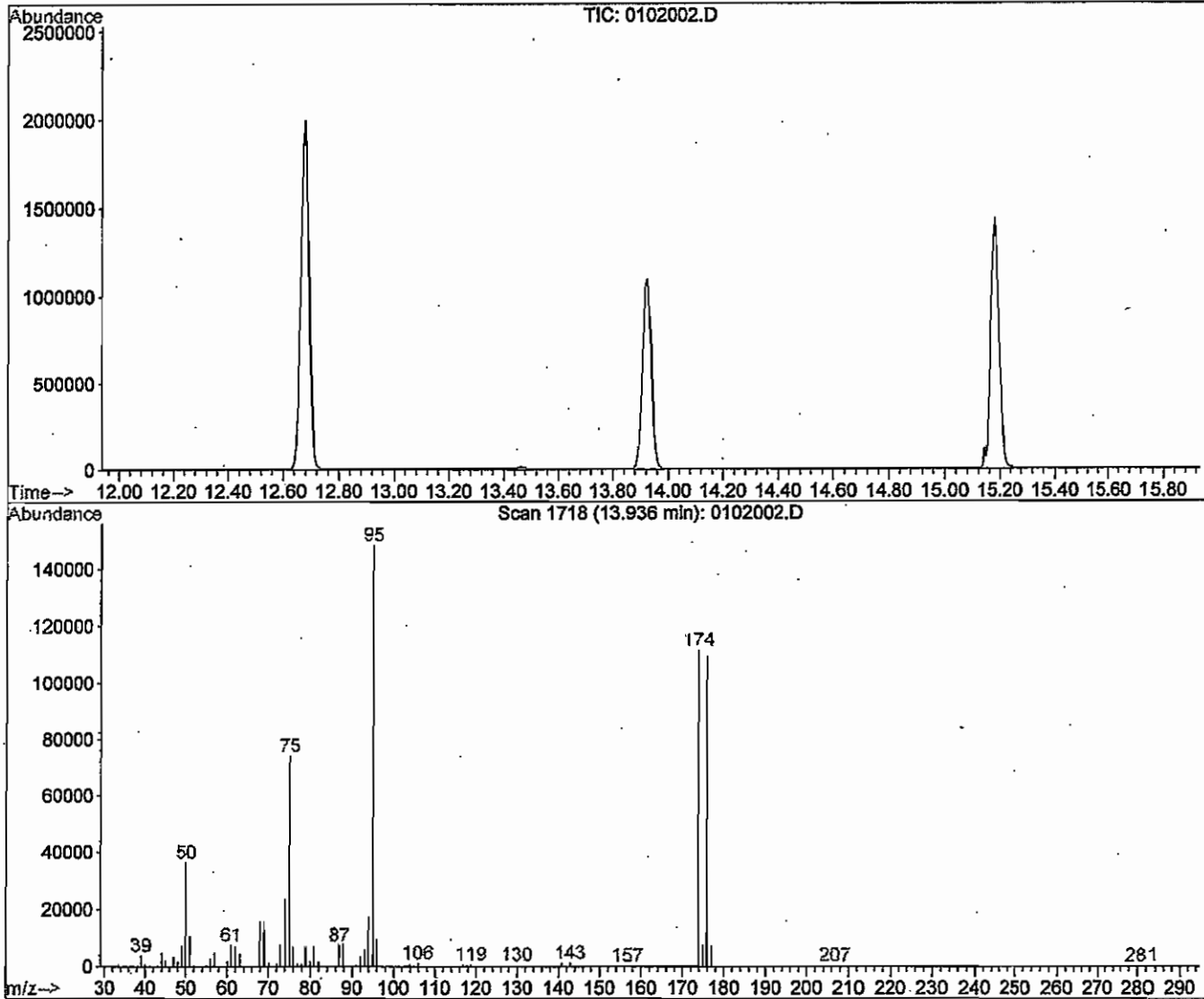
Title : Mass Spec VOA

Vial: 1

Operator: RG

Inst : ms-01

Multiplr: 1.00



Spectrum Information: Scan 1718

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.4	36256	PASS
75	95	30	60	49.9	74072	PASS
95	95	100	100	100.0	148416	PASS
96	95	5	9	6.5	9686	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	75.1	111416	PASS
175	174	5	9	6.8	7582	PASS
176	174	95	101	98.2	109384	PASS
177	176	5	9	6.5	7094	PASS

Scan 1718 (13.936 min): 0102002.D
blank

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
39.00	3708	50.00	36256	64.05	266	77.85	869
39.90	738	51.00	10632	65.15	177	78.85	6480
41.10	172	52.00	383	67.95	15801	79.95	1719
42.00	156	55.00	524	69.05	15869	80.85	7114
42.90	269	56.00	2846	70.05	1369	81.95	1651
44.00	4909	56.95	4754	72.05	1123	85.90	284
45.00	2035	57.85	207	72.95	7434	86.90	7336
45.80	195	60.05	1695	74.05	23400	87.90	8051
47.00	3435	60.95	7435	75.05	74072	90.90	677
48.00	1736	61.95	6899	76.05	6786	92.00	3462
49.00	7375	63.05	4437	77.05	988	93.00	6093

Scan 1718 (13.936 min): 0102002.D
blank

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.00	17248	116.85	705	142.90	1266	280.95	164
95.00	148416	117.85	557	144.00	230	284.95	151
96.00	9686	118.85	708	145.70	234		
97.00	192	127.85	298	147.90	240		
102.90	170	128.85	172	156.80	268		
103.90	734	129.95	554	173.85	111416		
104.90	255	130.85	199	174.95	7582		
105.90	1123	135.10	165	175.85	109384		
106.90	170	136.80	204	176.95	7094		
114.75	177	140.80	1234	177.85	415		
115.85	568	141.90	256	206.80	311		

Evaluate Continuing Calibration Report

Data File : J:\98MSV01.I\101206.B\0103003.D
 Acq On : 12 Oct 2006 3:49 pm
 Sample : ccv
 Misc :
 MS Integration Params: RTEINT.P

Vial: 1
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
 Max. RRF Dev : 90% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	fluorobenzene	50.000	50.000	0.0	95	0.00
2 P	chloromethane	100.000	92.863	7.1	101	0.00
3 C	vinyl chloride	100.000	85.408	14.6	90	0.00
4 T	bromomethane	100.000	94.175	5.8	82	0.00
5 T	chloroethane	100.000	104.353	-4.4	97	0.00
6 T	dichlorodifluoromethane	100.000	76.480	23.5	81	0.00
7 T	trichlorofluoromethane	100.000	87.386	12.6	92	0.00
8 T	acrolein	100.000	23.375	76.6	25	0.01
9 T	acetone	100.000	112.354	-12.4	103	0.00
10 MC	1,1-dichloroethene	100.000	90.847	9.2	93	0.00
11 T	methylene chloride	100.000	101.408	-1.4	96	0.00
12 T	methyl tert-butyl ether	100.000	94.119	5.9	96	0.00
13 T	trans-1,2-dichloroethene	100.000	88.840	11.2	93	0.00
14	hexane	100.000	97.557	2.4	99	0.00
15 P	1,1-dichloroethane	100.000	90.974	9.0	93	0.00
16 T	acrylonitrile	100.000	93.476	6.5	96	0.00
17 T	2-butanone	100.000	111.051	-11.1	104	0.00
18 T	cis-1,2-dichloroethene	100.000	91.455	8.5	92	0.00
19 T	2,2-dichloropropane	100.000	93.645	6.4	98	0.00
20 C	chloroform	100.000	89.803	10.2	92	0.00
21 T	bromochloromethane	100.000	89.576	10.4	88	0.00
22	tetrahydrofuran	100.000	83.747	16.3	81	0.00
23 T	1,1,1-trichloroethane	100.000	92.162	7.8	91	0.00
24 S	dibromofluoromethane	100.000	94.361	5.6	93	0.00
25 S	1,2-dichloroethane-d4	100.000	88.234	11.8	91	0.00
26 T	1,2-dichloroethane	100.000	90.495	9.5	92	0.00
27 T	carbon tetrachloride	100.000	92.776	7.2	92	0.00
28 T	1,1-dichloropropene	100.000	92.841	7.2	92	0.00
29 M	benzene	100.000	92.162	7.8	93	0.00
30 M	trichloroethene	100.000	89.902	10.1	86	0.00
31 C	1,2-dichloropropane	100.000	92.747	7.3	89	0.00
32 T	bromodichloromethane	100.000	95.694	4.3	91	0.00
33 T	dibromomethane	100.000	91.410	8.6	89	0.00
34 T	2-chloroethyl vinyl ether	100.000	91.713	8.3	82	0.00
35 T	cis-1,3-dichloropropene	100.000	93.873	6.1	88	0.00
36 T	trans-1,3-dichloropropene	100.000	98.397	1.6	92	0.00
37 CM	toluene	100.000	97.270	2.7	92	0.00
38 S	toluene-d8	100.000	96.123	3.9	91	0.00
39 T	1,1,2-trichloroethane	100.000	92.776	7.2	86	0.00
40 T	1,2-dibromoethane	100.000	90.732	9.3	86	0.00
41 I	chlorobenzene-d5	50.000	50.000	0.0	98	0.00
42 T	1,3-dichloropropane	100.000	79.071	20.9	86	0.00
43 T	dibromochloromethane	100.000	82.181	17.8	85	0.00
44 P	bromoform	100.000	91.808	8.2	88	0.00
45 T	4-methyl-2-pentanone	100.000	87.283	12.7	92	0.00
46 T	2-hexanone	100.000	85.086	14.9	86	0.00
47 T	tetrachloroethene	100.000	83.890	16.1	89	0.00
48 MP	chlorobenzene	100.000	85.621	14.4	92	0.01
49 T	1,1,1,2-tetrachloroethane	100.000	82.284	17.7	88	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : J:\98MSV01.I\101206.B\0103003.D

Vial: 1

Acq On : 12 Oct 2006 3:49 pm

Operator: RG

Sample : ccv

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 10% Max. R.T. Dev 0.50min

Max. RRF Dev : 90% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
50 C	ethylbenzene	100.000	98.973	1.0	92	0.01
51 T	m,p-xylene	200.000	188.812	5.6	93	0.00
52 T	o-xylene	100.000	91.108	8.9	89	0.00
53 T	styrene	100.000	95.312	4.7	91	0.00
54 I	1,4-dichlorobenzene-d4	50.000	50.000	0.0	95	0.01
55 T	isopropylbenzene	100.000	89.794	10.2	89	0.00
56 P	1,1,2,2-tetrachloroethane	100.000	89.068	10.9	94	0.00
57 S	p-bromofluorobenzene	100.000	87.838	12.2	88	0.00
58 T	bromobenzene	100.000	87.703	12.3	87	0.01
59 T	1,2,3-trichloropropane	100.000	88.391	11.6	90	0.00
60 T	n-propylbenzene	100.000	89.587	10.4	89	0.00
61 T	2-chlorotoluene	100.000	90.085	9.9	89	0.00
62 T	1,3,5-trimethylbenzene	100.000	93.101	6.9	89	0.01
63 T	4-chlorotoluene	100.000	89.394	10.6	89	0.01
64 T	tert-butylbenzene	100.000	91.620	8.4	90	0.00
65 T	1,2,4-trimethylbenzene	100.000	94.991	5.0	91	0.01
66	d-Limonene	100.000	100.027	-0.0	94	0.00
67 T	sec-butylbenzene	100.000	95.248	4.8	92	0.00
68 T	p-isopropyltoluene	100.000	97.046	3.0	92	0.00
69 T	1,3-dichlorobenzene	100.000	92.308	7.7	90	0.01
70 T	1,4-dichlorobenzene	100.000	97.590	2.4	90	0.01
71 T	1,2-dichlorobenzene	100.000	88.637	11.4	88	0.01
72 T	n-butylbenzene	100.000	95.314	4.7	91	0.01
73 T	1,2-dibromo-3-chloropropane	100.000	92.993	7.0	93	0.01
74 T	1,2,4-trichlorobenzene	100.000	92.043	8.0	91	0.01
75 T	hexachlorobutadiene	100.000	88.153	11.8	90	0.02
76 T	naphthalene	100.000	99.811	0.2	87	0.02
77 T	1,2,3-trichlorobenzene	100.000	94.234	5.8	89	0.01
78 T M	n-heptane	150.000	0.000	100.0#	0	0.00

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\0103003.D

Vial: 1

Acq On : 12 Oct 2006 3:49 pm

Operator: RG

Sample : ccv

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 12 15:07 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	2164253	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	957955	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.19	152	610061	50.00	ppb	0.01
System Monitoring Compounds						
24) dibromofluoromethane	8.75	113	1211524	94.36	ppb	0.00
Spiked Amount 50.000	Range 66 - 124		Recovery =	188.72%	#	94%
25) 1,2-dichloroethane-d4	9.30	65	1418024	88.23	ppb	0.00
Spiked Amount 50.000	Range 70 - 120		Recovery =	176.46%	#	88%
38) toluene-d8	11.09	98	3684295	96.12	ppb	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery =	192.24%	#	96%
57) p-bromofluorobenzene	13.92	176	752643	87.84	ppb	0.00
Spiked Amount 50.000	Range 74 - 127		Recovery =	175.68%	#	88%
Target Compounds						
2) chloromethane	4.26	50	2307473	92.86	ppb	100
3) vinyl chloride	4.41	62	1060882	85.41	ppb	98
4) bromomethane	5.01	94	422020	94.18	ppb	100
5) chloroethane	5.21	49	90122	104.35	ppb	99
6) dichlorodifluoromethane	3.83	85	1727381	76.48	ppb	97
7) trichlorofluoromethane	5.45	101	1837449	87.39	ppb	99
8) acrolein	6.61	56	48149	23.38	ppb	93
9) acetone	6.94	43	881487	112.35	ppb	99
10) 1,1-dichloroethene	6.19	96	1092278	90.85	ppb	99
11) methylene chloride	6.90	84	1440381	101.41	ppb	96
12) methyl tert-butyl ether	7.19	73	3978082	94.12	ppb	100
13) trans-1,2-dichloroethene	7.09	96	1277648	88.84	ppb	99
14) hexane	7.16	57	3034176	97.56	ppb	100
15) 1,1-dichloroethane	7.76	63	2618814	90.97	ppb	99
16) acrylonitrile	7.80	53	733721	93.48	ppb	99
17) 2-butanone	8.84	43	1259535	111.05	ppb	100
18) cis-1,2-dichloroethene	8.31	96	1337239	91.45	ppb	99
19) 2,2-dichloropropane	8.44	77	1847814	93.64	ppb	100
20) chloroform	8.56	83	2361558	89.80	ppb	99
21) bromochloromethane	8.53	128	602086	89.58	ppb	99
22) tetrahydrofuran	8.76	42	757414	83.75	ppb	95
23) 1,1,1-trichloroethane	8.82	97	1717191	92.16	ppb	100
26) 1,2-dichloroethane	9.37	62	1721347	90.50	ppb	100
27) carbon tetrachloride	8.76	117	1401616	92.78	ppb	99
28) 1,1-dichloropropene	8.93	75	1821965	92.84	ppb	99
29) benzene	9.18	78	4908841	92.16	ppb	100
30) trichloroethene	9.73	130	1002167	89.90	ppb	100
31) 1,2-dichloropropane	10.26	63	1345150	92.75	ppb	99
32) bromodichloromethane	10.28	83	1685951	95.69	ppb	98
33) dibromomethane	10.17	93	826263	91.41	ppb	99
34) 2-chloroethyl vinyl ether	10.75	63	941366	91.71	ppb	98
35) cis-1,3-dichloropropene	10.89	75	1988102	93.87	ppb	100
36) trans-1,3-dichloropropene	11.52	75	1883648	98.40	ppb	99
37) toluene	11.15	91	4587531	97.27	ppb	100
39) 1,1,2-trichloroethane	11.70	97	924527	92.78	ppb	98

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

0103003.D MS100906.M

Thu Oct 12 19:52:18 2006

VOA

Page 1

Data File : J:\98MSV01.I\101206.B\0103003.D

Vial: 1

Acq On : 12 Oct 2006 3:49 pm

Operator: RG

Sample : ccv

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 12 15:07 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.22	107	929938	90.73	ppb	99
42) 1,3-dichloropropane	12.01	76	1825545	79.07	ppb	100
43) dibromochloromethane	11.93	129	911756	82.18	ppb	99
44) bromoform	13.40	173	649733	91.81	ppb	99
45) 4-methyl-2-pentanone	11.45	43	2218226	87.28	ppb	99
46) 2-hexanone	12.27	43	1462239	85.09	ppb	100
47) tetrachloroethene	11.57	164	674676	83.89	ppb	100
48) chlorobenzene	12.70	112	2719061	85.62	ppb	99
49) 1,1,1,2-tetrachloroethane	12.73	131	846990	82.28	ppb	100
50) ethylbenzene	12.66	91	5122270	98.97	ppb	100
51) m,p-xylene	12.79	106	3633386	188.81	ppb	100
52) o-xylene	13.25	106	1541316	91.11	ppb	99
53) styrene	13.29	104	2931425	95.31	ppb	94
55) isopropylbenzene	13.56	105	3916166	89.79	ppb	100
56) 1,1,2,2-tetrachloroethane	14.07	83	1462858	89.07	ppb	100
58) bromobenzene	14.09	156	925731	87.70	ppb	99
59) 1,2,3-trichloropropane	14.27	110	384214	88.39	ppb	99
60) n-propylbenzene	14.01	91	5236926	89.59	ppb	100
61) 2-chlorotoluene	14.25	91	3116680	90.08	ppb	99
62) 1,3,5-trimethylbenzene	14.18	105	3101762	93.10	ppb	100
63) 4-chlorotoluene	14.43	91	3113444	89.39	ppb	100
64) tert-butylbenzene	14.58	119	2448053	91.62	ppb	99
65) 1,2,4-trimethylbenzene	14.64	105	3295904	94.99	ppb	100
66) d-Limonene	14.73	68	1295804	100.03	ppb	99
67) sec-butylbenzene	14.77	105	4239833	95.25	ppb	100
68) p-isopropyltoluene	14.90	119	3229974	97.05	ppb	100
69) 1,3-dichlorobenzene	15.11	146	1735016	92.31	ppb	100
70) 1,4-dichlorobenzene	15.20	146	1854744	97.59	ppb	100
71) 1,2-dichlorobenzene	15.72	146	1581173	88.64	ppb	100
72) n-butylbenzene	15.39	91	3255977	95.31	ppb	100
73) 1,2-dibromo-3-chloropropan	16.68	75	184197	92.99	ppb	99
74) 1,2,4-trichlorobenzene	17.60	180	849250	92.04	ppb	100
75) hexachlorobutadiene	17.49	225	221223	88.15	ppb	100
76) naphthalene	18.12	128	2107121	99.81	ppb	100
77) 1,2,3-trichlorobenzene	18.42	180	778683	94.23	ppb	99
78) n-heptane	8.99	43	1991	No Calib		

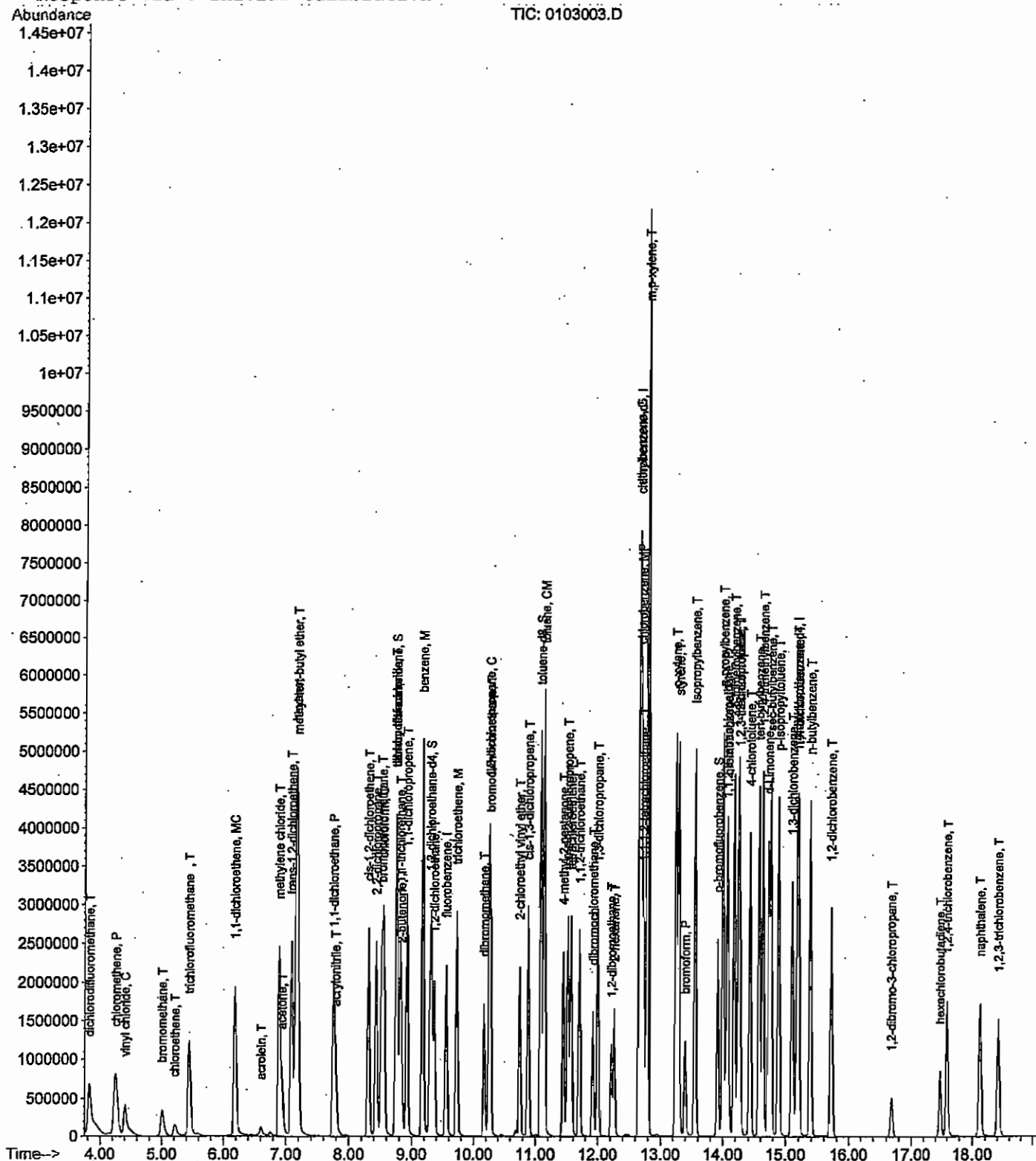
Quantitation Report

Data File : J:\98MSV01.I\101206.B\0103003.D
Acq On : 12 Oct 2006 3:49 pm
Sample : ccv
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 12 15:07 19106

Vial: 1
Operator: RG
Inst : ms-01
Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
Title : Mass Spec VOA
Last Update : Tue Oct 10 10:31:41 2006
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\0701006.D

Vial: 7

Acq On : 12 Oct 2006 7:09 pm

Operator: RG

Sample : mb,,,1

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 12 20:02 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	2458290	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	854815	50.00	ppb	0.01
54) 1,4-dichlorobenzene-d4	15.19	152	537053	50.00	ppb	0.01

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	623737	42.77	ppb	0.01
Spiked Amount	50.000	Range	66 - 124	Recovery	=	85.54%
25) 1,2-dichloroethane-d4	9.30	65	766333	41.98	ppb	0.00
Spiked Amount	50.000	Range	70 - 120	Recovery	=	83.96%
38) toluene-d8	11.09	98	1954087	44.88	ppb	0.01
Spiked Amount	50.000	Range	76 - 120	Recovery	=	89.76%
57) p-bromofluorobenzene	13.93	176	385110	51.95	ppb	0.01
Spiked Amount	50.000	Range	74 - 127	Recovery	=	103.90%

Target Compounds

						Qvalue
2) chloromethane	4.24	50	2139	N.D.		
3) vinyl chloride	0.00	62	0	N.D.		
4) bromomethane	5.01	94	2678	-4.08 ppb	#	73
5) chloroethane	0.00	49	0	N.D.	d	
6) dichlorodifluoromethane	3.82	85	2251	N.D.		
7) trichlorofluoromethane	0.00	101	0	N.D.		
8) acrolein	0.00	56	0	N.D.		
9) acetone	6.95	43	80615	2.38 ppb		98
10) 1,1-dichloroethene	6.18	96	1507	N.D.		
11) methylene chloride	6.90	84	41754	-0.83 ppb		98
12) methyl tert-butyl ether	0.00	73	0	N.D.		
13) trans-1,2-dichloroethene	7.09	96	1899	N.D.		
14) hexane	7.16	57	11751	N.D.		
15) 1,1-dichloroethane	7.77	63	1345	N.D.		
16) acrylonitrile	0.00	53	0	N.D.		
17) 2-butanone	8.85	43	7226	-0.80 ppb		96
18) cis-1,2-dichloroethene	8.31	96	1071	N.D.		
19) 2,2-dichloropropane	8.44	77	1609	N.D.		
20) chloroform	8.56	83	6771	N.D.		
21) bromochloromethane	0.00	128	0	N.D.		
22) tetrahydrofuran	8.77	42	9494	1.49 ppb		92
23) 1,1,1-trichloroethane	8.82	97	1289	N.D.		
26) 1,2-dichloroethane	9.37	62	1446	N.D.		
27) carbon tetrachloride	8.77	117	1320	N.D.		
28) 1,1-dichloropropene	8.93	75	2791	N.D.		
29) benzene	9.19	78	5012	N.D.		
30) trichloroethene	9.73	130	1788	N.D.		
31) 1,2-dichloropropane	0.00	63	0	N.D.		
32) bromodichloromethane	10.29	83	1208	N.D.		
33) dibromomethane	0.00	93	0	N.D.		
34) 2-chloroethyl vinyl ether	0.00	63	0	N.D.		
35) cis-1,3-dichloropropene	10.90	75	1787	N.D.		
36) trans-1,3-dichloropropene	11.52	75	1955	N.D.		
37) toluene	11.14	91	6810	N.D.		
39) 1,1,2-trichloroethane	0.00	97	0	N.D.		

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

0701006.D MS100906.M Thu Oct 12 20:02:57 2006

VOA

Page 1

Data File : J:\98MSV01.I\101206.B\0701006.D

Vial: 7

Acq On : 12 Oct 2006 7:09 pm

Operator: RG

Sample : mb,,,1

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 12 20:02 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.23	107	1198	N.D.		
42) 1,3-dichloropropane	12.01	76	1319	N.D.		
43) dibromochloromethane	0.00	129	0	N.D.		
44) bromoform	0.00	173	0	N.D.		
45) 4-methyl-2-pentanone	11.46	43	3349	N.D.		
46) 2-hexanone	12.27	43	2986	N.D.		
47) tetrachloroethene	11.57	164	1587	N.D.		
48) chlorobenzene	12.71	112	4090	N.D.		
49) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
50) ethylbenzene	12.66	91	15917	-2.29 ppb	#	70
51) m,p-xylene	12.79	106	8711	0.51 ppb		97
52) o-xylene	13.25	106	4019	N.D.		
53) styrene	13.30	104	4864	N.D.		
55) isopropylbenzene	13.56	105	10251	N.D.		
56) 1,1,2,2-tetrachloroethane	14.06	83	2740	N.D.		
58) bromobenzene	14.10	156	2046	N.D.		
59) 1,2,3-trichloropropane	0.00	110	0	N.D.		
60) n-propylbenzene	14.01	91	18435	N.D.		
61) 2-chlorotoluene	14.25	91	8607	N.D.		
62) 1,3,5-trimethylbenzene	14.19	105	9905	N.D.		
63) 4-chlorotoluene	14.43	91	10144	N.D.		
64) tert-butylbenzene	14.58	119	11111	N.D.		
65) 1,2,4-trimethylbenzene	14.64	105	10450	N.D.		
66) d-Limonene	14.73	68	13733	1.20 ppb		95
67) sec-butylbenzene	14.78	105	25285	0.65 ppb		100
68) p-isopropyltoluene	14.90	119	19051	0.65 ppb		98
69) 1,3-dichlorobenzene	15.11	146	7484	N.D.		
70) 1,4-dichlorobenzene	15.21	146	8628	-1.32 ppb		91
71) 1,2-dichlorobenzene	15.71	146	6782	N.D.		
72) n-butylbenzene	15.39	91	27668	0.92 ppb		98
73) 1,2-dibromo-3-chloropropan	16.69	75	1673	1.78 ppb	#	37
74) 1,2,4-trichlorobenzene	17.61	180	10472	1.29 ppb		96
75) hexachlorobutadiene	17.49	225	8165	3.70 ppb		100
76) naphthalene	18.11	128	22508	1.21 ppb		100
77) 1,2,3-trichlorobenzene	18.42	180	10812	1.49 ppb		94
78) n-heptane	8.85	43	7226	No Calib	#	

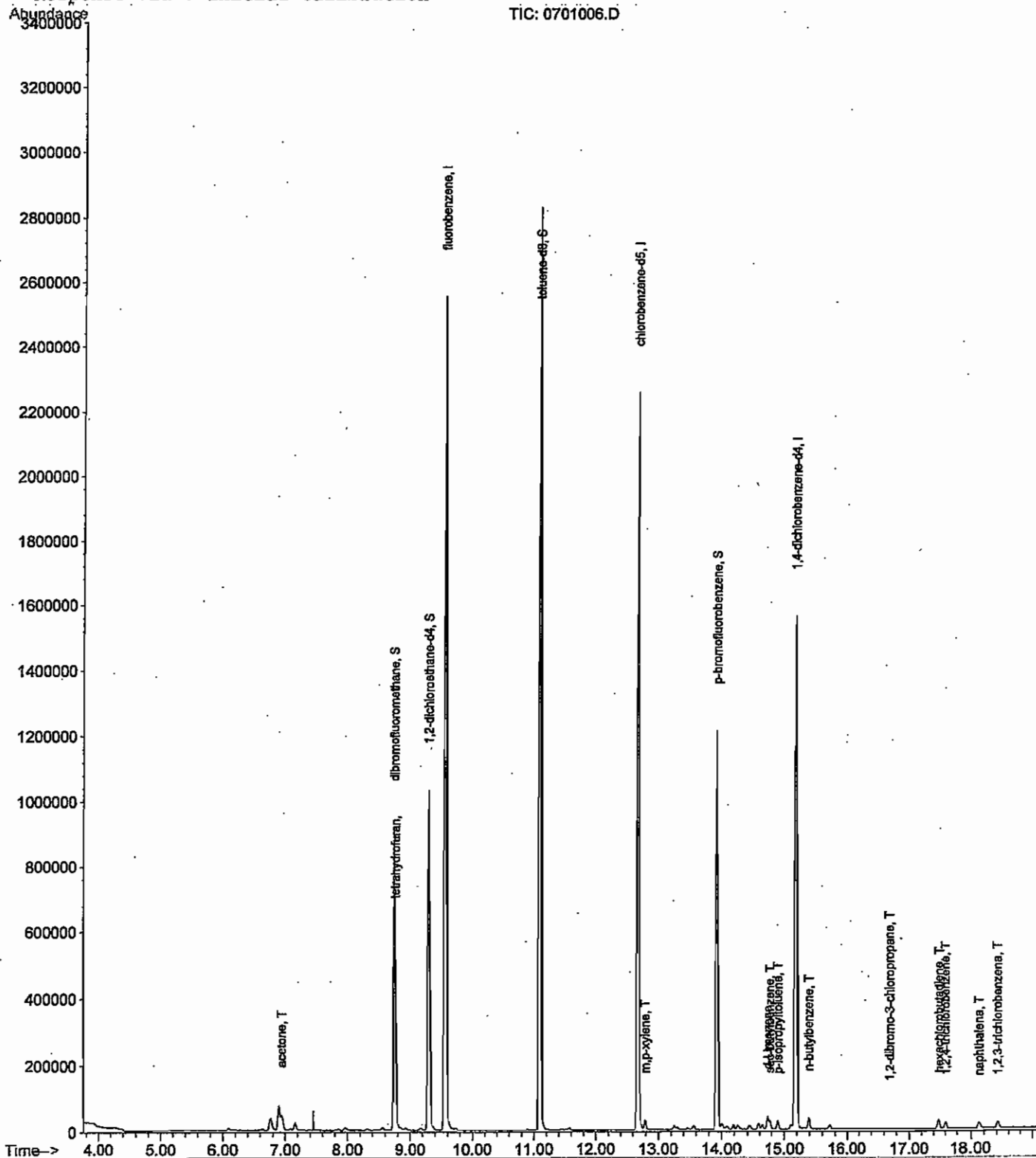
Quantitation Report

Data File : J:\98MSV01.I\101206.B\0701006.D
 Acq On : 12 Oct 2006 7:09 pm
 Sample : mb,,,1
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 12 20:02 19106

Vial: 7
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\0801007.D
 Acq On : 12 Oct 2006 7:40 pm
 Sample : lcs,,,2
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 12 19:55 19106

Vial: 8
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration
 DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	2370037	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	1014578	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.19	152	666550	50.00	ppb	0.01

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	646918	46.01	ppb	0.00
Spiked Amount	50.000	Range	66 - 124	Recovery	=	92.02%
25) 1,2-dichloroethane-d4	9.30	65	748547	42.53	ppb	0.00
Spiked Amount	50.000	Range	70 - 120	Recovery	=	85.06%
38) toluene-d8	11.09	98	1910640	45.52	ppb	0.01
Spiked Amount	50.000	Range	76 - 120	Recovery	=	91.04%
57) p-bromofluorobenzene	13.93	176	400734	43.90	ppb	0.01
Spiked Amount	50.000	Range	74 - 127	Recovery	=	87.80%

Target Compounds

						Qvalue
2) chloromethane	4.25	50	2459022	90.37	ppb	99
3) vinyl chloride	4.41	62	1214061	89.25	ppb	99
4) bromomethane	5.01	94	479707	97.93	ppb	100
5) chloroethane	5.21	49	92381	97.36	ppb	91
6) dichlorodifluoromethane	3.82	85	1776937	71.84	ppb	97
7) trichlorofluoromethane	5.45	101	1832228	79.57	ppb	100
8) acrolein	6.61	56	63480	28.14	ppb	90
9) acetone	6.94	43	1257390	148.54	ppb	98
10) 1,1-dichloroethene	6.19	96	1167358	88.66	ppb	100
11) methylene chloride	6.90	84	1559861	100.25	ppb	97
12) methyl tert-butyl ether	7.19	73	4209464	90.95	ppb	100
13) trans-1,2-dichloroethene	7.09	96	1436531	91.21	ppb	100
14) hexane	7.16	57	2455876	72.11	ppb	96
15) 1,1-dichloroethane	7.76	63	2832738	89.86	ppb	100
16) acrylonitrile	7.80	53	779444	90.68	ppb	96
17) 2-butanone	8.84	43	1406497	113.27	ppb	99
18) cis-1,2-dichloroethene	8.32	96	1467326	91.64	ppb	100
19) 2,2-dichloropropane	8.44	77	2031519	94.02	ppb	100
20) chloroform	8.56	83	2609166	90.60	ppb	100
21) bromochloromethane	8.53	128	666422	90.54	ppb	99
22) tetrahydrofuran	8.76	42	813071	81.59	ppb	96
23) 1,1,1-trichloroethane	8.82	97	1903765	93.30	ppb	100
26) 1,2-dichloroethane	9.37	62	1861694	89.38	ppb	100
27) carbon tetrachloride	8.76	117	1550142	93.70	ppb	98
28) 1,1-dichloropropene	8.93	75	1986136	92.42	ppb	99
29) benzene	9.18	78	5262131	90.22	ppb	100
30) trichloroethene	9.73	130	1092754	89.52	ppb	100
31) 1,2-dichloropropane	10.26	63	1450577	91.33	ppb	100
32) bromodichloromethane	10.28	83	1903249	98.65	ppb	99
33) dibromomethane	10.17	93	904503	91.38	ppb	98
34) 2-chloroethyl vinyl ether	10.75	63	1013195	90.14	ppb	97
35) cis-1,3-dichloropropene	10.90	75	2166060	93.40	ppb	100
36) trans-1,3-dichloropropene	11.52	75	2015000	96.12	ppb	100
37) toluene	11.15	91	4910227	95.07	ppb	100
39) 1,1,2-trichloroethane	11.70	97	1015977	93.10	ppb	100

(#) = qualifier out of range (m) = manual integration
 0801007.D MS100906.M Thu Oct 12 20:03:34 2006

VOA

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\0801007.D

Vial: 8

Acq On : 12 Oct 2006 7:40 pm

Operator: RG

Sample : lcs,,,2

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 12 19:55 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.22	107	1035132	92.23	ppb	100
42) 1,3-dichloropropane	12.01	76	2026004	82.86	ppb	100
43) dibromochloromethane	11.93	129	1057240	89.98	ppb	100
44) bromoform	13.40	173	696627	92.94	ppb	99
45) 4-methyl-2-pentanone	11.45	43	2307418	85.73	ppb	100
46) 2-hexanone	12.27	43	1662932	91.36	ppb	100
47) tetrachloroethene	11.57	164	743619	87.30	ppb	100
48) chlorobenzene	12.70	112	2919416	86.80	ppb	100
49) 1,1,1,2-tetrachloroethane	12.74	131	927455	85.07	ppb	99
50) ethylbenzene	12.67	91	5457694	99.58	ppb	100
51) m,p-xylene	12.80	106	3917736	192.23	ppb	100
52) o-xylene	13.25	106	1728751	96.48	ppb	99
53) styrene	13.29	104	3224443	98.99	ppb	95
55) isopropylbenzene	13.56	105	4426847	92.90	ppb	100
56) 1,1,2,2-tetrachloroethane	14.07	83	1523017	84.87	ppb	99
58) bromobenzene	14.09	156	1026714	89.03	ppb	99
59) 1,2,3-trichloropropane	14.27	110	415842	87.56	ppb	100
60) n-propylbenzene	14.01	91	5834275	91.35	ppb	100
61) 2-chlorotoluene	14.25	91	3474152	91.91	ppb	100
62) 1,3,5-trimethylbenzene	14.18	105	3461316	95.09	ppb	100
63) 4-chlorotoluene	14.43	91	3483512	91.54	ppb	100
64) tert-butylbenzene	14.58	119	2710339	92.84	ppb	100
65) 1,2,4-trimethylbenzene	14.64	105	3592752	94.77	ppb	100
66) d-Limonene	14.74	68	1391107	98.28	ppb	99
67) sec-butylbenzene	14.78	105	4433578	91.16	ppb	100
68) p-isopropyltoluene	14.90	119	3554835	97.75	ppb	100
69) 1,3-dichlorobenzene	15.11	146	1893327	92.19	ppb	100
70) 1,4-dichlorobenzene	15.21	146	1964499	94.55	ppb	100
71) 1,2-dichlorobenzene	15.72	146	1764323	90.52	ppb	99
72) n-butylbenzene	15.39	91	3652669	97.86	ppb	100
73) 1,2-dibromo-3-chloropropan	16.69	75	201749	93.22	ppb	100
74) 1,2,4-trichlorobenzene	17.61	180	923888	91.65	ppb	100
75) hexachlorobutadiene	17.49	225	250835	91.48	ppb	100
76) naphthalene	18.12	128	2270178	98.42	ppb	100
77) 1,2,3-trichlorobenzene	18.42	180	850328	94.18	ppb	99
78) n-heptane	8.84	43	1413922	No Calib	#	

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

0801007.D MS100906.M

Thu Oct 12 20:03:34 2006

VOA

Page 2

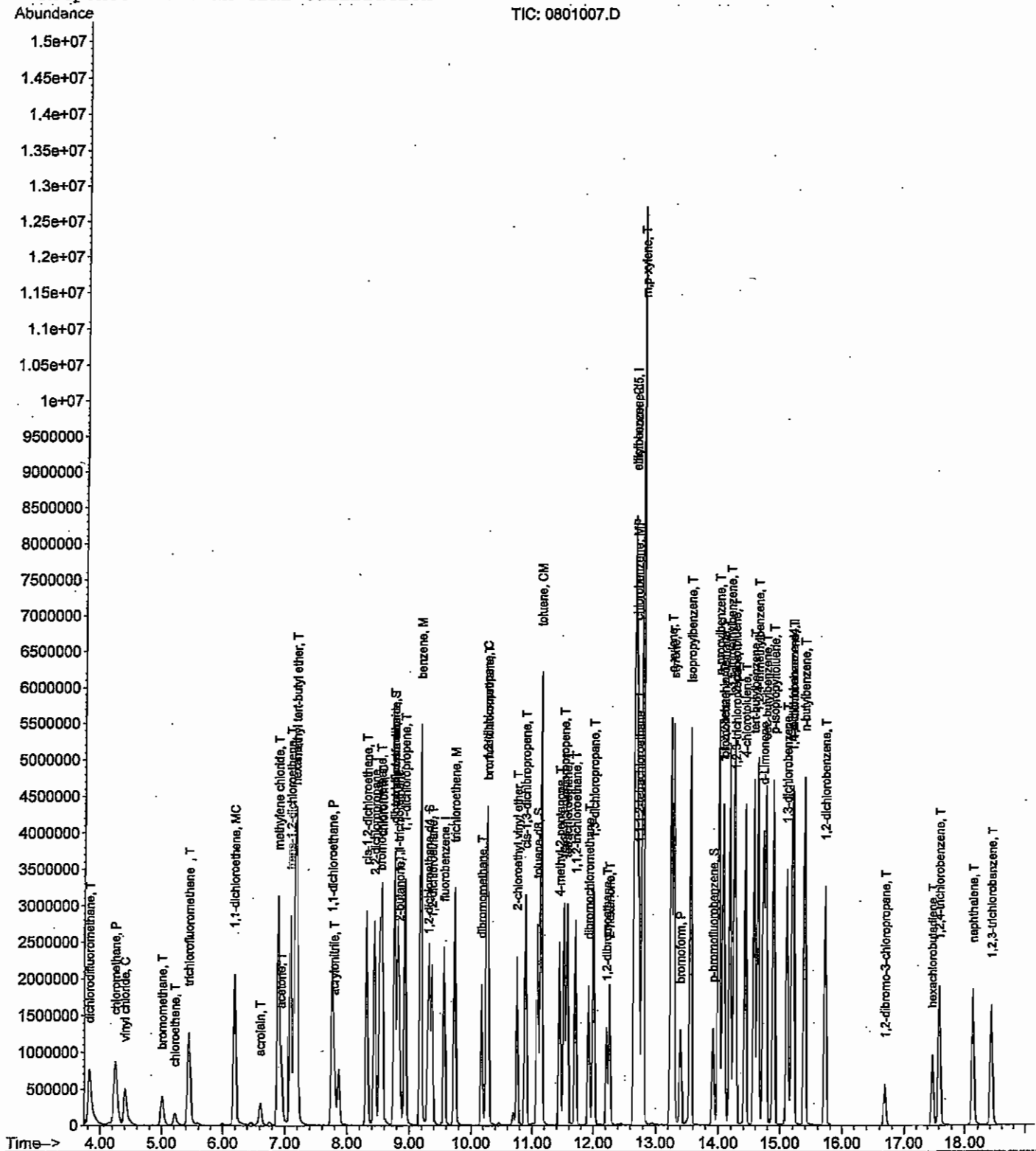
Quantitation Report

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Data File : J:\98MSV01.I\101206.B\0801007.D
Acq On    : 12 Oct 2006    7:40 pm
Sample    : lcs,,,2
Misc      :
MS Integration Params: RTEINT.P
Quant Time: Oct 12 19:55 19106
```

Vial: 8
Operator: RG
Inst : ms-01
Multiplr: 1.00

Quant Results File: MS100906.RES

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Method       : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
Title        : Mass Spec VOA
Last Update   : Tue Oct 10 10:31:41 2006
Response via  : Initial Calibration
```



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\0901008.D

Vial: 9

Acq On : 12 Oct 2006 8:10 pm

Operator: RG

Sample : 3559-0777,...

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 12 19:56 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	2247492	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	781538	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	496821	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	580322	43.53	ppb	0.00
Spiked Amount	50.000	Range	66 - 124	Recovery	=	87.06%
25) 1,2-dichloroethane-d4	9.29	65	706539	42.33	ppb	0.00
Spiked Amount	50.000	Range	70 - 120	Recovery	=	84.66%
38) toluene-d8	11.09	98	1773056	44.55	ppb	0.00
Spiked Amount	50.000	Range	76 - 120	Recovery	=	89.10%
57) p-bromofluorobenzene	13.92	176	356455	51.98	ppb	0.00
Spiked Amount	50.000	Range	74 - 127	Recovery	=	103.96%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) chloromethane	4.24	50	7294	N.D.		
3) vinyl chloride	0.00	62	0	N.D.		
4) bromomethane	5.03	94	2252	-4.13 ppb	#	67
5) chloroethane	5.11	49	3396	-1.10 ppb	#	1
6) dichlorodifluoromethane	3.82	85	1615	N.D.		
7) trichlorofluoromethane	0.00	101	0	N.D.		
8) acrolein	0.00	56	0	N.D.		
9) acetone	6.95	43	63113	1.00 ppb		99 AH/RL
10) 1,1-dichloroethene	6.18	96	1006	N.D.		
11) methylene chloride	6.90	84	42304	-0.54 ppb		99 10/13/06
12) methyl tert-butyl ether	0.00	73	0	N.D.		
13) trans-1,2-dichloroethene	7.09	96	1486	N.D.		
14) hexane	7.16	57	11139	N.D.		
15) 1,1-dichloroethane	7.76	63	1124	N.D.		
16) acrylonitrile	0.00	53	0	N.D.		
17) 2-butanone	8.86	43	6143	-0.84 ppb	#	64
18) cis-1,2-dichloroethene	8.31	96	1157	N.D.		
19) 2,2-dichloropropane	8.45	77	1227	N.D.		
20) chloroform	8.56	83	5272	N.D.		
21) bromochloromethane	0.00	128	0	N.D.		
22) tetrahydrofuran	8.77	42	8840	1.51 ppb		89
23) 1,1,1-trichloroethane	0.00	97	0	N.D.		
26) 1,2-dichloroethane	9.37	62	1005	N.D.		
27) carbon tetrachloride	8.76	117	1012	N.D.		
28) 1,1-dichloropropene	8.93	75	2302	N.D.		
29) benzene	9.18	78	3850	N.D.		
30) trichloroethene	9.73	130	1162	N.D.		
31) 1,2-dichloropropane	0.00	63	0	N.D.		
32) bromodichloromethane	0.00	83	0	N.D.		
33) dibromomethane	0.00	93	0	N.D.		
34) 2-chloroethyl vinyl ether	0.00	63	0	N.D.		
35) cis-1,3-dichloropropene	10.90	75	1350	N.D.		
36) trans-1,3-dichloropropene	11.53	75	1725	N.D.		
37) toluene	11.14	91	5327	N.D.		
39) 1,1,2-trichloroethane	0.00	97	0	N.D.		

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

0901008.D MS100906.M

Thu Oct 12 20:04:20 2006

VOA

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\0901008.D
 Acq On : 12 Oct 2006 8:10 pm
 Sample : 3559-0777,,,
 Misc :

Vial: 9
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

MS Integration Params: RTEINT.P
 Quant Time: Oct 12 19:56 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration
 DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.22	107	1068	N.D.		
42) 1,3-dichloropropane	12.01	76	1330	N.D.		
43) dibromochloromethane	0.00	129	0	N.D.		
44) bromoform	0.00	173	0	N.D.		
45) 4-methyl-2-pentanone	11.44	43	2629	N.D.		
46) 2-hexanone	12.27	43	3454	N.D.		
47) tetrachloroethene	11.57	164	1258	N.D.		
48) chlorobenzene	12.70	112	3811	N.D.		
49) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
50) ethylbenzene	12.66	91	12635	-2.34	ppb #	65
51) m,p-xylene	12.80	106	6962	N.D.		
52) o-xylene	13.25	106	3080	N.D.		
53) styrene	13.30	104	3585	N.D.		
55) isopropylbenzene	13.56	105	8839	N.D.		
56) 1,1,2,2-tetrachloroethane	14.08	83	2354	N.D.		
58) bromobenzene	14.09	156	2047	N.D.		
59) 1,2,3-trichloropropane	0.00	110	0	N.D.		
60) n-propylbenzene	14.01	91	16930	N.D.		
61) 2-chlorotoluene	14.24	91	6948	N.D.		
62) 1,3,5-trimethylbenzene	14.18	105	9020	N.D.		
63) 4-chlorotoluene	14.43	91	8443	N.D.		
64) tert-butylbenzene	14.58	119	9782	N.D.		
65) 1,2,4-trimethylbenzene	14.64	105	9393	N.D.		
66) d-Limonene	14.74	68	12460	1.18	ppb	98
67) sec-butylbenzene	14.77	105	23309	0.64	ppb	99
68) p-isopropyltoluene	14.90	119	17827	0.66	ppb	99
69) 1,3-dichlorobenzene	15.10	146	6227	N.D.		
70) 1,4-dichlorobenzene	15.20	146	7061	-1.38	ppb	87
71) 1,2-dichlorobenzene	15.72	146	5197	N.D.		
72) n-butylbenzene	15.39	91	25809	0.93	ppb	96
73) 1,2-dibromo-3-chloropropan	16.68	75	1130	1.52	ppb #	2
74) 1,2,4-trichlorobenzene	17.61	180	8470	1.13	ppb	92
75) hexachlorobutadiene	17.49	225	6407	3.13	ppb	100
76) naphthalene	18.11	128	20549	1.20	ppb	100
77) 1,2,3-trichlorobenzene	18.42	180	10153	1.51	ppb	93
78) n-heptane	8.86	43	6069	No Calib	#	

Quantitation Report

Data File : J:\98MSV01.I\101206.B\0901008.D

Vial: 9

Acq On : 12 Oct 2006 8:10 pm

Operator: RG

Sample : 3559-0777,.,.

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 12 19:56 19106

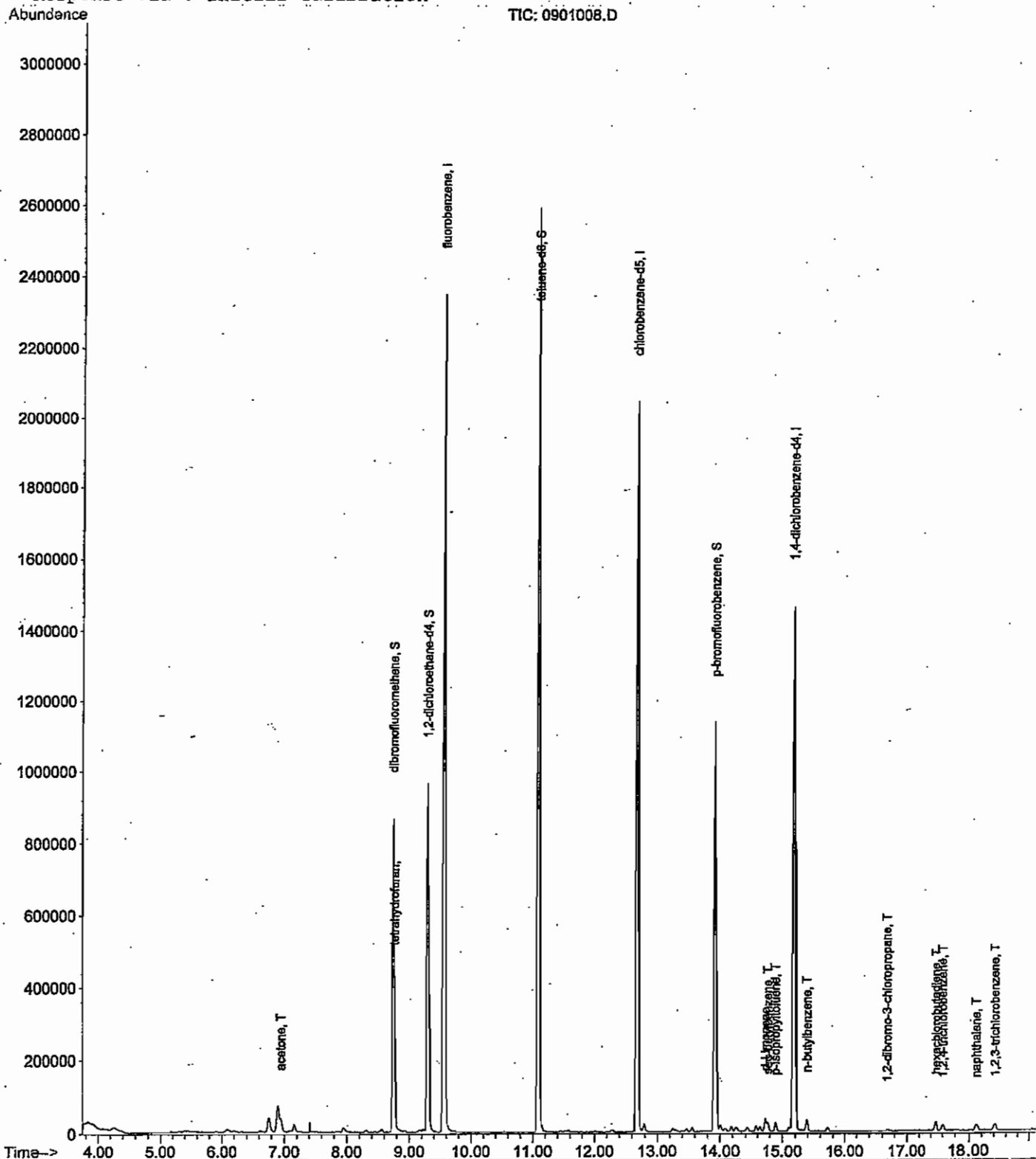
Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1001009.D

Vial: 10

Acq On : 12 Oct 2006 8:41 pm

Operator: RG

Sample : 3559-0778,,,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 12 20:04 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) fluorobenzene	9.56	96	2084999	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	729682	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	475582	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	535795	43.32	ppb	0.00
Spiked Amount	50.000	Range	66 - 124	Recovery	=	86.64%
25) 1,2-dichloroethane-d4	9.30	65	662334	42.78	ppb	0.00
Spiked Amount	50.000	Range	70 - 120	Recovery	=	85.56%
38) toluene-d8	11.09	98	1640005	44.41	ppb	0.01
Spiked Amount	50.000	Range	76 - 120	Recovery	=	88.82%
57) p-bromofluorobenzene	13.92	176	334422	50.99	ppb	0.00
Spiked Amount	50.000	Range	74 - 127	Recovery	=	101.98%

Target Compounds

						Qvalue
2) chloromethane	4.25	50	1607	N.D.		
3) vinyl chloride	0.00	62	0	N.D.		
4) bromomethane	5.04	94	1507	-4.27 ppb	#	35
5) chloroethane	5.17	49	293	-4.70 ppb	#	1
6) dichlorodifluoromethane	0.00	85	0	N.D.		
7) trichlorofluoromethane	0.00	101	0	N.D.		
8) acrolein	0.00	56	0	N.D.		
9) acetone	6.95	43	10698	-5.74 ppb		91
10) 1,1-dichloroethene	0.00	96	0	N.D.		
11) methylene chloride	6.90	84	2868	-3.29 ppb		96
12) methyl tert-butyl ether	0.00	73	0	N.D.		
13) trans-1,2-dichloroethene	0.00	96	0	N.D.		
14) hexane	7.16	57	4437	N.D.		
15) 1,1-dichloroethane	7.77	63	1182	N.D.		
16) acrylonitrile	0.00	53	0	N.D.		
17) 2-butanone	8.85	43	1848	-1.19 ppb	#	64
18) cis-1,2-dichloroethene	0.00	96	0	N.D.		
19) 2,2-dichloropropane	0.00	77	0	N.D.		
20) chloroform	8.56	83	50063	1.98 ppb		97
21) bromochloromethane	0.00	128	0	N.D.		
22) tetrahydrofuran	8.77	42	1698	0.91 ppb	#	46
23) 1,1,1-trichloroethane	0.00	97	0	N.D.		
26) 1,2-dichloroethane	0.00	62	0	N.D.		
27) carbon tetrachloride	0.00	117	0	N.D.		
28) 1,1-dichloropropene	8.93	75	1056	N.D.		
29) benzene	9.18	78	1671	N.D.		
30) trichloroethene	0.00	130	0	N.D.		
31) 1,2-dichloropropane	10.26	63	6091	N.D.		
32) bromodichloromethane	10.27	83	2671	N.D.		
33) dibromomethane	0.00	93	0	N.D.		
34) 2-chloroethyl vinyl ether	0.00	63	0	N.D.		
35) cis-1,3-dichloropropene	0.00	75	0	N.D.		
36) trans-1,3-dichloropropene	0.00	75	0	N.D.		
37) toluene	11.13	91	2108	N.D.		
39) 1,1,2-trichloroethane	0.00	97	0	N.D.		

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

1001009.D MS100906.M

Thu Oct 12 20:05:22 2006

VOA

Page 1

A11 <RL
B.10/13/06

Data File : J:\98MSV01.I\101206.B\1001009.D
 Acq On : 12 Oct 2006 8:41 pm
 Sample : 3559-0778,,,
 Misc :

Vial: 10
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 12 20:04 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	0.00	107	0	N.D.		
42) 1,3-dichloropropane	0.00	76	0	N.D.		
43) dibromochloromethane	0.00	129	0	N.D.		
44) bromoform	0.00	173	0	N.D.		
45) 4-methyl-2-pentanone	0.00	43	0	N.D.		
46) 2-hexanone	0.00	43	0	N.D.		
47) tetrachloroethene	0.00	164	0	N.D.		
48) chlorobenzene	12.71	112	1754	N.D.		
49) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
50) ethylbenzene	12.67	91	5220	-2.51 ppb	#	1
51) m,p-xylene	12.79	106	2272	N.D.		
52) o-xylene	0.00	106	0	N.D.		
53) styrene	13.29	104	1209	N.D.		
55) isopropylbenzene	13.55	105	2947	N.D.		
56) 1,1,2,2-tetrachloroethane	0.00	83	0	N.D.		
58) bromobenzene	0.00	156	0	N.D.		
59) 1,2,3-trichloropropane	14.27	110	3293	0.97 ppb		96
60) n-propylbenzene	14.01	91	6025	N.D.		
61) 2-chlorotoluene	14.24	91	2704	N.D.		
62) 1,3,5-trimethylbenzene	14.18	105	2435	N.D.		
63) 4-chlorotoluene	14.43	91	3007	N.D.		
64) tert-butylbenzene	14.58	119	2379	N.D.		
65) 1,2,4-trimethylbenzene	14.63	105	3041	N.D.		
66) d-Limonene	14.74	68	2996	N.D.		
67) sec-butylbenzene	14.78	105	6280	N.D.		
68) p-isopropyltoluene	14.89	119	5213	N.D.		
69) 1,3-dichlorobenzene	15.11	146	2400	N.D.		
70) 1,4-dichlorobenzene	15.20	146	2818	-1.65 ppb	#	52
71) 1,2-dichlorobenzene	15.72	146	2039	N.D.		
72) n-butylbenzene	15.38	91	7370	N.D.		
73) 1,2-dibromo-3-chloropropan	0.00	75	0	N.D.		
74) 1,2,4-trichlorobenzene	17.61	180	2232	N.D.		
75) hexachlorobutadiene	17.48	225	2593	1.33 ppb		100
76) naphthalene	18.12	128	5079	N.D.		
77) 1,2,3-trichlorobenzene	18.42	180	2365	N.D.		
78) n-heptane	8.85	43	1848	No Calib	#	

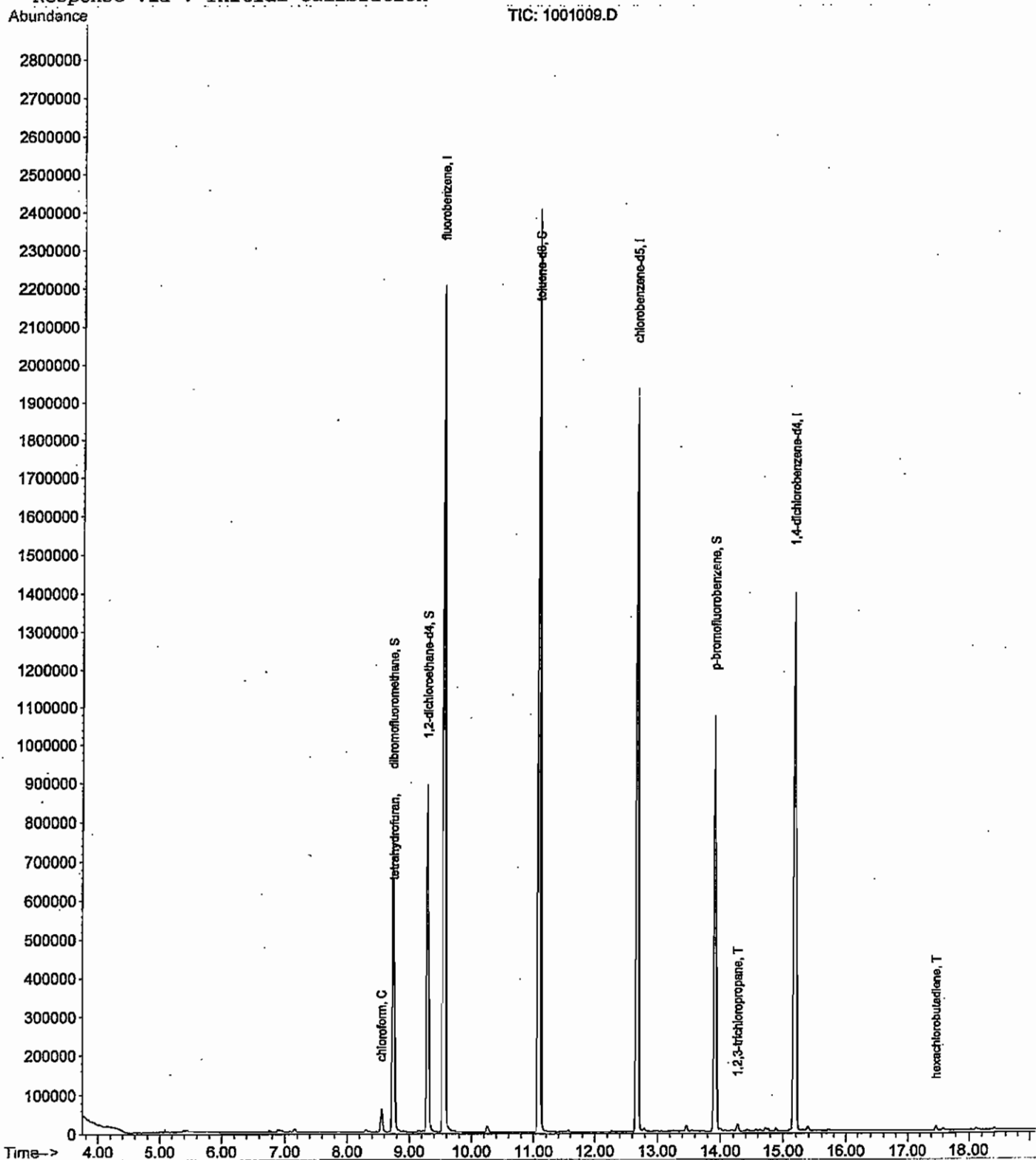
Quantitation Report

Data File : J:\98MSV01.I\101206.B\1001009.D
 Acq On : 12 Oct 2006 8:41 pm
 Sample : 3559-0778,,,
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 12 20:04 19106

Vial: 10
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1101010.D
 Acq On : 12 Oct 2006 9:11 pm
 Sample : 3559-0778ms,,,3
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 12:25:19106

Vial: 11
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration
 DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) fluorobenzene	9.56	96	2089978	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	960072	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	610543	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	590370	47.62	ppb	0.00
Spiked Amount 50.000	Range 66 - 124		Recovery =	95.24%		
25) 1,2-dichloroethane-d4	9.29	65	659811	42.51	ppb	0.00
Spiked Amount 50.000	Range 70 - 120		Recovery =	85.02%		
38) toluene-d8	11.09	98	1664865	44.98	ppb	0.01
Spiked Amount 50.000	Range 76 - 120		Recovery =	89.96%		
57) p-bromofluorobenzene	13.92	176	357338	42.80	ppb	0.00
Spiked Amount 50.000	Range 74 - 127		Recovery =	85.60%		

Target Compounds

						Qvalue
2) chloromethane	4.25	50	2566138	106.94	ppb	100
3) vinyl chloride	4.41	62	1189325	99.15	ppb	98
4) bromomethane	5.00	94	453881	105.41	ppb	100
5) chloroethane	5.22	49	90657	108.91	ppb	93
6) dichlorodifluoromethane	3.83	85	1736073	79.60	ppb	97
7) trichlorofluoromethane	5.44	101	1858745	91.54	ppb	99
8) acrolein	6.60	56	373867	187.96	ppb	100
9) acetone	6.94	43	827655	109.04	ppb	97
10) 1,1-dichloroethene	6.18	96	1170985	100.85	ppb	98
11) methylene chloride	6.90	84	1530202	111.91	ppb	96
12) methyl tert-butyl ether	7.19	73	4290341	105.11	ppb	100
13) trans-1,2-dichloroethene	7.09	96	1434838	103.32	ppb	99
14) hexane	7.16	57	2467582	82.16	ppb	96
15) 1,1-dichloroethane	7.76	63	2829209	101.78	ppb	99
16) acrylonitrile	7.80	53	781963	103.16	ppb	97
17) 2-butanone	8.84	43	1204147	109.93	ppb	100
18) cis-1,2-dichloroethene	8.31	96	1428119	101.14	ppb	98
19) 2,2-dichloropropane	8.44	77	1950731	102.37	ppb	100
20) chloroform	8.56	83	2641250	104.01	ppb	99
21) bromochloromethane	8.53	128	656342	101.12	ppb	99
22) tetrahydrofuran	8.76	42	747073	86.13	ppb	94
23) 1,1,1-trichloroethane	8.82	97	1816611	100.96	ppb	99
26) 1,2-dichloroethane	9.36	62	1839029	100.12	ppb	99
27) carbon tetrachloride	8.76	117	1503147	103.03	ppb	99
28) 1,1-dichloropropene	8.92	75	1934580	102.08	ppb	100
29) benzene	9.18	78	5239204	101.86	ppb	100
30) trichloroethene	9.73	130	1045019	97.08	ppb	99
31) 1,2-dichloropropane	10.25	63	1398474	99.85	ppb	99
32) bromodichloromethane	10.28	83	1824662	107.25	ppb	99
33) dibromomethane	10.17	93	854620	97.91	ppb	99
34) 2-chloroethyl vinyl ether	10.81	63	11830	1.19	ppb	# 42
35) cis-1,3-dichloropropene	10.89	75	1991963	97.40	ppb	100
36) trans-1,3-dichloropropene	11.52	75	1936714	104.76	ppb	99
37) toluene	11.14	91	4822318	105.88	ppb	100
39) 1,1,2-trichloroethane	11.70	97	938789	97.56	ppb	98

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

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1101010.D

Vial: 11

Acq On : 12 Oct 2006 9:11 pm

Operator: RG

Sample : 3559-0778ms,,,3

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 12:25 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.22	107	987638	99.79	ppb	100
42) 1,3-dichloropropane	12.01	76	1908066	82.46	ppb	100
43) dibromochloromethane	11.93	129	1005025	90.39	ppb	100
44) bromoform	13.40	173	659669	93.01	ppb	100
45) 4-methyl-2-pentanone	11.45	43	2183888	85.74	ppb	98
46) 2-hexanone	12.27	43	1408514	81.78	ppb	100
47) tetrachloroethene	11.57	164	702016	87.10	ppb	99
48) chlorobenzene	12.69	112	2868592	90.13	ppb	98
49) 1,1,1,2-tetrachloroethane	12.73	131	880139	85.32	ppb	99
50) ethylbenzene	12.66	91	5430569	104.85	ppb	100
51) m,p-xylene	12.79	106	3897807	202.11	ppb	100
52) o-xylene	13.25	106	1643351	96.93	ppb	99
53) styrene	13.29	104	3069652	99.59	ppb	99
55) isopropylbenzene	13.55	105	4215801	96.59	ppb	100
56) 1,1,2,2-tetrachloroethane	14.06	83	1458911	88.76	ppb	99
58) bromobenzene	14.08	156	976973	92.48	ppb	99
59) 1,2,3-trichloropropane	14.27	110	398102	91.51	ppb	99
60) n-propylbenzene	14.01	91	5576457	95.32	ppb	100
61) 2-chlorotoluene	14.25	91	3317906	95.83	ppb	100
62) 1,3,5-trimethylbenzene	14.18	105	3318697	99.53	ppb	100
63) 4-chlorotoluene	14.42	91	3312348	95.03	ppb	100
64) tert-butylbenzene	14.57	119	2633801	98.49	ppb	99
65) 1,2,4-trimethylbenzene	14.63	105	3493752	100.61	ppb	100
66) d-Limonene	14.73	68	762862	58.84	ppb	99
67) sec-butylbenzene	14.77	105	4231058	94.98	ppb	100
68) p-isopropyltoluene	14.90	119	3441464	103.32	ppb	100
69) 1,3-dichlorobenzene	15.11	146	1824362	96.99	ppb	99
70) 1,4-dichlorobenzene	15.20	146	1916529	100.82	ppb	100
71) 1,2-dichlorobenzene	15.71	146	1690339	94.68	ppb	99
72) n-butylbenzene	15.38	91	3492485	102.16	ppb	100
73) 1,2-dibromo-3-chloropropan	16.68	75	196344	98.99	ppb	98
74) 1,2,4-trichlorobenzene	17.60	180	892344	96.64	ppb	99
75) hexachlorobutadiene	17.48	225	235015	93.58	ppb	100
76) naphthalene	18.11	128	2191383	103.72	ppb	100
77) 1,2,3-trichlorobenzene	18.41	180	810721	98.03	ppb	100
78) n-heptane	8.84	43	1209010	No Calib	#	

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

1101010.D MS100906.M

Fri Oct 13 14:22:34 2006

VOA

Page 2

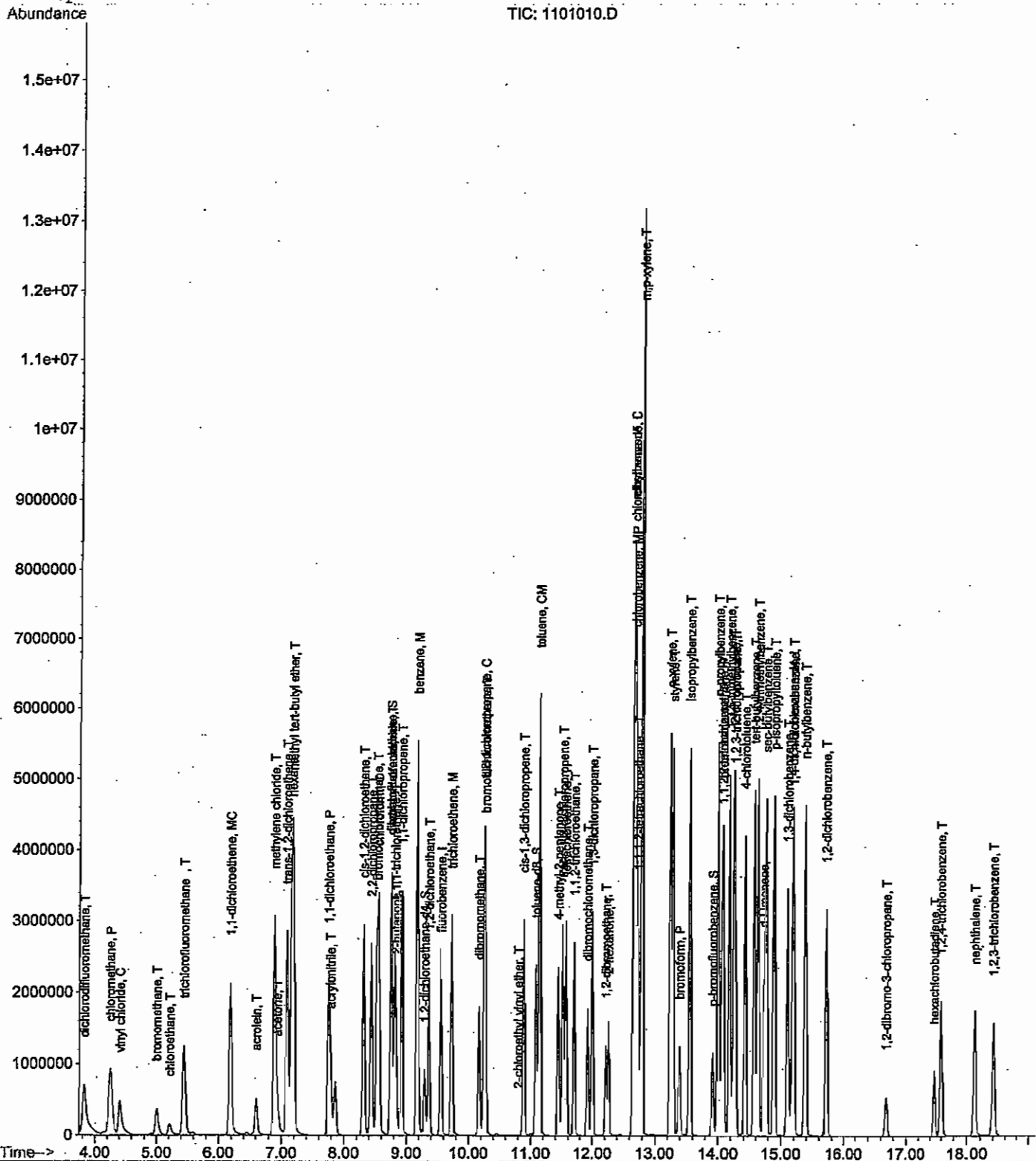
Quantitation Report

Data File : J:\98MSV01.I\101206.B\1101010.D
Acq On : 12 Oct 2006 9:11 pm
Sample : 3559-0778ms,,,3
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 13 12:25 19106

Vial: 11
Operator: RG
Inst : ms-01
Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
Title : Mass Spec VOA
Last Update : Tue Oct 10 10:31:41 2006
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1102011.D
 Acq On : 12 Oct 2006 9:42 pm
 Sample : 3559-0778msd,,,3
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 12:26 19106

Vial: 11
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration
 DataAcq Meth : VOAMS1

Internal Standards	R.T:	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	2179214	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	976963	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	617447	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	596537	46.14	ppb	0.00
Spiked Amount 50.000	Range 66 - 124		Recovery =	92.28%		
25) 1,2-dichloroethane-d4	9.29	65	686846	42.44	ppb	0.00
Spiked Amount 50.000	Range 70 - 120		Recovery =	84.88%		
38) toluene-d8	11.09	98	1716041	44.46	ppb	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery =	88.92%		
57) p-bromofluorobenzene	13.92	176	360305	42.68	ppb	0.00
Spiked Amount 50.000	Range 74 - 127		Recovery =	85.36%		

Target Compounds

						Qvalue
2) chloromethane	4.26	50	2356503	94.19	ppb	100
3) vinyl chloride	4.41	62	1162060	92.91	ppb	98
4) bromomethane	5.02	94	485089	108.16	ppb	99
5) chloroethane	5.22	49	88601	101.77	ppb	92
6) dichlorodifluoromethane	3.83	85	1702423	74.86	ppb	97
7) trichlorofluoromethane	5.45	101	1830441	86.45	ppb	100
8) acrolein	6.61	56	373590	180.13	ppb	98
9) acetone	6.94	43	814978	102.57	ppb	97
10) 1,1-dichloroethene	6.19	96	1166544	96.36	ppb	99
11) methylene chloride	6.90	84	1488992	104.20	ppb	97
12) methyl tert-butyl ether	7.19	73	4258939	100.07	ppb	100
13) trans-1,2-dichloroethene	7.09	96	1423545	98.31	ppb	99
14) hexane	7.16	57	2428424	77.54	ppb	96
15) 1,1-dichloroethane	7.76	63	2823740	97.42	ppb	100
16) acrylonitrile	7.80	53	782642	99.02	ppb	97
17) 2-butanone	8.84	43	1234962	108.10	ppb	100
18) cis-1,2-dichloroethene	8.31	96	1444872	98.14	ppb	99
19) 2,2-dichloropropane	8.43	77	1936036	97.44	ppb	100
20) chloroform	8.56	83	2661946	100.53	ppb	99
21) bromochloromethane	8.53	128	665892	98.39	ppb	99
22) tetrahydrofuran	8.76	42	751424	82.14	ppb	94
23) 1,1,1-trichloroethane	8.82	97	1854987	98.87	ppb	99
26) 1,2-dichloroethane	9.37	62	1877310	98.02	ppb	100
27) carbon tetrachloride	8.76	117	1532716	100.76	ppb	98
28) 1,1-dichloropropene	8.93	75	1946850	98.52	ppb	100
29) benzene	9.18	78	5220001	97.33	ppb	100
30) trichloroethene	9.73	130	1059876	94.43	ppb	100
31) 1,2-dichloropropane	10.26	63	1430193	97.93	ppb	99
32) bromodichloromethane	10.28	83	1874825	105.68	ppb	99
33) dibromomethane	10.17	93	873868	96.01	ppb	100
34) 2-chloroethyl vinyl ether	10.81	63	18186	1.76	ppb	# 26
35) cis-1,3-dichloropropene	10.89	75	2040899	95.70	ppb	100
36) trans-1,3-dichloropropene	11.51	75	1962505	101.81	ppb	99
37) toluene	11.15	91	4848473	102.10	ppb	100
39) 1,1,2-trichloroethane	11.70	97	961677	95.84	ppb	98

(#) = qualifier out of range (m) = manual integration
 1102011.D MS100906.M Fri Oct 13 14:22:50 2006

VOA

Page 1

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1102011.D

Vial: 11

Acq On : 12 Oct 2006 9:42 pm

Operator: RG

Sample : 3559-0778msd,,,3

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 12:26 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.21	107	995525	96.46	ppb	100
42) 1,3-dichloropropane	12.00	76	1929714	81.96	ppb	99
43) dibromochloromethane	11.92	129	1018251	89.99	ppb	99
44) bromoform	13.40	173	677456	93.86	ppb	99
45) 4-methyl-2-pentanone	11.44	43	2230777	86.07	ppb	99
46) 2-hexanone	12.27	43	1437117	82.00	ppb	100
47) tetrachloroethene	11.57	164	712353	86.85	ppb	100
48) chlorobenzene	12.69	112	2866192	88.50	ppb	99
49) 1,1,1,2-tetrachloroethane	12.73	131	904396	86.15	ppb	99
50) ethylbenzene	12.66	91	5427115	102.93	ppb	100
51) m,p-xylene	12.79	106	3865949	196.99	ppb	99
52) o-xylene	13.25	106	1661793	96.32	ppb	99
53) styrene	13.29	104	3075130	98.04	ppb	94
55) isopropylbenzene	13.56	105	4261160	96.54	ppb	100
56) 1,1,2,2-tetrachloroethane	14.07	83	1484990	89.33	ppb	100
58) bromobenzene	14.08	156	994130	93.06	ppb	100
59) 1,2,3-trichloropropane	14.27	110	406406	92.38	ppb	99
60) n-propylbenzene	14.01	91	5615241	94.91	ppb	100
61) 2-chlorotoluene	14.24	91	3364986	96.10	ppb	99
62) 1,3,5-trimethylbenzene	14.18	105	3343737	99.16	ppb	100
63) 4-chlorotoluene	14.42	91	3352020	95.09	ppb	100
64) tert-butylbenzene	14.58	119	2634574	97.42	ppb	100
65) 1,2,4-trimethylbenzene	14.64	105	3503844	99.78	ppb	100
66) d-Limonene	14.73	68	727031	55.45	ppb	99
67) sec-butylbenzene	14.77	105	4216154	93.58	ppb	100
68) p-isopropyltoluene	14.89	119	3429324	101.80	ppb	100
69) 1,3-dichlorobenzene	15.10	146	1835712	96.50	ppb	100
70) 1,4-dichlorobenzene	15.20	146	1920449	99.88	ppb	100
71) 1,2-dichlorobenzene	15.71	146	1705289	94.45	ppb	100
72) n-butylbenzene	15.38	91	3507162	101.44	ppb	100
73) 1,2-dibromo-3-chloropropan	16.68	75	197197	98.32	ppb	99
74) 1,2,4-trichlorobenzene	17.60	180	898503	96.22	ppb	100
75) hexachlorobutadiene	17.48	225	239099	94.14	ppb	100
76) naphthalene	18.11	128	2269318	106.21	ppb	100
77) 1,2,3-trichlorobenzene	18.41	180	837675	100.16	ppb	99
78) n-heptane	8.99	43	1067	No Calib	#	

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

1102011.D MS100906.M

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VOA

Page 2

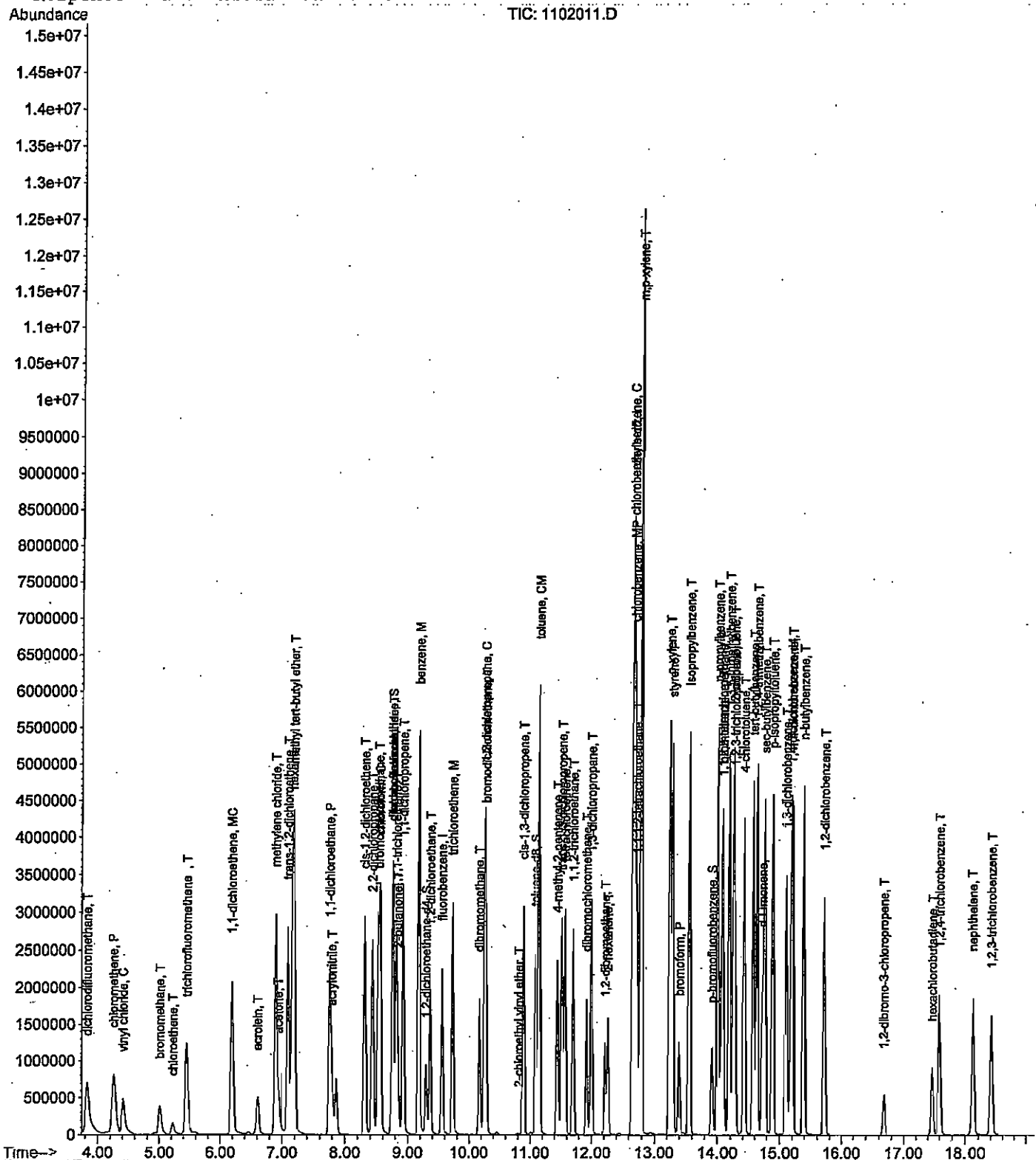
Quantitation Report

Data File : J:\98MSV01.I\101206.B\1102011.D
 Acq On : 12 Oct 2006 9:42 pm
 Sample : 3559-0778msd,,3
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 12:26 19106

Vial: 11
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1201012.D
 Acq On : 12 Oct 2006 10:12 pm
 Sample : 3559-0779,,
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 12:26 19106

Vial: 12
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration
 DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) fluorobenzene	9.56	96	2085556	50.00	ppb	0.00
41) chlorobenzene-d5	12.67	82	727057	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	474624	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.74	113	535646	43.29	ppb	0.00
Spiked Amount 50.000	Range 66 - 124		Recovery =	86.58%		
25) 1,2-dichloroethane-d4	9.30	65	660222	42.63	ppb	0.00
Spiked Amount 50.000	Range 70 - 120		Recovery =	85.26%		
38) toluene-d8	11.09	98	1633127	44.22	ppb	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery =	88.44%		
57) p-bromofluorobenzene	13.92	176	333731	50.98	ppb	0.00
Spiked Amount 50.000	Range 74 - 127		Recovery =	101.96%		

Target Compounds

					Qvalue
2) chloromethane	4.26	50	1419	N.D.	
3) vinyl chloride	0.00	62	0	N.D.	
4) bromomethane	5.03	94	2533	-4.02 ppb #	61
5) chloroethane	5.22	49	89	-4.95 ppb #	1
6) dichlorodifluoromethane	3.85	85	2270	N.D.	
7) trichlorofluoromethane	0.00	101	0	N.D.	
8) acrolein	0.00	56	0	N.D.	
9) acetone	6.95	43	9286	-5.94 ppb	95
10) 1,1-dichloroethene	6.19	96	1354	N.D.	
11) methylene chloride	6.89	84	2912	-3.29 ppb	98
12) methyl tert-butyl ether	7.19	73	1042	N.D.	
13) trans-1,2-dichloroethene	7.09	96	2055	N.D.	
14) hexane	7.16	57	11132	N.D.	
15) 1,1-dichloroethane	7.76	63	1514	N.D.	
16) acrylonitrile	0.00	53	0	N.D.	
17) 2-butanone	8.85	43	2369	-1.14 ppb #	64
18) cis-1,2-dichloroethene	8.32	96	1093	N.D.	
19) 2,2-dichloropropane	8.44	77	1332	N.D.	
20) chloroform	8.55	83	87792	3.46 ppb	99
21) bromochloromethane	0.00	128	0	N.D.	
22) tetrahydrofuran	8.77	42	1495	0.89 ppb #	46
23) 1,1,1-trichloroethane	8.82	97	1182	N.D.	
26) 1,2-dichloroethane	9.35	62	1482	N.D.	
27) carbon tetrachloride	8.76	117	1354	N.D.	
28) 1,1-dichloropropene	8.92	75	2764	N.D.	
29) benzene	9.18	78	3878	N.D.	
30) trichloroethene	9.73	130	1482	N.D.	
31) 1,2-dichloropropane	10.25	63	4120	N.D.	
32) bromodichloromethane	10.27	83	2059	N.D.	
33) dibromomethane	0.00	93	0	N.D.	
34) 2-chloroethyl vinyl ether	0.00	63	0	N.D.	
35) cis-1,3-dichloropropene	10.90	75	1529	N.D.	
36) trans-1,3-dichloropropene	11.51	75	1925	N.D.	
37) toluene	11.14	91	5459	N.D.	
39) 1,1,2-trichloroethane	0.00	97	0	N.D.	

All < RL

to 10/13/06

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1201012.D

Vial: 12

Acq On : 12 Oct 2006 10:12 pm

Operator: RG

Sample : 3559-0779,,,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 12:26 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.22	107	1235	N.D.		
42) 1,3-dichloropropane	12.01	76	1581	N.D.		
43) dibromochloromethane	0.00	129	0	N.D.		
44) bromoform	0.00	173	0	N.D.		
45) 4-methyl-2-pentanone	11.44	43	1685	N.D.		
46) 2-hexanone	12.27	43	2834	N.D.		
47) tetrachloroethene	11.56	164	1772	N.D.		
48) chlorobenzene	12.69	112	4301	N.D.		
49) 1,1,1,2-tetrachloroethane	12.74	131	1174	N.D.		
50) ethylbenzene	12.67	91	10809	-2.36 ppb	#	62
51) m,p-xylene	12.78	106	5484	N.D.		
52) o-xylene	13.25	106	2332	N.D.		
53) styrene	13.28	104	3698	N.D.		
55) isopropylbenzene	13.56	105	8764	N.D.		
56) 1,1,2,2-tetrachloroethane	14.06	83	2365	N.D.		
58) bromobenzene	14.08	156	2265	N.D.		
59) 1,2,3-trichloropropane	14.27	110	2726	0.81 ppb		94
60) n-propylbenzene	14.01	91	17380	N.D.		
61) 2-chlorotoluene	14.24	91	7538	N.D.		
62) 1,3,5-trimethylbenzene	14.17	105	8947	N.D.		
63) 4-chlorotoluene	14.42	91	8818	N.D.		
64) tert-butylbenzene	14.57	119	9368	N.D.		
65) 1,2,4-trimethylbenzene	14.64	105	9260	N.D.		
66) d-Limonene	14.73	68	7771	0.77 ppb		99
67) sec-butylbenzene	14.77	105	23003	0.66 ppb		98
68) p-isopropyltoluene	14.89	119	17080	0.66 ppb		99
69) 1,3-dichlorobenzene	15.10	146	6370	N.D.		
70) 1,4-dichlorobenzene	15.19	146	7218	-1.35 ppb	#	80
71) 1,2-dichlorobenzene	15.70	146	6149	N.D.		
72) n-butylbenzene	15.39	91	26675	1.00 ppb		98
73) 1,2-dibromo-3-chloropropan	16.68	75	1264	1.64 ppb	#	2
74) 1,2,4-trichlorobenzene	17.60	180	8684	1.21 ppb		100
75) hexachlorobutadiene	17.48	225	6864	3.52 ppb		100
76) naphthalene	18.11	128	21107	1.29 ppb		100
77) 1,2,3-trichlorobenzene	18.41	180	9370	1.46 ppb		94
78) n-heptane	8.85	43	2369	No Calib	#	

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

1201012.D MS100906.M

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VOA

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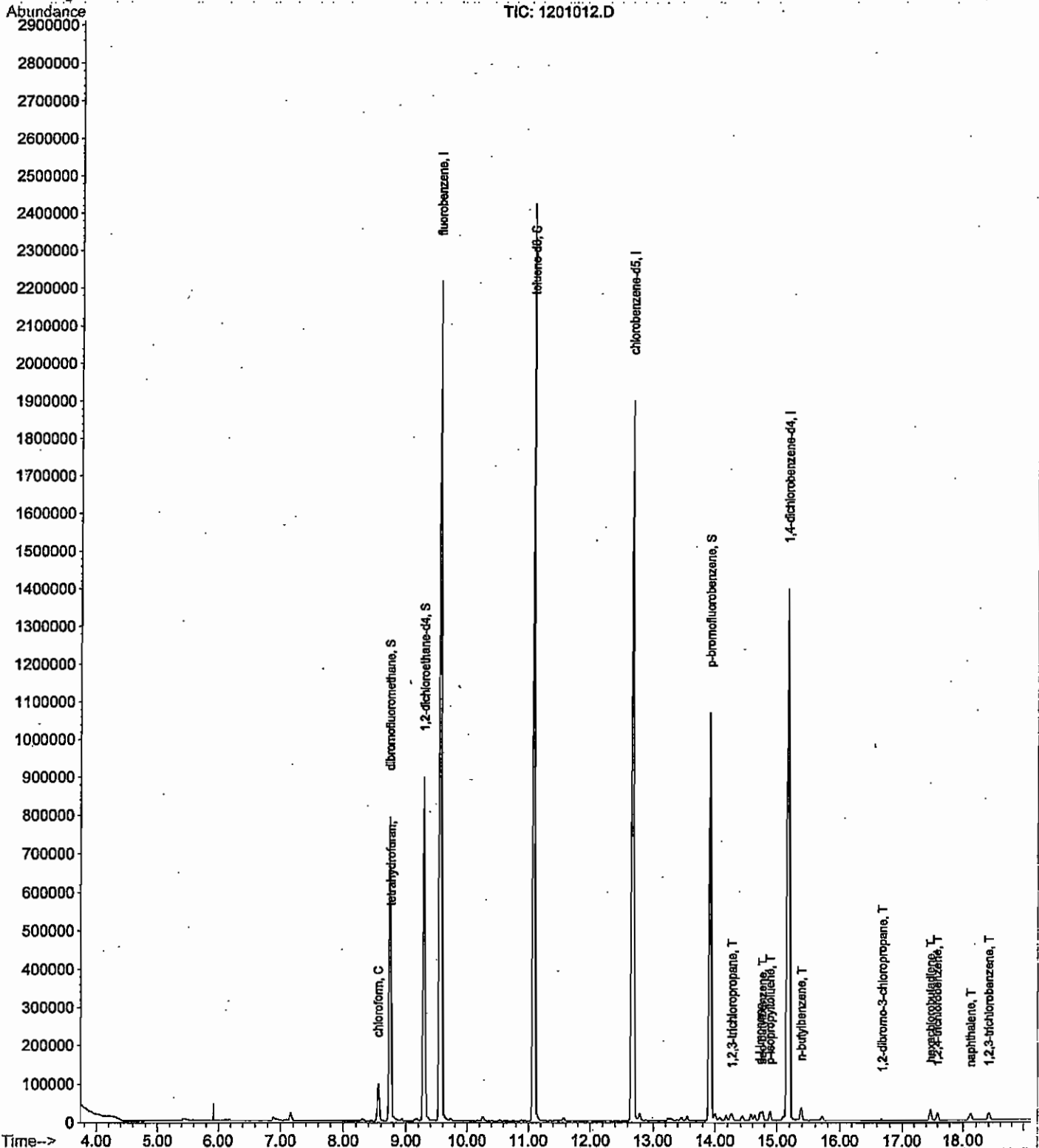
Quantitation Report

Data File : J:\98MSV01.I\101206.B\1201012.D
 Acq On : 12 Oct 2006 10:12 pm
 Sample : 3559-0779,,,
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 12:26 19106

Vial: 12
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1301013.D

Vial: 13

Acq On : 12 Oct 2006 10:43 pm

Operator: RG

Sample : 3559-0780,,,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 12:26 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	1941514	50.00	ppb	0.00
41) chlorobenzene-d5	12.67	82	693569	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	446077	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	500397	43.45	ppb	0.00
Spiked Amount	50.000	Range	66 - 124	Recovery	=	86.90%
25) 1,2-dichloroethane-d4	9.29	65	618667	42.91	ppb	0.00
Spiked Amount	50.000	Range	70 - 120	Recovery	=	85.82%
38) toluene-d8	11.09	98	1524742	44.34	ppb	0.00
Spiked Amount	50.000	Range	76 - 120	Recovery	=	88.68%
57) p-bromofluorobenzene	13.92	176	315556	51.28	ppb	0.00
Spiked Amount	50.000	Range	74 - 127	Recovery	=	102.56%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) chloromethane	4.26	50	1213	N.D.		
3) vinyl chloride	0.00	62	0	N.D.		
4) bromomethane	4.96	94	109	-4.61 ppb	#	1
5) chloroethane	5.18	49	481	-4.42 ppb	#	1
6) dichlorodifluoromethane	0.00	85	0	N.D.		
7) trichlorofluoromethane	0.00	101	0	N.D.		
8) acrolein	0.00	56	0	N.D.		
9) acetone	6.96	43	11235	-5.55 ppb		96
10) 1,1-dichloroethene	0.00	96	0	N.D.		
11) methylene chloride	6.90	84	2280	-3.32 ppb	#	81
12) methyl tert-butyl ether	0.00	73	0	N.D.		
13) trans-1,2-dichloroethene	0.00	96	0	N.D.		
14) hexane	7.16	57	3777	N.D.		
15) 1,1-dichloroethane	0.00	63	0	N.D.		
16) acrylonitrile	0.00	53	0	N.D.		
17) 2-butanone	8.85	43	2234	-1.14 ppb	#	64
18) cis-1,2-dichloroethene	0.00	96	0	N.D.		
19) 2,2-dichloropropane	0.00	77	0	N.D.		
20) chloroform	8.56	83	20570	0.87 ppb		96
21) bromochloromethane	0.00	128	0	N.D.		
22) tetrahydrofuran	0.00	42	0	N.D.		
23) 1,1,1-trichloroethane	0.00	97	0	N.D.		
26) 1,2-dichloroethane	0.00	62	0	N.D.		
27) carbon tetrachloride	0.00	117	0	N.D.		
28) 1,1-dichloropropene	8.93	75	1129	N.D.		
29) benzene	9.19	78	1597	N.D.		
30) trichloroethene	0.00	130	0	N.D.		
31) 1,2-dichloropropane	0.00	63	0	N.D.		
32) bromodichloromethane	0.00	83	0	N.D.		
33) dibromomethane	0.00	93	0	N.D.		
34) 2-chloroethyl vinyl ether	0.00	63	0	N.D.		
35) cis-1,3-dichloropropene	0.00	75	0	N.D.		
36) trans-1,3-dichloropropene	0.00	75	0	N.D.		
37) toluene	11.13	91	2109	N.D.		
39) 1,1,2-trichloroethane	0.00	97	0	N.D.		

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

1301013.D MS100906.M

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VOA

Page 1

All LRL.

MS 10/13/06

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1301013.D
 Acq On : 12 Oct 2006 10:43 pm
 Sample : 3559-0780,,,
 Misc :

Vial: 13
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 12:26 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	0.00	107	0	N.D.		
42) 1,3-dichloropropane	0.00	76	0	N.D.		
43) dibromochloromethane	0.00	129	0	N.D.		
44) bromoform	0.00	173	0	N.D.		
45) 4-methyl-2-pentanone	0.00	43	0	N.D.		
46) 2-hexanone	12.27	43	1160	N.D.		
47) tetrachloroethene	0.00	164	0	N.D.		
48) chlorobenzene	12.69	112	1717	N.D.		
49) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
50) ethylbenzene	12.66	91	6136	-2.48 ppb	#	27
51) m,p-xylene	12.78	106	2390	N.D.		
52) o-xylene	0.00	106	0	N.D.		
53) styrene	13.29	104	1565	N.D.		
55) isopropylbenzene	13.56	105	3265	N.D.		
56) 1,1,2,2-tetrachloroethane	0.00	83	0	N.D.		
58) bromobenzene	0.00	156	0	N.D.		
59) 1,2,3-trichloropropane	0.00	110	0	N.D.		
60) n-propylbenzene	14.00	91	6529	N.D.		
61) 2-chlorotoluene	14.25	91	3006	N.D.		
62) 1,3,5-trimethylbenzene	14.18	105	3332	N.D.		
63) 4-chlorotoluene	14.42	91	3487	N.D.		
64) tert-butylbenzene	14.58	119	2487	N.D.		
65) 1,2,4-trimethylbenzene	14.64	105	2989	N.D.		
66) d-Limonene	14.72	68	2100	N.D.		
67) sec-butylbenzene	14.77	105	6276	N.D.		
68) p-isopropyltoluene	14.89	119	4566	N.D.		
69) 1,3-dichlorobenzene	15.10	146	2413	N.D.		
70) 1,4-dichlorobenzene	15.20	146	3389	-1.60 ppb	#	72
71) 1,2-dichlorobenzene	15.70	146	1863	N.D.		
72) n-butylbenzene	15.38	91	7835	N.D.		
73) 1,2-dibromo-3-chloropropan	0.00	75	0	N.D.		
74) 1,2,4-trichlorobenzene	17.60	180	2103	N.D.		
75) hexachlorobutadiene	17.47	225	2292	1.25 ppb		100
76) naphthalene	18.11	128	4834	N.D.		
77) 1,2,3-trichlorobenzene	18.40	180	2138	N.D.		
78) n-heptane	8.85	43	2234	No Calib	#	

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

1301013.D MS100906.M

Fri Oct 13 14:23:24 2006

VOA

Page 2

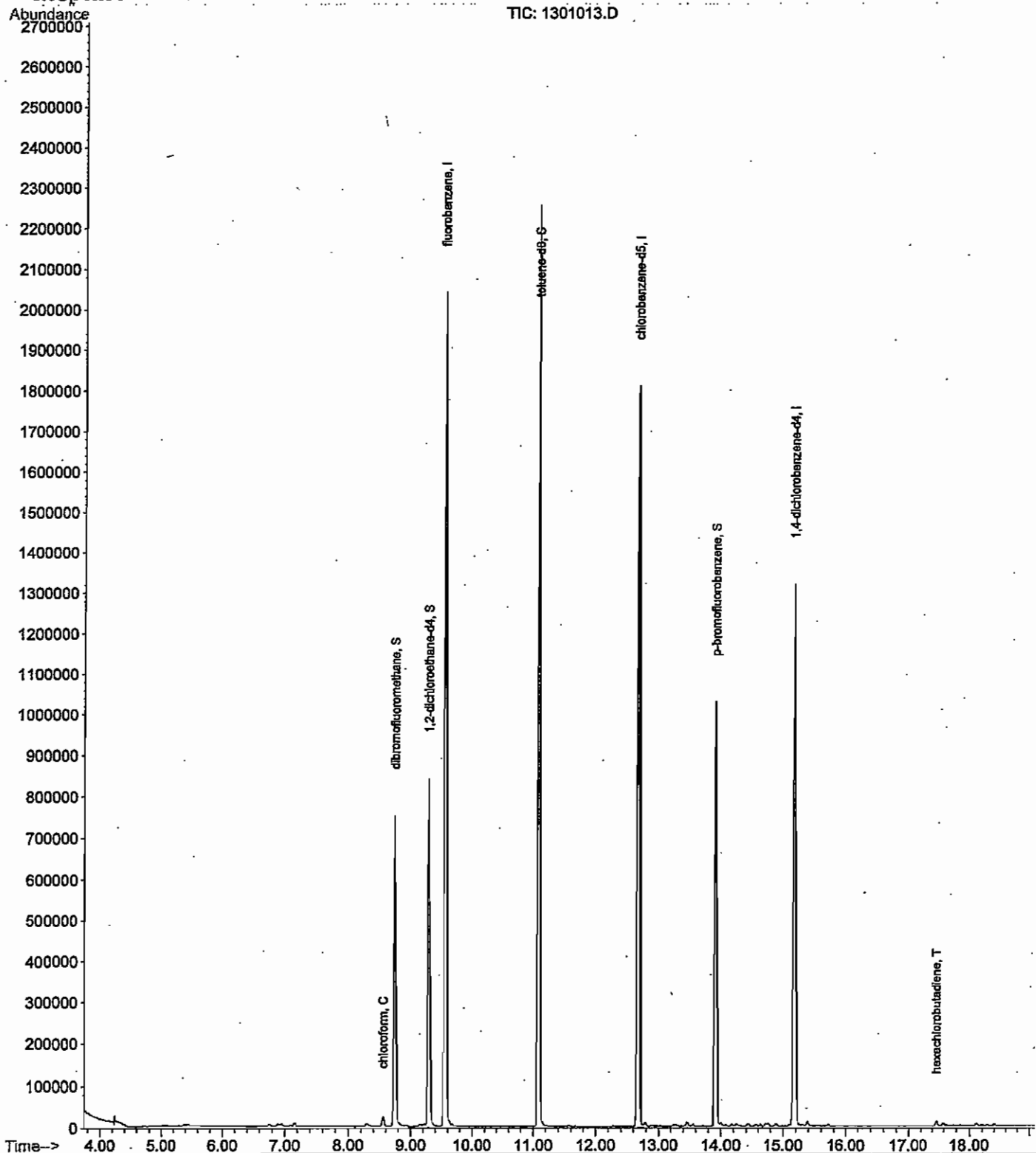
Quantitation Report

Data File : J:\98MSV01.I\101206.B\1301013.D
 Acq On : 12 Oct 2006 10:43 pm
 Sample : 3559-0780,,,
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 12:26 19106

Vial: 13
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1401014.D

Vial: 14

Acq On : 12 Oct 2006 11:13 pm

Operator: RG

Sample : 3559-0781,,,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 12:27 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) fluorobenzene	9.56	96	1844258	50.00	ppb	0.00
41) chlorobenzene-d5	12.67	82	698139	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	424244	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	468896	42.86	ppb	0.00
Spiked Amount	50.000	Range	66 - 124	Recovery	=	85.72%
25) 1,2-dichloroethane-d4	9.29	65	574548	41.95	ppb	0.00
Spiked Amount	50.000	Range	70 - 120	Recovery	=	83.90%
38) toluene-d8	11.09	98	1447147	44.31	ppb	0.00
Spiked Amount	50.000	Range	76 - 120	Recovery	=	88.62%
57) p-bromofluorobenzene	13.92	176	294792	50.41	ppb	0.00
Spiked Amount	50.000	Range	74 - 127	Recovery	=	100.82%

Target Compounds

						Qvalue
2) chloromethane	4.24	50	1415	N.D.		
3) vinyl chloride	0.00	62	0	N.D.		
4) bromomethane	4.97	94	388	-4.53 ppb	#	35
5) chloroethane	5.18	49	710	-4.05 ppb	#	1
6) dichlorodifluoromethane	0.00	85	0	N.D.		
7) trichlorofluoromethane	0.00	101	0	N.D.		
8) acrolein	0.00	56	0	N.D.		
9) acetone	6.96	43	11377	-5.44 ppb		94
10) 1,1-dichloroethene	0.00	96	0	N.D.		
11) methylene chloride	6.90	84	1846	-3.35 ppb	#	22
12) methyl tert-butyl ether	0.00	73	0	N.D.		
13) trans-1,2-dichloroethene	0.00	96	0	N.D.		
14) hexane	7.15	57	1234	N.D.		
15) 1,1-dichloroethane	0.00	63	0	N.D.		
16) acrylonitrile	0.00	53	0	N.D.		
17) 2-butanone	0.00	43	0	N.D.		
18) cis-1,2-dichloroethene	0.00	96	0	N.D.		
19) 2,2-dichloropropane	0.00	77	0	N.D.		
20) chloroform	0.00	83	0	N.D.		
21) bromochloromethane	0.00	128	0	N.D.		
22) tetrahydrofuran	8.77	42	1622	0.93 ppb	#	46
23) 1,1,1-trichloroethane	0.00	97	0	N.D.		
26) 1,2-dichloroethane	0.00	62	0	N.D.		
27) carbon tetrachloride	0.00	117	0	N.D.		
28) 1,1-dichloropropene	0.00	75	0	N.D.		
29) benzene	9.18	78	22744	0.50 ppb		98
30) trichloroethene	0.00	130	0	N.D.		
31) 1,2-dichloropropane	0.00	63	0	N.D.		
32) bromodichloromethane	0.00	83	0	N.D.		
33) dibromomethane	0.00	93	0	N.D.		
34) 2-chloroethyl vinyl ether	0.00	63	0	N.D.		
35) cis-1,3-dichloropropene	0.00	75	0	N.D.		
36) trans-1,3-dichloropropene	0.00	75	0	N.D.		
37) toluene	11.15	91	1620	N.D.		
39) 1,1,2-trichloroethane	0.00	97	0	N.D.		

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

1401014.D MS100906.M

Fri Oct 13 14:23:40 2006

VOA

Page 1

Data File : J:\98MSV01.I\101206.B\1401014.D

Vial: 14

Acq On : 12 Oct 2006 11:13 pm

Operator: RG

Sample : 3559-0781,,,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 12:27 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	0.00	107	0	N.D.		
42) 1,3-dichloropropane	0.00	76	0	N.D.		
43) dibromochloromethane	0.00	129	0	N.D.		
44) bromoform	0.00	173	0	N.D.		
45) 4-methyl-2-pentanone	0.00	43	0	N.D.		
46) 2-hexanone	0.00	43	0	N.D.		
47) tetrachloroethene	0.00	164	0	N.D.		
48) chlorobenzene	12.69	112	1102729	47.65	ppb	84
49) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
50) ethylbenzene	12.68	91	5229	-2.50	ppb	# 1
51) m,p-xylene	12.78	106	1463	N.D.		
52) o-xylene	0.00	106	0	N.D.		
53) styrene	0.00	104	0	N.D.		
55) isopropylbenzene	13.56	105	1660	N.D.		
56) 1,1,2,2-tetrachloroethane	0.00	83	0	N.D.		
58) bromobenzene	0.00	156	0	N.D.		
59) 1,2,3-trichloropropane	0.00	110	0	N.D.		
60) n-propylbenzene	14.01	91	4005	N.D.		
61) 2-chlorotoluene	14.25	91	1598	N.D.		
62) 1,3,5-trimethylbenzene	0.00	105	0	N.D.		
63) 4-chlorotoluene	14.42	91	1973	N.D.		
64) tert-butylbenzene	14.57	119	1430	N.D.		
65) 1,2,4-trimethylbenzene	14.63	105	1905	N.D.		
66) d-Limonene	14.72	68	1543	N.D.		
67) sec-butylbenzene	14.77	105	3401	N.D.		
68) p-isopropyltoluene	14.89	119	2737	N.D.		
69) 1,3-dichlorobenzene	15.10	146	1110	N.D.		
70) 1,4-dichlorobenzene	15.20	146	1768	-1.71	ppb	# 25
71) 1,2-dichlorobenzene	0.00	146	0	N.D.		
72) n-butylbenzene	15.38	91	4025	N.D.		
73) 1,2-dibromo-3-chloropropan.	0.00	75	0	N.D.		
74) 1,2,4-trichlorobenzene	17.60	180	1122	N.D.		
75) hexachlorobutadiene	17.47	225	1106	0.63	ppb	100
76) naphthalene	18.10	128	1214	N.D.		
77) 1,2,3-trichlorobenzene	18.39	180	1201	N.D.		
78) n-heptane	9.22	43	6092	No Calib	#	

48 µg/L

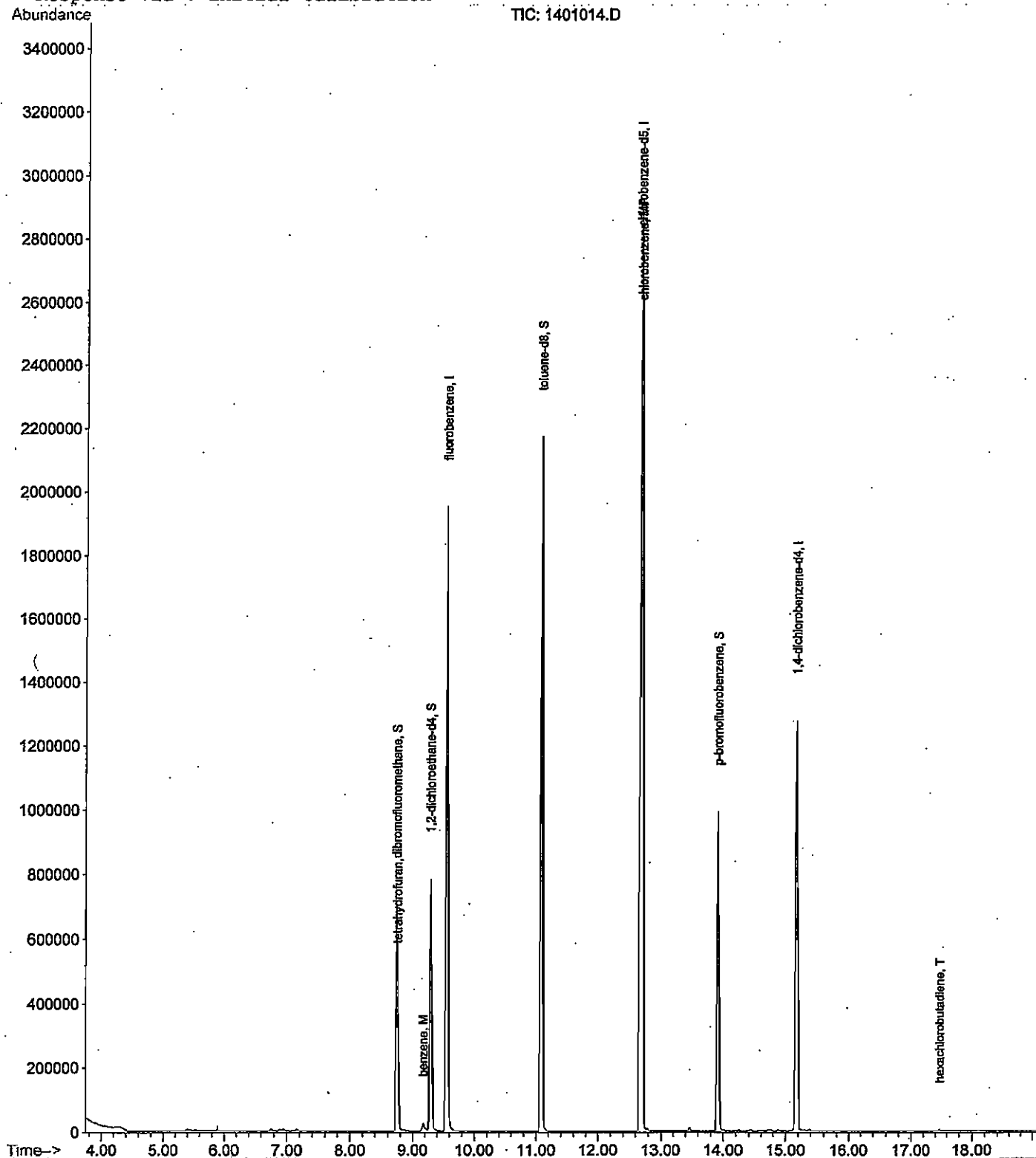
Quantitation Report

Data File : J:\98MSV01.I\101206.B\1401014.D
 Acq On : 12 Oct 2006 11:13 pm
 Sample : 3559-0781,,,
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 12:27 19106

Vial: 14
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1501015.D

Vial: 15

Acq On : 12 Oct 2006 11:44 pm

Operator: RG

Sample : 3559-0782,,,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 12:27 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

RR 2X CA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	1784431	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	809478	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	420782	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.74	113	453435	42.83	ppb	0.00
Spiked Amount	50.000	Range	66 - 124	Recovery	=	85.66%
25) 1,2-dichloroethane-d4	9.29	65	552971	41.73	ppb	0.00
Spiked Amount	50.000	Range	70 - 120	Recovery	=	83.46%
38) toluene-d8	11.09	98	1411480	44.66	ppb	0.00
Spiked Amount	50.000	Range	76 - 120	Recovery	=	89.32%
57) p-bromofluorobenzene	13.92	176	289074	49.86	ppb	0.00
Spiked Amount	50.000	Range	74 - 127	Recovery	=	99.72%

Target Compounds

						Qvalue
2) chloromethane	4.23	50	1760	N.D.		
3) vinyl chloride	0.00	62	0	N.D.		
4) bromomethane	5.01	94	372	-4.53 ppb	#	55
5) chloroethane	5.21	49	486	-4.35 ppb	#	1
6) dichlorodifluoromethane	0.00	85	0	N.D.		
7) trichlorofluoromethane	0.00	101	0	N.D.		
8) acrolein	0.00	56	0	N.D.		
9) acetone	6.94	43	12093	-5.26 ppb	#	89
10) 1,1-dichloroethene	0.00	96	0	N.D.		
11) methylene chloride	6.89	84	2523	-3.29 ppb		86
12) methyl tert-butyl ether	0.00	73	0	N.D.		
13) trans-1,2-dichloroethene	0.00	96	0	N.D.		
14) hexane	7.16	57	2348	N.D.		
15) 1,1-dichloroethane	0.00	63	0	N.D.		
16) acrylonitrile	0.00	53	0	N.D.		
17) 2-butanone	0.00	43	0	N.D.		
18) cis-1,2-dichloroethene	0.00	96	0	N.D.		
19) 2,2-dichloropropane	0.00	77	0	N.D.		
20) chloroform	8.56	83	184577	8.51 ppb		100
21) bromochloromethane	0.00	128	0	N.D.		
22) tetrahydrofuran	8.77	42	2706	1.05 ppb	#	46
23) 1,1,1-trichloroethane	0.00	97	0	N.D.		
26) 1,2-dichloroethane	0.00	62	0	N.D.		
27) carbon tetrachloride	0.00	117	0	N.D.		
28) 1,1-dichloropropene	0.00	75	0	N.D.		
29) benzene	9.18	78	27663	0.63 ppb		99
30) trichloroethene	0.00	130	0	N.D.		
31) 1,2-dichloropropane	10.24	63	1545	N.D.		
32) bromodichloromethane	0.00	83	0	N.D.		
33) dibromomethane	0.00	93	0	N.D.		
34) 2-chloroethyl vinyl ether	0.00	63	0	N.D.		
35) cis-1,3-dichloropropene	0.00	75	0	N.D.		
36) trans-1,3-dichloropropene	0.00	75	0	N.D.		
37) toluene	11.15	91	2615	N.D.		
39) 1,1,2-trichloroethane	0.00	97	0	N.D.		

8.5 µg/l

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1501015.D

Vial: 15

Acq On : 12 Oct 2006 11:44 pm

Operator: RG

Sample : 3559-0782,,,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 12:27 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	0.00	107	0	N.D.		
42) 1,3-dichloropropane	0.00	76	0	N.D.		
43) dibromochloromethane	0.00	129	0	N.D.		
44) bromoform	0.00	173	0	N.D.		
45) 4-methyl-2-pentanone	0.00	43	0	N.D.		
46) 2-hexanone	12.27	43	1061	N.D.		
47) tetrachloroethene	0.00	164	0	N.D.		
48) chlorobenzene	12.69	112	7353759	274.04	ppb	83
49) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
50) ethylbenzene	12.67	91	5565	-2.52	ppb #	1
51) m,p-xylene	12.78	106	1165	N.D.		
52) o-xylene	0.00	106	0	N.D.		
53) styrene	0.00	104	0	N.D.		
55) isopropylbenzene	13.56	105	1297	N.D.		
56) 1,1,2,2-tetrachloroethane	0.00	83	0	N.D.		
58) bromobenzene	0.00	156	0	N.D.		
59) 1,2,3-trichloropropane	0.00	110	0	N.D.		
60) n-propylbenzene	13.99	91	2718	N.D.		
61) 2-chlorotoluene	14.25	91	1051	N.D.		
62) 1,3,5-trimethylbenzene	14.18	105	1323	N.D.		
63) 4-chlorotoluene	14.42	91	1477	N.D.		
64) tert-butylbenzene	14.58	119	1159	N.D.		
65) 1,2,4-trimethylbenzene	14.64	105	1237	N.D.		
66) d-Limonene	0.00	68	0	N.D.		
67) sec-butylbenzene	14.77	105	2340	N.D.		
68) p-isopropyltoluene	14.88	119	1866	N.D.		
69) 1,3-dichlorobenzene	0.00	146	0	N.D.		
70) 1,4-dichlorobenzene	15.20	146	1342	-1.74	ppb #	23
71) 1,2-dichlorobenzene	0.00	146	0	N.D.		
72) n-butylbenzene	15.40	91	2883	N.D.		
73) 1,2-dibromo-3-chloropropan	0.00	75	0	N.D.		
74) 1,2,4-trichlorobenzene	0.00	180	0	N.D.		
75) hexachlorobutadiene	0.00	225	0	N.D.		
76) naphthalene	18.12	128	1506	N.D.		
77) 1,2,3-trichlorobenzene	0.00	180	0	N.D.		
78) n-heptane	9.22	43	6307	No Calib	#	

over range
Rc 2x

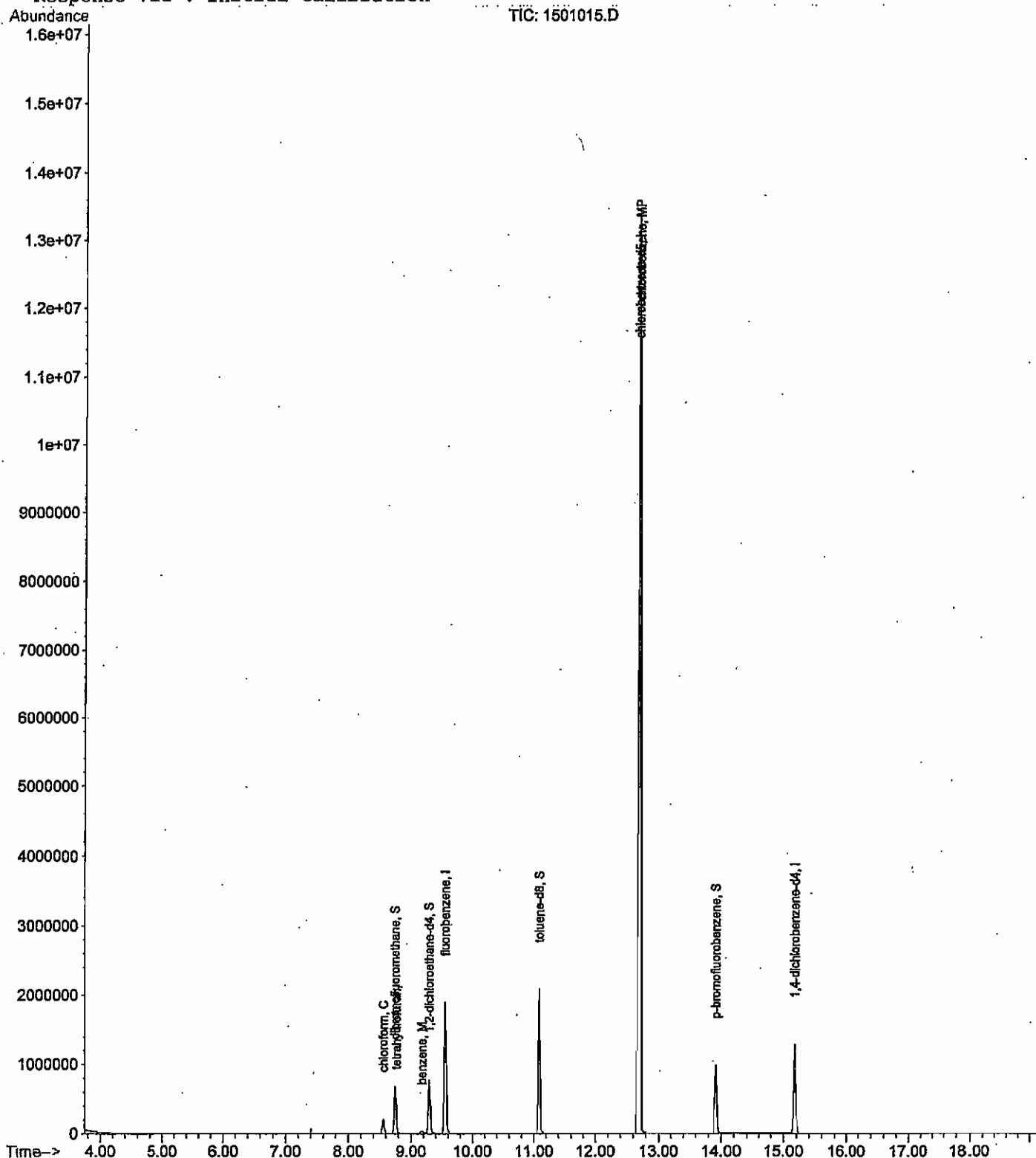
Quantitation Report

Data File : J:\98MSV01.I\101206.B\1501015.D
 Acq On : 12 Oct 2006 11:44 pm
 Sample : 3559-0782,,,
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 12:27 19106

Vial: 15
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration



Data File : J:\98MSV01.I\101206.B\1601016.D

Vial: 16

Acq On : 13 Oct 2006 12:14 am

Operator: RG

Sample : 3559-0783,,,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 12:23 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	1743701	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	683987	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	406355	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.74	113	438695	42.41	ppb	0.00
Spiked Amount	50.000	Range 66 - 124	Recovery	=	84.82%	
25) 1,2-dichloroethane-d4	9.29	65	536389	41.43	ppb	0.00
Spiked Amount	50.000	Range 70 - 120	Recovery	=	82.86%	
38) toluene-d8	11.09	98	1382728	44.78	ppb	0.00
Spiked Amount	50.000	Range 76 - 120	Recovery	=	89.56%	
57) p-bromofluorobenzene	13.92	176	277525	49.58	ppb	0.00
Spiked Amount	50.000	Range 74 - 127	Recovery	=	99.16%	

Target Compounds

					Qvalue
2) chloromethane	4.24	50	1126	N.D.	
3) vinyl chloride	0.00	62	0	N.D.	
4) bromomethane	5.03	94	140	-4.60 ppb	88
5) chloroethane	5.21	49	179	-4.80 ppb	# 1
6) dichlorodifluoromethane	0.00	85	0	N.D.	
7) trichlorofluoromethane	0.00	101	0	N.D.	
8) acrolein	0.00	56	0	N.D.	
9) acetone	6.95	43	9845	-5.59 ppb	95
10) 1,1-dichloroethene	0.00	96	0	N.D.	
11) methylene chloride	6.90	84	2795	-3.26 ppb	# 88
12) methyl tert-butyl ether	0.00	73	0	N.D.	
13) trans-1,2-dichloroethene	0.00	96	0	N.D.	
14) hexane	7.16	57	1990	N.D.	
15) 1,1-dichloroethane	0.00	63	0	N.D.	
16) acrylonitrile	0.00	53	0	N.D.	
17) 2-butanone	8.85	43	3493	-0.98 ppb	# 64
18) cis-1,2-dichloroethene	0.00	96	0	N.D.	
19) 2,2-dichloropropane	0.00	77	0	N.D.	
20) chloroform	0.00	83	0	N.D.	
21) bromochloromethane	0.00	128	0	N.D.	
22) tetrahydrofuran	8.77	42	2254	1.00 ppb	# 46
23) 1,1,1-trichloroethane	0.00	97	0	N.D.	
26) 1,2-dichloroethane	0.00	62	0	N.D.	
27) carbon tetrachloride	0.00	117	0	N.D.	
28) 1,1-dichloropropene	0.00	75	0	N.D.	
29) benzene	9.18	78	28837	0.67 ppb	99
30) trichloroethene	0.00	130	0	N.D.	
31) 1,2-dichloropropane	0.00	63	0	N.D.	
32) bromodichloromethane	0.00	83	0	N.D.	
33) dibromomethane	0.00	93	0	N.D.	
34) 2-chloroethyl vinyl ether	0.00	63	0	N.D.	
35) cis-1,3-dichloropropene	0.00	75	0	N.D.	
36) trans-1,3-dichloropropene	0.00	75	0	N.D.	
37) toluene	11.14	91	2905	N.D.	
39) 1,1,2-trichloroethane	0.00	97	0	N.D.	

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

1601016.D MS100906.M

Fri Oct 13 14:24:13 2006

VOA

Page 1

Data File : J:\98MSV01.I\101206.B\1601016.D

Vial: 16

Acq On : 13 Oct 2006 12:14 am

Operator: RG

Sample : 3559-0783,,,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 12:23 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	0.00	107	0	N.D.		
42) 1,3-dichloropropane	0.00	76	0	N.D.		
43) dibromochloromethane	0.00	129	0	N.D.		
44) bromoform	0.00	173	0	N.D.		
45) 4-methyl-2-pentanone	0.00	43	0	N.D.		
46) 2-hexanone	0.00	43	0	N.D.		
47) tetrachloroethene	0.00	164	0	N.D.		
48) chlorobenzene	12.69	112	1425555	62.87	ppb	83
49) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
50) ethylbenzene	12.67	91	3922	-2.54	ppb	# 1
51) m,p-xylene	12.80	106	1217	N.D.		
52) o-xylene	0.00	106	0	N.D.		
53) styrene	0.00	104	0	N.D.		
55) isopropylbenzene	13.56	105	1067	N.D.		
56) 1,1,2,2-tetrachloroethane	0.00	83	0	N.D.		
58) bromobenzene	0.00	156	0	N.D.		
59) 1,2,3-trichloropropane	0.00	110	0	N.D.		
60) n-propylbenzene	14.01	91	2247	N.D.		
61) 2-chlorotoluene	0.00	91	0	N.D.		
62) 1,3,5-trimethylbenzene	14.18	105	1152	N.D.		
63) 4-chlorotoluene	14.43	91	1164	N.D.		
64) tert-butylbenzene	0.00	119	0	N.D.		
65) 1,2,4-trimethylbenzene	0.00	105	0	N.D.		
66) d-Limonene	0.00	68	0	N.D.		
67) sec-butylbenzene	14.78	105	1479	N.D.		
68) p-isopropyltoluene	14.88	119	1167	N.D.		
69) 1,3-dichlorobenzene	0.00	146	0	N.D.		
70) 1,4-dichlorobenzene	0.00	146	0	N.D.		
71) 1,2-dichlorobenzene	0.00	146	0	N.D.		
72) n-butylbenzene	15.38	91	2274	N.D.		
73) 1,2-dibromo-3-chloropropan	0.00	75	0	N.D.		
74) 1,2,4-trichlorobenzene	0.00	180	0	N.D.		
75) hexachlorobutadiene	0.00	225	0	N.D.		
76) naphthalene	0.00	128	0	N.D.		
77) 1,2,3-trichlorobenzene	0.00	180	0	N.D.		
78) n-heptane	8.85	43	3493	No Calib	#	

63 µg/L

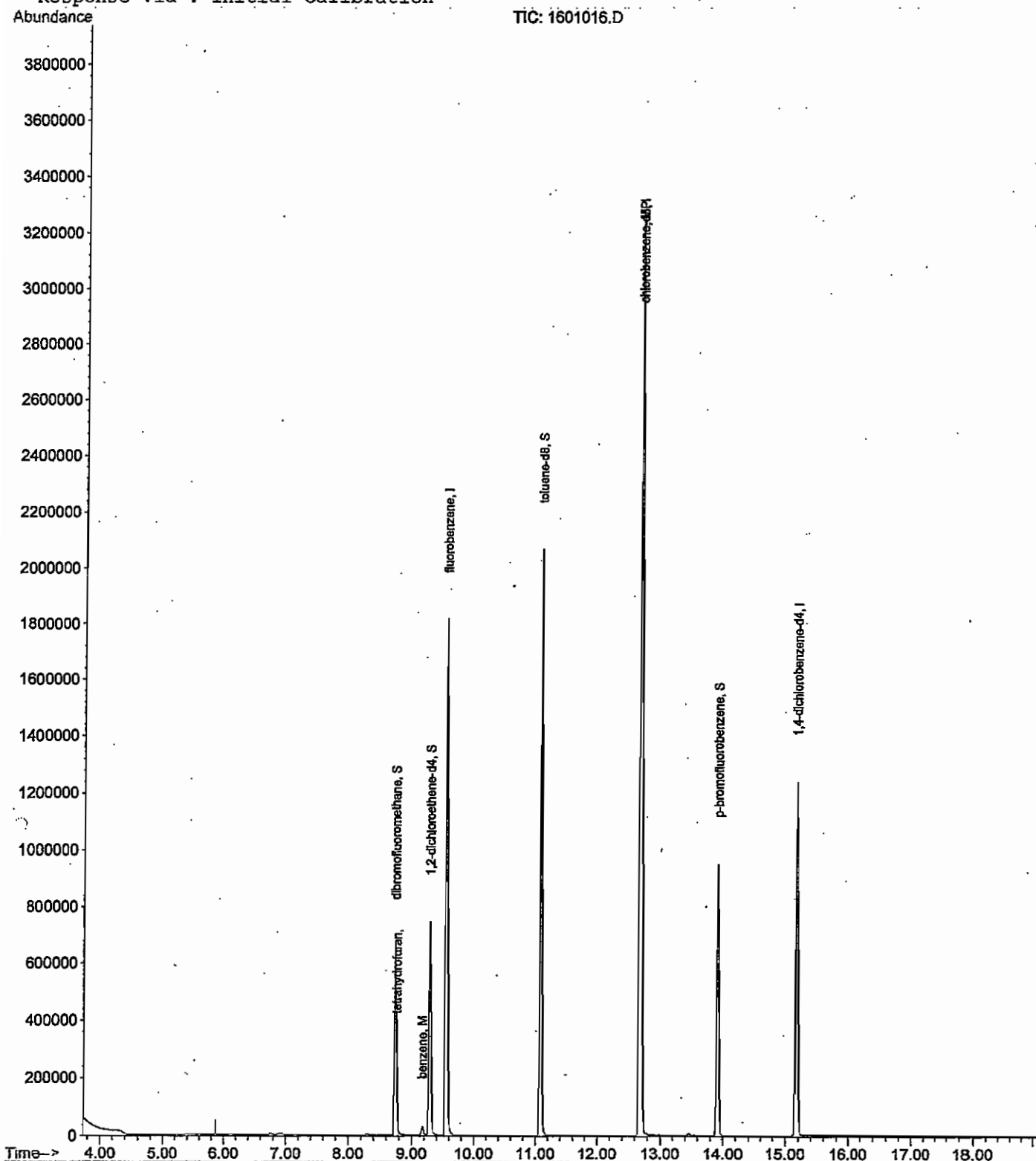
Quantitation Report

Data File : J:\98MSV01.I\101206.B\1601016.D
 Acq On : 13 Oct 2006 12:14 am
 Sample : 3559-0783,,,
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 12:23 19106

Vial: 16
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101206.B\1701017.D

Vial: 17

Acq On : 13 Oct 2006 12:45 am

Operator: RG

Sample : 3559-0784,,,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 12:21 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

RR 2x CB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) fluorobenzene	9.56	96	1716240	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	788115	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	394342	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	427043	41.94	ppb	0.00
Spiked Amount 50.000	Range 66	- 124	Recovery	=	83.88%	
25) 1,2-dichloroethane-d4	9.29	65	520051	40.81	ppb	0.00
Spiked Amount 50.000	Range 70	- 120	Recovery	=	81.62%	
38) toluene-d8	11.09	98	1360003	44.74	ppb	0.00
Spiked Amount 50.000	Range 76	- 120	Recovery	=	89.48%	
57) p-bromofluorobenzene	13.92	176	271876	50.03	ppb	0.00
Spiked Amount 50.000	Range 74	- 127	Recovery	=	100.06%	

Target Compounds

						Qvalue
2) chloromethane	4.24	50	1947	N.D.		
3) vinyl chloride	0.00	62	0	N.D.		
4) bromomethane	5.03	94	572	-4.47 ppb	#	78
5) chloroethane	5.24	49	470	-4.35 ppb	#	1
6) dichlorodifluoromethane	0.00	85	0	N.D.		
7) trichlorofluoromethane	0.00	101	0	N.D.		
8) acrolein	0.00	56	0	N.D.		
9) acetone	6.96	43	7950	-5.89 ppb		96
10) 1,1-dichloroethene	0.00	96	0	N.D.		
11) methylene chloride	6.90	84	2584	-3.27 ppb		88
12) methyl tert-butyl ether	0.00	73	0	N.D.		
13) trans-1,2-dichloroethene	0.00	96	0	N.D.		
14) hexane	7.16	57	1782	N.D.		
15) 1,1-dichloroethane	0.00	63	0	N.D.		
16) acrylonitrile	0.00	53	0	N.D.		
17) 2-butanone	8.86	43	1462	-1.20 ppb	#	64
18) cis-1,2-dichloroethene	0.00	96	0	N.D.		
19) 2,2-dichloropropane	0.00	77	0	N.D.		
20) chloroform	8.56	83	174588	8.37 ppb		99
21) bromochloromethane	0.00	128	0	N.D.		
22) tetrahydrofuran	8.76	42	2524	1.04 ppb	#	46
23) 1,1,1-trichloroethane	0.00	97	0	N.D.		
26) 1,2-dichloroethane	0.00	62	0	N.D.		
27) carbon tetrachloride	0.00	117	0	N.D.		
28) 1,1-dichloropropene	0.00	75	0	N.D.		
29) benzene	9.18	78	26507	0.63 ppb		96
30) trichloroethene	0.00	130	0	N.D.		
31) 1,2-dichloropropane	10.26	63	1450	N.D.		
32) bromodichloromethane	0.00	83	0	N.D.		
33) dibromomethane	0.00	93	0	N.D.		
34) 2-chloroethyl vinyl ether	0.00	63	0	N.D.		
35) cis-1,3-dichloropropene	0.00	75	0	N.D.		
36) trans-1,3-dichloropropene	0.00	75	0	N.D.		
37) toluene	11.14	91	2049	N.D.		
39) 1,1,2-trichloroethane	0.00	97	0	N.D.		

8.4 mg/L

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

1701017.D MS100906.M

Fri Oct 13 14:24:29 2006

VOA

Data File : J:\98MSV01.I\101206.B\1701017.D Vial: 17
 Acq On : 13 Oct 2006 12:45 am Operator: RG
 Sample : 3559-0784,,, Inst : ms-01
 Misc : Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 12:21 19106 Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration
 DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	0.00	107	0	N.D.		
42) 1,3-dichloropropane	0.00	76	0	N.D.		
43) dibromochloromethane	0.00	129	0	N.D.		
44) bromoform	0.00	173	0	N.D.		
45) 4-methyl-2-pentanone	0.00	43	0	N.D.		
46) 2-hexanone	0.00	43	0	N.D.		
47) tetrachloroethene	0.00	164	0	N.D.		
48) chlorobenzene	12.70	112	7219097	276.31	ppb	84
49) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
50) ethylbenzene	12.68	91	4530	-2.54	ppb #	1
51) m,p-xylene	0.00	106	0	N.D.		
52) o-xylene	0.00	106	0	N.D.		
53) styrene	0.00	104	0	N.D.		
55) isopropylbenzene	0.00	105	0	N.D.		
56) 1,1,2,2-tetrachloroethane	0.00	83	0	N.D.		
58) bromobenzene	0.00	156	0	N.D.		
59) 1,2,3-trichloropropane	0.00	110	0	N.D.		
60) n-propylbenzene	14.00	91	1675	N.D.		
61) 2-chlorotoluene	0.00	91	0	N.D.		
62) 1,3,5-trimethylbenzene	0.00	105	0	N.D.		
63) 4-chlorotoluene	0.00	91	0	N.D.		
64) tert-butylbenzene	0.00	119	0	N.D.		
65) 1,2,4-trimethylbenzene	0.00	105	0	N.D.		
66) d-Limonene	0.00	68	0	N.D.		
67) sec-butylbenzene	14.77	105	1230	N.D.		
68) p-isopropyltoluene	14.89	119	1181	N.D.		
69) 1,3-dichlorobenzene	0.00	146	0	N.D.		
70) 1,4-dichlorobenzene	0.00	146	0	N.D.		
71) 1,2-dichlorobenzene	0.00	146	0	N.D.		
72) n-butylbenzene	0.00	91	0	N.D.		
73) 1,2-dibromo-3-chloropropan	0.00	75	0	N.D.		
74) 1,2,4-trichlorobenzene	0.00	180	0	N.D.		
75) hexachlorobutadiene	0.00	225	0	N.D.		
76) naphthalene	0.00	128	0	N.D.		
77) 1,2,3-trichlorobenzene	0.00	180	0	N.D.		
78) n-heptane	8.86	43	1462	No Calib	#	

over range.

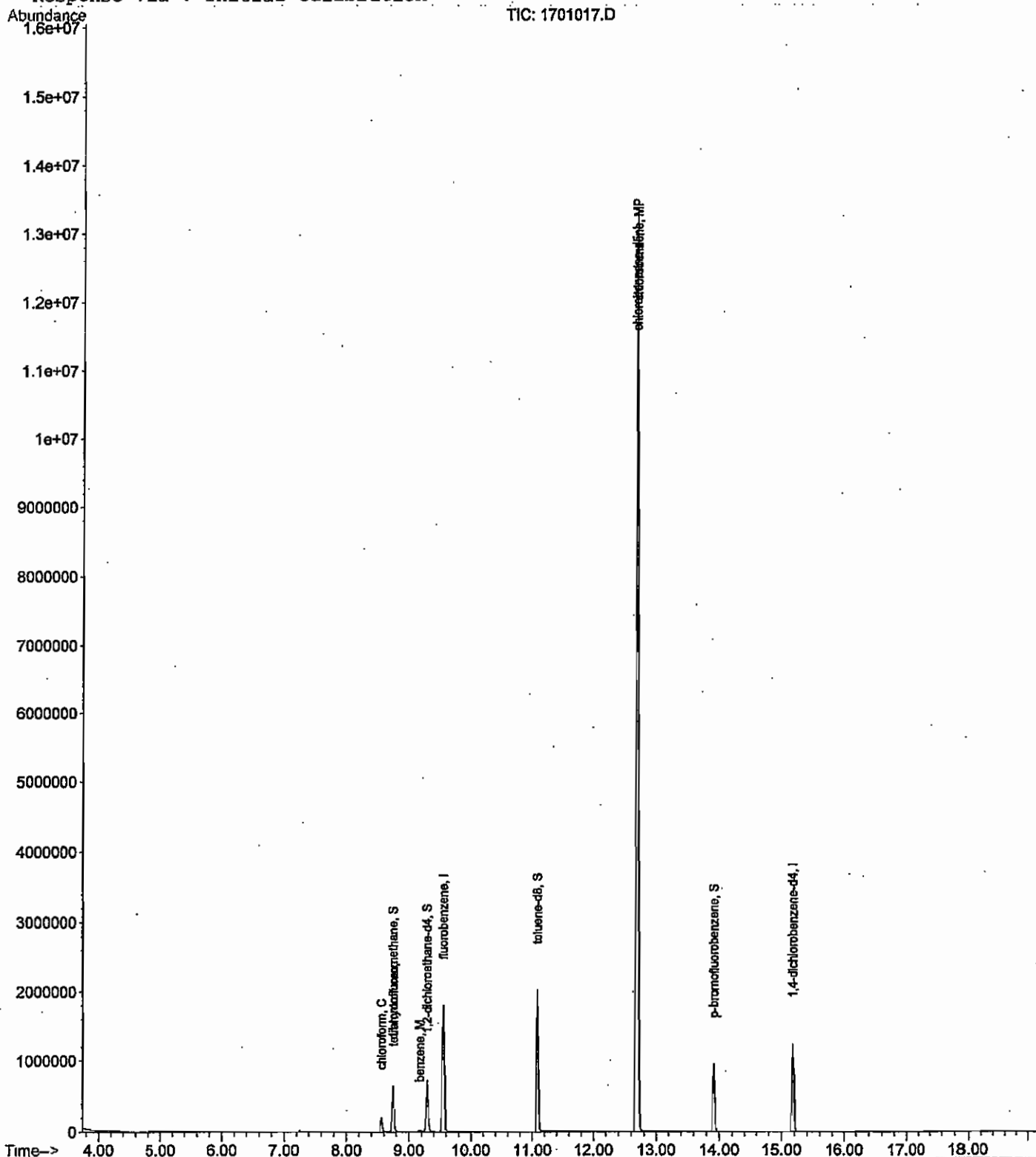
Quantitation Report

Data File : J:\98MSV01.I\101206.B\1701017.D
 Acq On : 13 Oct 2006 12:45 am
 Sample : 3559-0784,,,
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 12:21 19106

Vial: 17
 Operator: RG
 Inst : ms-01
 Multiplx: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration



Notebook for: **SAMPLE PREPARATION LOG FOR EPA 8260 VOA** Instrument ID: **PADC-MS-001** SN: **3336A60677** Book No.: **4**

Spike ID's:

Surrogate ID's:	CCV Spike ID's:	Internal Standard	LCS/MS/MSD ID's:	ICV
ws1 voa-gcms-s-3-019	cc1 voa-gcms-s-3-021	is1 voa-gcms-s-3-020	m1 gcms-s-3-022	ms1 gcms-s-3-022
ws2 n/a	cc2 n/a	is2 n/a	m2 n/a	ms2 n/a
ss1 n/a	cc3 n/a	is3 n/a	m3 n/a	ms3 n/a
ss2 n/a	cc4 n/a	is4 n/a	m4 n/a	ms4 n/a

Sample

Project #	Lab. Sample Number	pH	Batch #	File Name	Matrix	Weight (g)/ Volume (mL)	DF	Run Date/Time	Comments	
1	n/a	blank	n/a	0101001.D	Water	5mL	1	10/13/06 15:51		
2	n/a	blank	n/a	0102002.D	Water	5mL	1	10/13/06 16:20	Tune	
3	n/a	ccv	n/a	0103003.D	Water	5mL	1	10/13/06 16:51		
4	n/a	mb	n/a	0201004.D	Water	5mL	1	10/13/06 17:21		
5	n/a	lcs	n/a	0301005.D	Water	5mL	1	10/13/06 17:52		
6	06-3559	0782	<2	5895	0401006.D	Water	2.5mL	2	10/13/06 18:25	Run# 10758
7	06-3559	0784	<2	5895	0501007.D	Water	2.5mL	2	10/13/06 18:59	

10/13/06

Data File Name 0301005.D

Date Acquired 13 Oct 2006 5:52 pm

Method File VOAMS1

Sample Name lcs,,,2

<u>Name</u>	<u>Amount</u>	<u>True Value</u>	<u>% Recovery</u>	<u>Control Limits</u>	<u>Flags</u>
dibromofluoromethane	47.39	50	95	70 - 130	Pass
1,2-dichloroethane-d4	43.41	50	87	70 - 130	Pass
toluene-d8	44.88	50	90	70 - 130	Pass
p-bromofluorobenzene	43.62	50	87	70 - 130	Pass
1,1-dichloroethene	99.41	100	99	70 - 130	Pass
benzene	97.98	100	98	70 - 130	Pass
trichloroethene	92.21	100	92	70 - 130	Pass
toluene	102.08	100	102	70 - 130	Pass
chlorobenzene	81.81	100	82	70 - 130	Pass

BFB

Data File : J:\98MSV01.I\101306.B\0102002.D

Vial: 1

Acq On : 13 Oct 2006 4:20 pm

Operator: RG

Sample : blank

Inst : ms-01

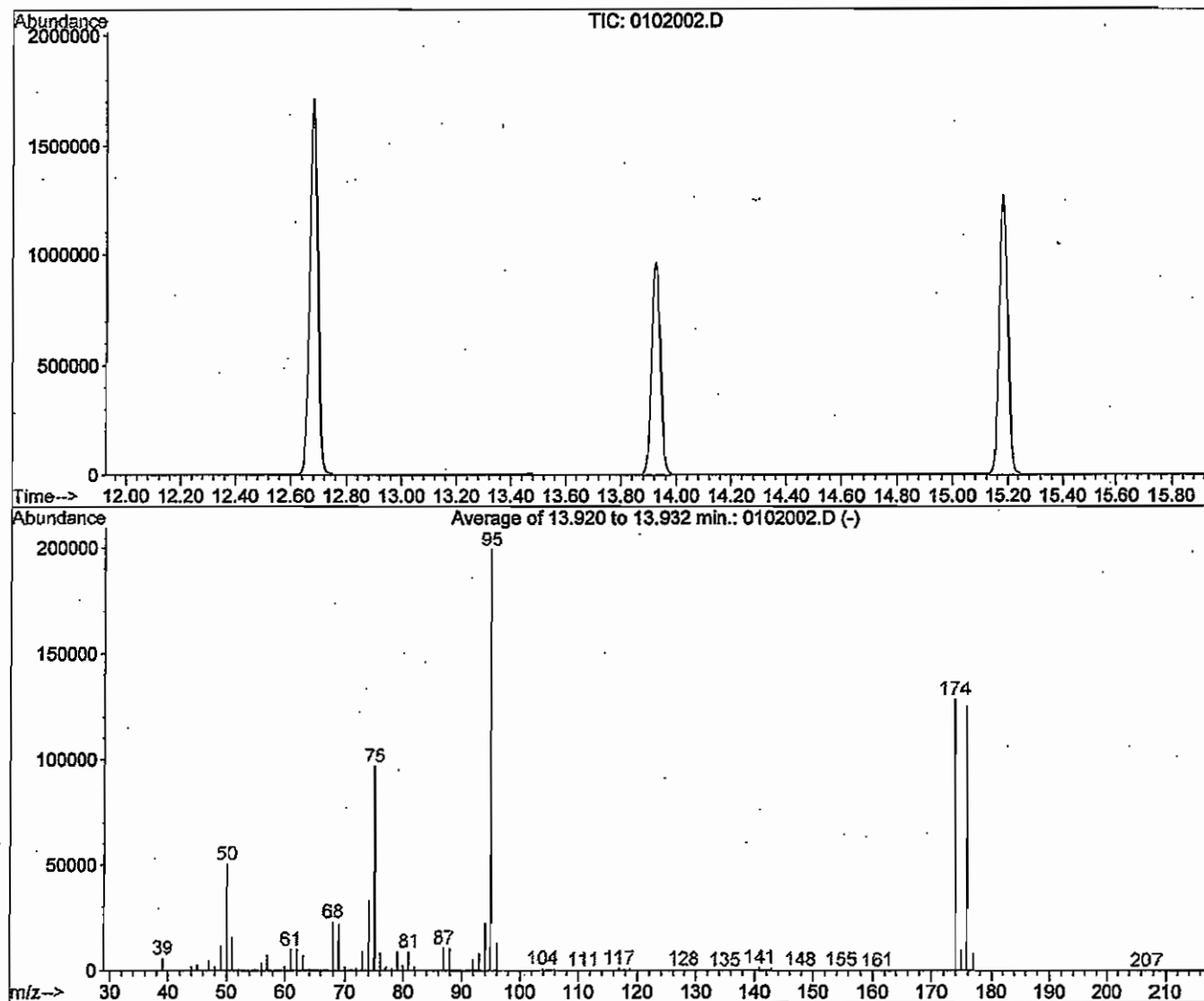
Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA



Spectrum Information: Average of 13.920 to 13.932 min.

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
50	95	15	40	25.4	50603	PASS
75	95	30	60	48.6	96813	PASS
95	95	100	100	100.0	199253	PASS
96	95	5	9	6.5	13019	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	64.5	128491	PASS
175	174	5	9	7.3	9402	PASS
176	174	95	101	97.5	125328	PASS
177	176	5	9	6.3	7954	PASS

Average of 13.920 to 13.932 min.: 0102002.D

blank

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
39.00	5890	50.00	50603	63.00	7028	76.05	8280
39.90	519	51.00	15874	64.00	664	77.00	1309
41.05	128	52.05	801	64.95	78	78.00	1124
43.00	228	54.95	663	66.95	485	78.95	8809
44.00	2061	56.00	3882	67.95	22984	79.95	2360
45.00	2772	57.00	7178	69.00	21830	80.95	8965
45.80	87	58.05	310	70.00	1904	81.90	1761
46.05	227	58.95	76	71.95	1285	82.70	50
47.00	4728	59.95	1984	73.00	8973	83.00	171
48.00	1877	60.95	9996	74.05	33227	85.90	73
49.05	11797	62.00	9808	75.05	96813	86.90	10742

Average of 13.920 to 13.932 min.: 0102002.D

blank

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.90	10270	105.95	819	123.75	75	139.80	112
90.85	718	106.90	150	123.95	61	140.85	1402
91.95	5431	110.75	71	124.85	87	141.75	197
93.00	8093	110.90	163	126.85	72	142.85	1376
94.00	22347	111.90	124	127.90	642	143.90	75
95.00	199253	112.85	118	128.90	195	145.00	56
96.00	13019	114.85	224	129.90	534	145.85	293
97.05	489	115.85	621	130.85	450	146.95	117
103.85	964	116.90	1083	132.95	69	147.85	343
104.80	108	117.85	579	134.95	176	148.90	246
105.00	223	118.80	805	136.90	370	149.60	66

Average of 13.920 to 13.932 min.: 0102002.D

blank

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
149.80	57	173.85	128491				
151.90	54	174.90	9402				
153.80	127	175.85	125328				
154.80	276	176.90	7954				
155.00	128	177.95	159				
155.90	71	178.15	54				
156.90	275	206.85	98				
158.70	108						
158.90	205						
160.75	85						
171.75	57						

Evaluate Continuing Calibration Report

Data File : J:\98MSV01.I\101306.B\0103003.D

Acq On : 13 Oct 2006 4:51 pm

Sample : ccv

Misc :

MS Integration Params: RTEINT.P

Vial: 1

Operator: RG

Inst : ms-01

Multiplr: 1.00

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 10% Max. R.T. Dev 0.50min

Max. RRF Dev : 90% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	fluorobenzene	50.000	50.000	0.0	77	0.00
2 P	chloromethane	100.000	113.791	-13.8	101	0.01
3 C	vinyl chloride	100.000	106.381	-6.4	91	0.00
4 T	bromomethane	100.000	120.028	-20.0	85	0.00
5 T	chloroethane	100.000	125.783	-25.8	95	0.01
6 T	dichlorodifluoromethane	100.000	92.406	7.6	80	0.00
7 T	trichlorofluoromethane	100.000	101.753	-1.8	87	0.00
8 T	acrolein	100.000	20.842	79.2	18	0.01
9 T	acetone	100.000	160.545	-60.5	118	0.00
10 MC	1,1-dichloroethene	100.000	98.020	2.0	82	0.00
11 T	methylene chloride	100.000	105.687	-5.7	82	0.00
12 T	methyl tert-butyl ether	100.000	104.110	-4.1	86	0.00
13 T	trans-1,2-dichloroethene	100.000	92.620	7.4	80	0.00
14	hexane	100.000	109.646	-9.6	91	0.00
15 P	1,1-dichloroethane	100.000	93.023	7.0	78	0.00
16 T	acrylonitrile	100.000	92.880	7.1	78	0.00
17 T	2-butanone	100.000	123.162	-23.2	94	0.00
18 T	cis-1,2-dichloroethene	100.000	91.415	8.6	75	0.00
19 T	2,2-dichloropropane	100.000	93.925	6.1	81	0.00
20 C	chloroform	100.000	92.033	8.0	77	0.00
21 T	bromochloromethane	100.000	91.814	8.2	74	0.00
22	tetrahydrofuran	100.000	102.943	-2.9	77	0.00
23 T	1,1,1-trichloroethane	100.000	92.746	7.3	75	0.00
24 S	dibromofluoromethane	100.000	96.381	3.6	77	0.00
25 S	1,2-dichloroethane-d4	100.000	91.935	8.1	78	0.00
26 T	1,2-dichloroethane	100.000	95.907	4.1	80	0.00
27 T	carbon tetrachloride	100.000	95.112	4.9	77	0.00
28 T	1,1-dichloropropene	100.000	94.140	5.9	76	0.00
29 M	benzene	100.000	96.234	3.8	79	0.00
30 M	trichloroethene	100.000	91.617	8.4	72	0.00
31 C	1,2-dichloropropane	100.000	95.251	4.7	75	0.00
32 T	bromodichloromethane	100.000	97.203	2.8	75	0.00
33 T	dibromomethane	100.000	93.651	6.3	75	0.00
34 T	2-chloroethyl vinyl ether	100.000	89.308	10.7	66	0.00
35 T	cis-1,3-dichloropropene	100.000	96.099	3.9	74	0.00
36 T	trans-1,3-dichloropropene	100.000	99.542	0.5	76	0.00
37 CM	toluene	100.000	102.823	-2.8	80	0.00
38 S	toluene-d8	100.000	99.314	0.7	77	0.02
39 T	1,1,2-trichloroethane	100.000	96.688	3.3	73	0.02
40 T	1,2-dibromoethane	100.000	97.090	2.9	75	0.00
41 I	chlorobenzene-d5	50.000	50.000	0.0	88	0.00
42 T	1,3-dichloropropane	100.000	76.182	23.8	74	0.00
43 T	dibromochloromethane	100.000	78.815	21.2	73	0.00
44 P	bromoform	100.000	87.900	12.1	75	0.00
45 T	4-methyl-2-pentanone	100.000	81.203	18.8	77	0.00
46 T	2-hexanone	100.000	91.886	8.1	83	0.00
47 T	tetrachloroethene	100.000	79.024	21.0	75	0.01
48 MP	chlorobenzene	100.000	80.923	19.1	78	0.01
49 T	1,1,1,2-tetrachloroethane	100.000	78.563	21.4	75	0.02

(#) = Out of Range

0103003.D MS100906.M

Fri Oct 13 16:55:01 2006

VOA

Page 1

Evaluate Continuing Calibration Report

Data File : J:\98MSV01.I\101306.B\0103003.D

Vial: 1

Acq On : 13 Oct 2006 4:51 pm

Operator: RG

Sample : ccv

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 10% Max. R.T. Dev 0.50min

Max. RRF Dev : 90% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
50 C	ethylbenzene	100.000	96.848	3.2	81	0.02
51 T	m,p-xylene	200.000	188.324	5.8	83	0.01
52 T	o-xylene	100.000	86.239	13.8	76	0.01
53 T	styrene	100.000	90.824	9.2	78	0.00
54 I	1,4-dichlorobenzene-d4	50.000	50.000	0.0	83	0.01
55 T	isopropylbenzene	100.000	87.880	12.1	76	0.01
56 P	1,1,2,2-tetrachloroethane	100.000	88.311	11.7	81	0.01
57 S	p-bromofluorobenzene	100.000	89.137	10.9	78	0.02
58 T	bromobenzene	100.000	87.639	12.4	76	0.01
59 T	1,2,3-trichloropropane	100.000	86.602	13.4	77	0.01
60 T	n-propylbenzene	100.000	89.314	10.7	78	0.01
61 T	2-chlorotoluene	100.000	88.831	11.2	77	0.00
62 T	1,3,5-trimethylbenzene	100.000	90.707	9.3	76	0.01
63 T	4-chlorotoluene	100.000	88.367	11.6	76	0.01
64 T	tert-butylbenzene	100.000	89.724	10.3	77	0.01
65 T	1,2,4-trimethylbenzene	100.000	93.219	6.8	78	0.01
66	d-Limonene	100.000	100.528	-0.5	82	0.01
67 T	sec-butylbenzene	100.000	96.374	3.6	82	0.01
68 T	p-isopropyltoluene	100.000	97.194	2.8	80	0.00
69 T	1,3-dichlorobenzene	100.000	90.573	9.4	77	0.01
70 T	1,4-dichlorobenzene	100.000	97.327	2.7	79	0.02
71 T	1,2-dichlorobenzene	100.000	88.263	11.7	76	0.01
72 T	n-butylbenzene	100.000	95.534	4.5	79	0.01
73 T	1,2-dibromo-3-chloropropane	100.000	94.836	5.2	83	0.02
74 T	1,2,4-trichlorobenzene	100.000	94.674	5.3	82	0.02
75 T	hexachlorobutadiene	100.000	91.517	8.5	82	0.02
76 T	naphthalene	100.000	102.539	-2.5	78	0.02
77 T	1,2,3-trichlorobenzene	100.000	96.472	3.5	79	0.02
78 T M	n-heptane	150.000	0.000	100.0%	0	-0.14

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101306.B\0103003.D
 Acq On : 13 Oct 2006 4:51 pm
 Sample : ccv
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 16:55 19106

Vial: 1
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration
 DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	1770634	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	858807	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.19	152	532842	50.00	ppb	0.01
System Monitoring Compounds						
24) dibromofluoromethane	8.75	113	1012397	96.38	ppb	0.00
Spiked Amount 50.000	Range 66 - 124		Recovery = 192.76%#			96%
25) 1,2-dichloroethane-d4	9.30	65	1208789	91.94	ppb	0.00
Spiked Amount 50.000	Range 70 - 120		Recovery = 183.88%#			92%
38) toluene-d8	11.09	98	3114265	99.31	ppb	0.02
Spiked Amount 50.000	Range 76 - 120		Recovery = 198.62%#			99%
57) p-bromofluorobenzene	13.93	176	667338	89.14	ppb	0.02
Spiked Amount 50.000	Range 74 - 127		Recovery = 178.28%#			89%
Target Compounds						
2) chloromethane	4.26	50	2313244	113.79	ppb	99
3) vinyl chloride	4.41	62	1081061	106.38	ppb	98
4) bromomethane	5.01	94	435601	120.03	ppb	99
5) chloroethane	5.22	49	88172	125.78	ppb	95
6) dichlorodifluoromethane	3.83	85	1707512	92.41	ppb	97
7) trichlorofluoromethane	5.45	101	1750412	101.75	ppb	99
8) acrolein	6.61	56	35122	20.84	ppb	85
9) acetone	6.94	43	1011745	160.55	ppb	99
10) 1,1-dichloroethene	6.19	96	964182	98.02	ppb	96
11) methylene chloride	6.90	84	1226478	105.69	ppb	94
12) methyl tert-butyl ether	7.19	73	3600077	104.11	ppb	100
13) trans-1,2-dichloroethene	7.09	96	1089756	92.62	ppb	97
14) hexane	7.16	57	2789930	109.65	ppb	98
15) 1,1-dichloroethane	7.76	63	2190791	93.02	ppb	100
16) acrylonitrile	7.80	53	596449	92.88	ppb	100
17) 2-butanone	8.84	43	1141474	123.16	ppb	99
18) cis-1,2-dichloroethene	8.32	96	1093553	91.41	ppb	99
19) 2,2-dichloropropane	8.44	77	1516272	93.93	ppb	100
20) chloroform	8.56	83	1980038	92.03	ppb	99
21) bromochloromethane	8.53	128	504891	91.81	ppb	99
22) tetrahydrofuran	8.77	42	719510	102.94	ppb	97
23) 1,1,1-trichloroethane	8.82	97	1413783	92.75	ppb	99
26) 1,2-dichloroethane	9.37	62	1492503	95.91	ppb	100
27) carbon tetrachloride	8.76	117	1175571	95.11	ppb	99
28) 1,1-dichloropropene	8.93	75	1511470	94.14	ppb	98
29) benzene	9.18	78	4193490	96.23	ppb	100
30) trichloroethene	9.73	130	835539	91.62	ppb	99
31) 1,2-dichloropropane	10.26	63	1130222	95.25	ppb	100
32) bromodichloromethane	10.28	83	1401079	97.20	ppb	99
33) dibromomethane	10.17	93	692562	93.65	ppb	99
34) 2-chloroethyl vinyl ether	10.76	63	749961	89.31	ppb	98
35) cis-1,3-dichloropropene	10.89	75	1665102	96.10	ppb	99
36) trans-1,3-dichloropropene	11.52	75	1559001	99.54	ppb	99
37) toluene	11.15	91	3967433	102.82	ppb	100
39) 1,1,2-trichloroethane	11.71	97	788271	96.69	ppb	98

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

0103003.D MS100906.M

Fri Oct 13 16:55:15 2006

VOA

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101306.B\0103003.D

Vial: 1

Acq On : 13 Oct 2006 4:51 pm

Operator: RG

Sample : ccv

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 16:55 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.22	107	814121	97.09	ppb	99
42) 1,3-dichloropropane	12.01	76	1576794	76.18	ppb	100
43) dibromochloromethane	11.93	129	783917	78.82	ppb	99
44) bromoform	13.40	173	557696	87.90	ppb	100
45) 4-methyl-2-pentanone	11.45	43	1850121	81.20	ppb	98
46) 2-hexanone	12.27	43	1415666	91.89	ppb	100
47) tetrachloroethene	11.57	164	569761	79.02	ppb	100
48) chlorobenzene	12.70	112	2303885	80.92	ppb	96
49) 1,1,1,2-tetrachloroethane	12.74	131	724986	78.56	ppb	100
50) ethylbenzene	12.67	91	4496065	96.85	ppb	99
51) m,p-xylene	12.80	106	3248910	188.32	ppb	97
52) o-xylene	13.25	106	1307942	86.24	ppb	98
53) styrene	13.30	104	2504269	90.82	ppb	100
55) isopropylbenzene	13.56	105	3347578	87.88	ppb	100
56) 1,1,2,2-tetrachloroethane	14.07	83	1266833	88.31	ppb	100
58) bromobenzene	14.09	156	807959	87.64	ppb	99
59) 1,2,3-trichloropropane	14.27	110	328793	86.60	ppb	99
60) n-propylbenzene	14.01	91	4560145	89.31	ppb	99
61) 2-chlorotoluene	14.25	91	2684303	88.83	ppb	100
62) 1,3,5-trimethylbenzene	14.19	105	2639478	90.71	ppb	100
63) 4-chlorotoluene	14.43	91	2688102	88.37	ppb	100
64) tert-butylbenzene	14.58	119	2093946	89.72	ppb	99
65) 1,2,4-trimethylbenzene	14.64	105	2825027	93.22	ppb	100
66) d-Limonene	14.74	68	1137458	100.53	ppb	99
67) sec-butylbenzene	14.78	105	3746964	96.37	ppb	100
68) p-isopropyltoluene	14.90	119	2825454	97.19	ppb	100
69) 1,3-dichlorobenzene	15.11	146	1486912	90.57	ppb	100
70) 1,4-dichlorobenzene	15.21	146	1615694	97.33	ppb	99
71) 1,2-dichlorobenzene	15.72	146	1375206	88.26	ppb	100
72) n-butylbenzene	15.39	91	2850411	95.53	ppb	100
73) 1,2-dibromo-3-chloropropan	16.69	75	164099	94.84	ppb	100
74) 1,2,4-trichlorobenzene	17.61	180	762958	94.67	ppb	100
75) hexachlorobutadiene	17.49	225	200595	91.52	ppb	100
76) naphthalene	18.12	128	1890723	102.54	ppb	100
77) 1,2,3-trichlorobenzene	18.42	180	696268	96.47	ppb	99
78) n-heptane	8.84	43	1144267	No Calib	#	

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

0103003.D MS100906.M

Fri Oct 13 16:55:16 2006

VOA

Page 2

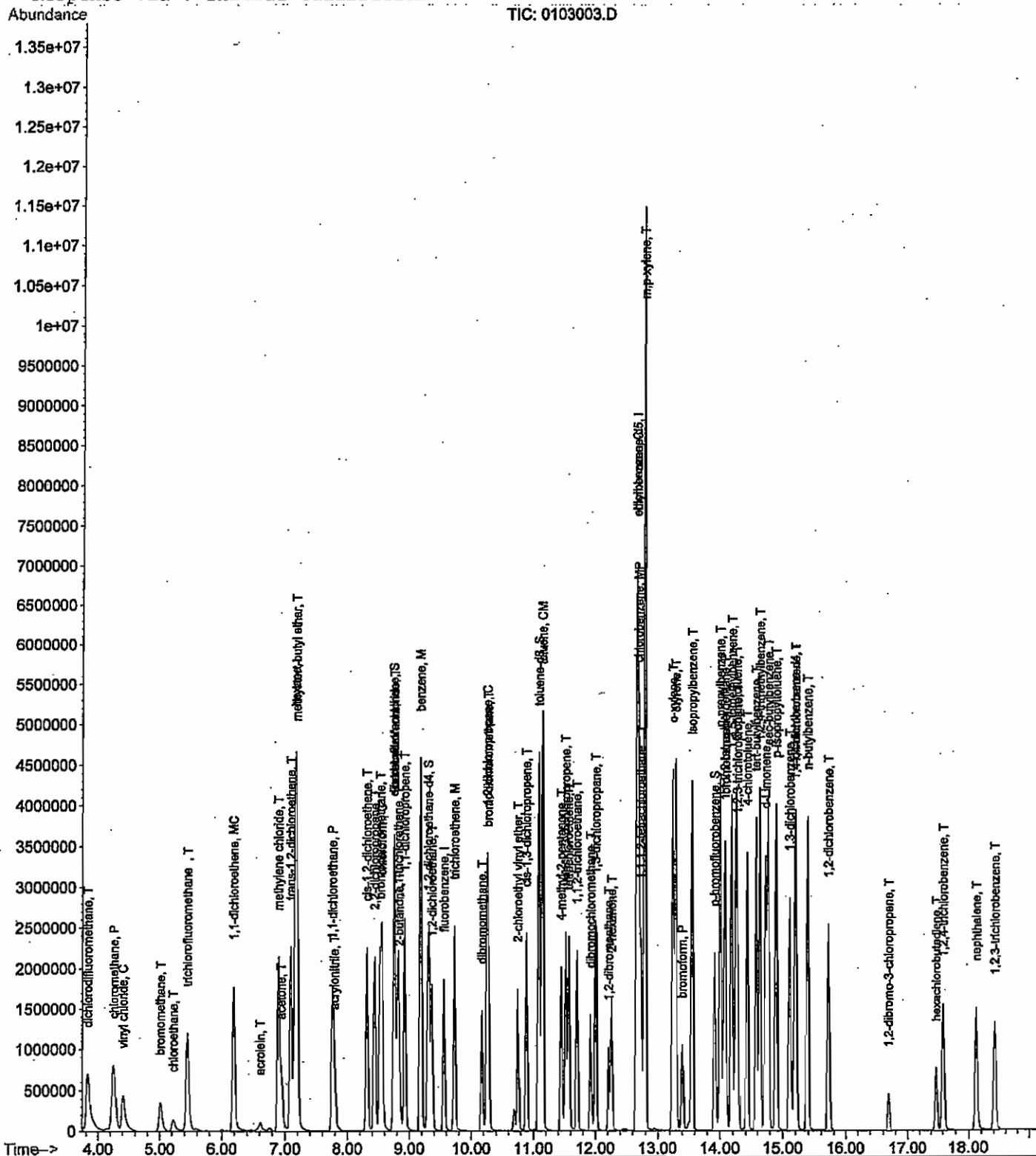
Quantitation Report

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Data File : J:\98MSV01.I\101306.B\0103003.D
Acq On    : 13 Oct 2006    4:51 pm
Sample    : ccv
Misc      :
MS Integration Params: RTEINT.P
Quant Time: Oct 13 16:55 19106
```

Vial: 1
Operator: RG
Inst : ms-01
Multiplr: 1.00

Quant Results File: MS100906.RES

```
Method      : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
Title       : Mass Spec VOA
Last Update  : Tue Oct 10 10:31:41 2006
Response via : Initial Calibration
```



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101306.B\0201004.D

Vial: 2

Acq On : 13 Oct 2006 5:21 pm

Operator: RG

Sample : mb,,,1

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 16:57 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	1772716	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	650564	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	420346	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	446476	42.46	ppb	0.00
Spiked Amount	50.000	Range 66 - 124	Recovery	=	84.92%	
25) 1,2-dichloroethane-d4	9.30	65	555996	42.24	ppb	0.00
Spiked Amount	50.000	Range 70 - 120	Recovery	=	84.48%	
38) toluene-d8	11.09	98	1396123	44.47	ppb	0.01
Spiked Amount	50.000	Range 76 - 120	Recovery	=	88.94%	
57) p-bromofluorobenzene	13.92	176	288883	49.88	ppb	0.00
Spiked Amount	50.000	Range 74 - 127	Recovery	=	99.76%	

Target Compounds

						Qvalue
2) chloromethane	4.26	50	1001	N.D.		
3) vinyl chloride	0.00	62	0	N.D.		
4) bromomethane	5.01	94	1638	-4.17 ppb	#	30
5) chloroethane	5.23	49	241	-4.71 ppb	#	1
6) dichlorodifluoromethane	3.82	85	1447	N.D.		
7) trichlorofluoromethane	0.00	101	0	N.D.		
8) acrolein	0.00	56	0	N.D.		
9) acetone	6.94	43	71100	4.53 ppb		100
10) 1,1-dichloroethene	0.00	96	0	N.D.		
11) methylene chloride	6.90	84	32277	-0.64 ppb		93
12) methyl tert-butyl ether	0.00	73	0	N.D.		
13) trans-1,2-dichloroethene	7.10	96	1058	N.D.		
14) hexane	7.16	57	11745	N.D.		
15) 1,1-dichloroethane	0.00	63	0	N.D.		
16) acrylonitrile	0.00	53	0	N.D.		
17) 2-butanone	8.85	43	6588	-0.65 ppb	#	64
18) cis-1,2-dichloroethene	0.00	96	0	N.D.		
19) 2,2-dichloropropane	8.43	77	1112	N.D.		
20) chloroform	8.56	83	4943	N.D.		
21) bromochloromethane	0.00	128	0	N.D.		
22) tetrahydrofuran	8.77	42	7783	1.59 ppb		94
23) 1,1,1-trichloroethane	0.00	97	0	N.D.		
26) 1,2-dichloroethane	0.00	62	0	N.D.		
27) carbon tetrachloride	0.00	117	0	N.D.		
28) 1,1-dichloropropene	8.93	75	1699	N.D.		
29) benzene	9.19	78	2768	N.D.		
30) trichloroethene	0.00	130	0	N.D.		
31) 1,2-dichloropropane	0.00	63	0	N.D.		
32) bromodichloromethane	0.00	83	0	N.D.		
33) dibromomethane	0.00	93	0	N.D.		
34) 2-chloroethyl vinyl ether	0.00	63	0	N.D.		
35) cis-1,3-dichloropropene	0.00	75	0	N.D.		
36) trans-1,3-dichloropropene	11.52	75	1022	N.D.		
37) toluene	11.15	91	3780	N.D.		
39) 1,1,2-trichloroethane	0.00	97	0	N.D.		

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

0201004.D MS100906.M

Fri Oct 13 16:58:04 2006

VOA

Page 1

Data File : J:\98MSV01.I\101306.B\0201004.D

Vial: 2

Acq On : 13 Oct 2006 5:21 pm

Operator: RG

Sample : mb,,,1

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 16:57 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	0.00	107	0	N.D.		
42) 1,3-dichloropropane	0.00	76	0	N.D.		
43) dibromochloromethane	0.00	129	0	N.D.		
44) bromoform	0.00	173	0	N.D.		
45) 4-methyl-2-pentanone	11.45	43	1914	N.D.		
46) 2-hexanone	12.27	43	2213	N.D.		
47) tetrachloroethene	11.57	164	1066	N.D.		
48) chlorobenzene	12.69	112	3315	N.D.		
49) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
50) ethylbenzene	12.68	91	10243	-2.35 ppb	#	63
51) m,p-xylene	12.80	106	5674	N.D.		
52) o-xylene	13.25	106	2563	N.D.		
53) styrene	13.30	104	2745	N.D.		
55) isopropylbenzene	13.56	105	5386	N.D.		
56) 1,1,2,2-tetrachloroethane	14.07	83	1465	N.D.		
58) bromobenzene	0.00	156	0	N.D.		
59) 1,2,3-trichloropropane	0.00	110	0	N.D.		
60) n-propylbenzene	14.01	91	11427	N.D.		
61) 2-chlorotoluene	14.26	91	4613	N.D.		
62) 1,3,5-trimethylbenzene	14.18	105	6000	N.D.		
63) 4-chlorotoluene	14.43	91	5436	N.D.		
64) tert-butylbenzene	14.58	119	6561	N.D.		
65) 1,2,4-trimethylbenzene	14.65	105	6490	N.D.		
66) d-Limonene	14.74	68	8967	1.00 ppb		99
67) sec-butylbenzene	14.77	105	17978	0.59 ppb		100
68) p-isopropyltoluene	14.89	119	13343	0.58 ppb		95
69) 1,3-dichlorobenzene	15.12	146	3721	N.D.		
70) 1,4-dichlorobenzene	15.20	146	4939	-1.46 ppb		86
71) 1,2-dichlorobenzene	15.72	146	3812	N.D.		
72) n-butylbenzene	15.39	91	19583	0.83 ppb		97
73) 1,2-dibromo-3-chloropropan	0.00	75	0	N.D.		
74) 1,2,4-trichlorobenzene	17.61	180	5906	0.93 ppb		91
75) hexachlorobutadiene	17.48	225	1882	1.09 ppb		100
76) naphthalene	18.12	128	14823	1.02 ppb		100
77) 1,2,3-trichlorobenzene	18.43	180	6256	1.10 ppb		97
78) n-heptane	8.85	43	6588	No Calib	#	

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

0201004.D MS100906.M

Fri Oct 13 16:58:05 2006

VOA

Page 2

Quantitation Report

Data File : J:\98MSV01.I\101306.B\0201004.D

Vial: 2

Acq On : 13 Oct 2006 5:21 pm

Operator: RG

Sample : mb,,,1

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 16:57 19106

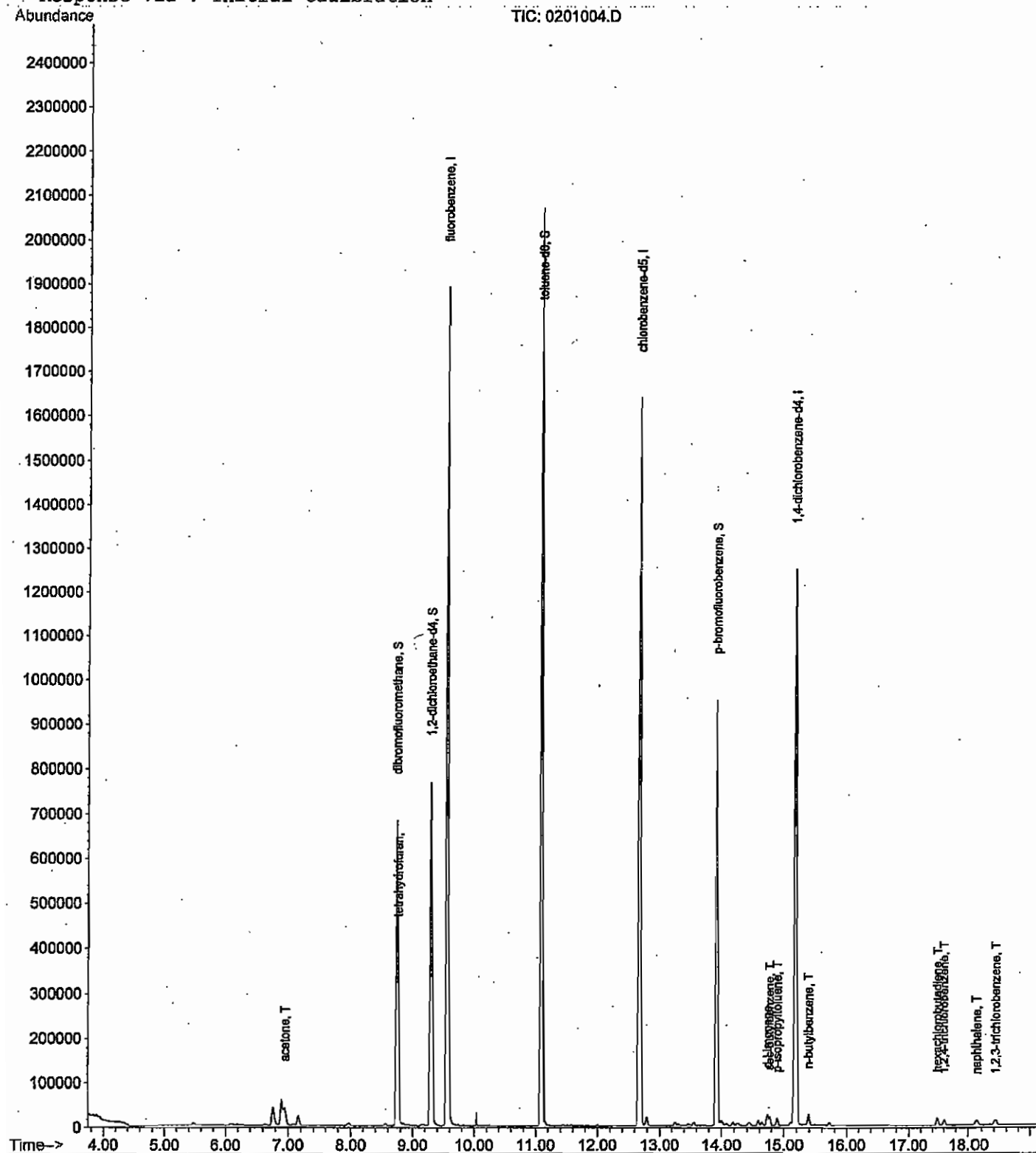
Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101306.B\0301005.D

Vial: 3

Acq On : 13 Oct 2006 5:52 pm

Operator: RG

Sample : lcs,,,2

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 17:54 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) fluorobenzene	9.56	96	1814991	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	866132	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.19	152	535594	50.00	ppb	0.01

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	510305	47.39	ppb	0.00
Spiked Amount 50.000	Range 66 - 124		Recovery =	94.78%		
25) 1,2-dichloroethane-d4	9.30	65	585064	43.41	ppb	0.00
Spiked Amount 50.000	Range 70 - 120		Recovery =	86.82%		
38) toluene-d8	11.09	98	1442529	44.88	ppb	0.01
Spiked Amount 50.000	Range 76 - 120		Recovery =	89.76%		
57) p-bromofluorobenzene	13.92	176	319799	43.62	ppb	0.00
Spiked Amount 50.000	Range 74 - 127		Recovery =	87.24%		

Target Compounds

						Qvalue
2) chloromethane	4.25	50	2378214	114.13	ppb	100
3) vinyl chloride	4.41	62	1079282	103.61	ppb	98
4) bromomethane	5.00	94	398861	106.72	ppb	99
5) chloroethane	5.22	49	88099	122.48	ppb	98
6) dichlorodifluoromethane	3.82	85	1581028	83.47	ppb	97
7) trichlorofluoromethane	5.45	101	1649753	93.56	ppb	99
8) acrolein	6.61	56	41766	24.18	ppb	87
9) acetone	6.94	43	968848	149.50	ppb	97
10) 1,1-dichloroethene	6.19	96	1002347	99.41	ppb	97
11) methylene chloride	6.90	84	1316387	110.83	ppb	95
12) methyl tert-butyl ether	7.19	73	3685141	103.97	ppb	100
13) trans-1,2-dichloroethene	7.09	96	1201820	99.65	ppb	98
14) hexane	7.17	57	2139384	82.02	ppb	95
15) 1,1-dichloroethane	7.76	63	2324949	96.31	ppb	100
16) acrylonitrile	7.80	53	627428	95.32	ppb	99
17) 2-butanone	8.84	43	1009838	106.11	ppb	100
18) cis-1,2-dichloroethene	8.31	96	1156928	94.35	ppb	98
19) 2,2-dichloropropane	8.44	77	1589490	96.05	ppb	100
20) chloroform	8.56	83	2114498	95.88	ppb	99
21) bromochloromethane	8.53	128	533910	94.72	ppb	99
22) tetrahydrofuran	8.77	42	737305	102.90	ppb	97
23) 1,1,1-trichloroethane	8.82	97	1492232	95.50	ppb	99
26) 1,2-dichloroethane	9.36	62	1549908	97.16	ppb	100
27) carbon tetrachloride	8.76	117	1218877	96.21	ppb	99
28) 1,1-dichloropropene	8.93	75	1584397	96.27	ppb	98
29) benzene	9.18	78	4376301	97.98	ppb	100
30) trichloroethene	9.73	130	861975	92.21	ppb	100
31) 1,2-dichloropropane	10.26	63	1155471	95.00	ppb	99
32) bromodichloromethane	10.28	83	1500825	101.58	ppb	99
33) dibromomethane	10.17	93	703351	92.79	ppb	99
34) 2-chloroethyl vinyl ether	10.75	63	769222	89.36	ppb	98
35) cis-1,3-dichloropropene	10.90	75	1678868	94.53	ppb	99
36) trans-1,3-dichloropropene	11.52	75	1577845	98.28	ppb	99
37) toluene	11.15	91	4037280	102.08	ppb	99
39) 1,1,2-trichloroethane	11.71	97	795584	95.20	ppb	99

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

0301005.D MS100906.M

Fri Oct 13 17:54:00 2006

VOA

Page 1

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101306.B\0301005.D

Vial: 3

Acq On : 13 Oct 2006 5:52 pm

Operator: RG

Sample : lcs,,,2

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 17:54 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIorr	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.22	107	821711	95.60	ppb	100
42) 1,3-dichloropropane	12.01	76	1591763	76.25	ppb	99
43) dibromochloromethane	11.93	129	838138	83.55	ppb	100
44) bromoform	13.40	173	555285	86.78	ppb	99
45) 4-methyl-2-pentanone	11.45	43	1818330	79.13	ppb	98
46) 2-hexanone	12.27	43	1289376	82.98	ppb	100
47) tetrachloroethene	11.57	164	581775	80.01	ppb	100
48) chlorobenzene	12.70	112	2348866	81.81	ppb	97
49) 1,1,1,2-tetrachloroethane	12.74	131	738076	79.30	ppb	100
50) ethylbenzene	12.66	91	4609555	98.50	ppb	99
51) m,p-xylene	12.80	106	3323325	191.01	ppb	97
52) o-xylene	13.25	106	1341190	87.68	ppb	98
53) styrene	13.29	104	2556302	91.93	ppb	100
55) isopropylbenzene	13.56	105	3483934	90.99	ppb	100
56) 1,1,2,2-tetrachloroethane	14.07	83	1210085	83.92	ppb	99
58) bromobenzene	14.09	156	822697	88.78	ppb	99
59) 1,2,3-trichloropropane	14.27	110	323086	84.66	ppb	99
60) n-propylbenzene	14.01	91	4645093	90.51	ppb	100
61) 2-chlorotoluene	14.25	91	2736698	90.10	ppb	100
62) 1,3,5-trimethylbenzene	14.18	105	2729184	93.31	ppb	100
63) 4-chlorotoluene	14.43	91	2731041	89.32	ppb	100
64) tert-butylbenzene	14.58	119	2138350	91.16	ppb	100
65) 1,2,4-trimethylbenzene	14.64	105	2858251	93.83	ppb	100
66) d-Limonene	14.74	68	1091922	96.01	ppb	99
67) sec-butylbenzene	14.78	105	3583572	91.70	ppb	99
68) p-isopropyltoluene	14.90	119	2880252	98.57	ppb	100
69) 1,3-dichlorobenzene	15.11	146	1503365	91.10	ppb	99
70) 1,4-dichlorobenzene	15.20	146	1593207	95.44	ppb	99
71) 1,2-dichlorobenzene	15.72	146	1399541	89.36	ppb	100
72) n-butylbenzene	15.39	91	2907094	96.93	ppb	99
73) 1,2-dibromo-3-chloropropan	16.69	75	169169	97.24	ppb	98
74) 1,2,4-trichlorobenzene	17.60	180	772269	95.34	ppb	100
75) hexachlorobutadiene	17.49	225	205395	93.23	ppb	100
76) naphthalene	18.12	128	1857145	100.20	ppb	100
77) 1,2,3-trichlorobenzene	18.42	180	700248	96.52	ppb	100
78) n-heptane	8.84	43	1010243	No Calib	#	

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

0301005.D MS100906.M Fri Oct 13 17:54:00 2006

VOA

Page 2

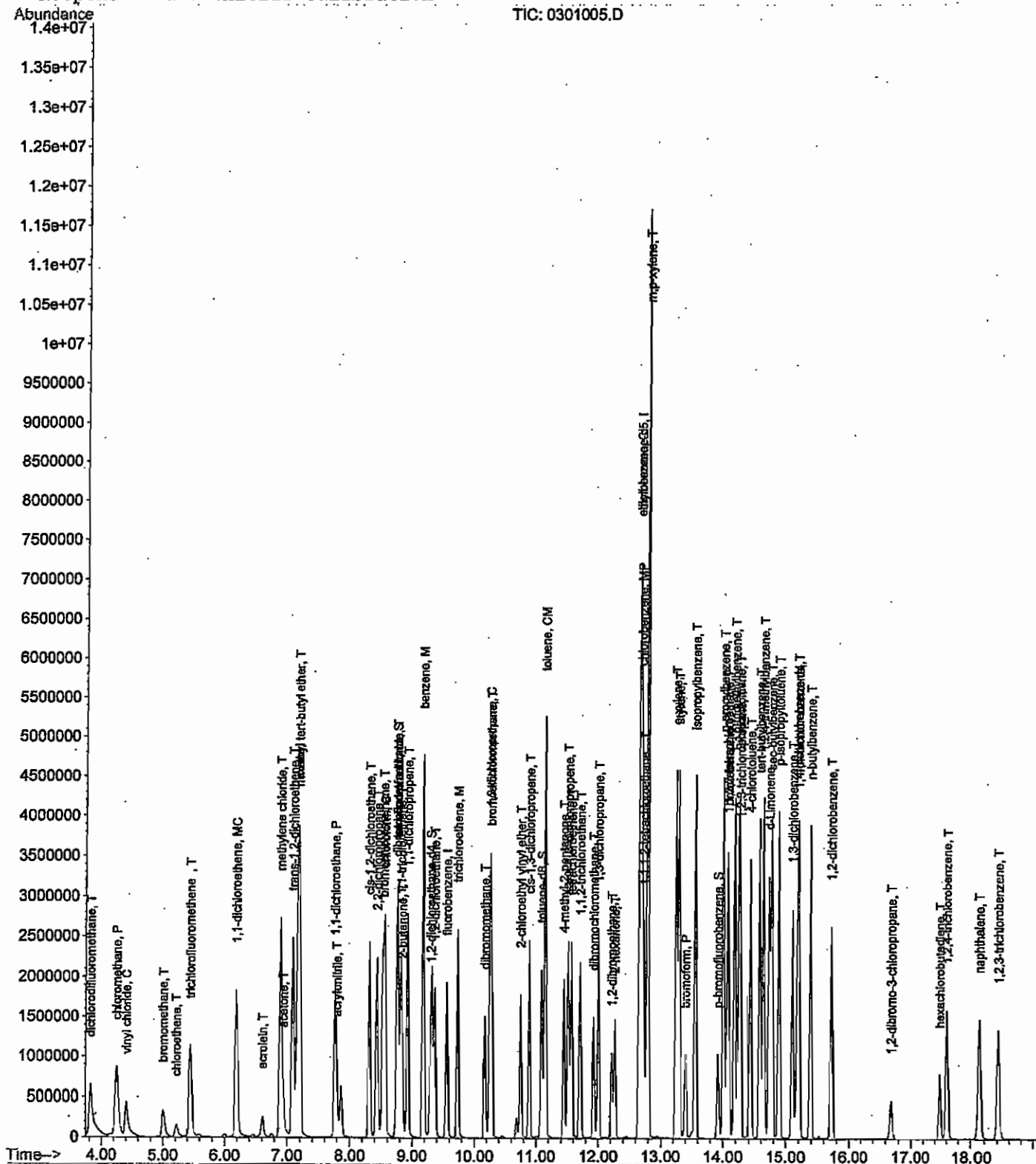
Quantitation Report

Data File : J:\98MSV01.I\101306.B\0301005.D
Acq On : 13 Oct 2006 5:52 pm
Sample : lcs,,,2
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 13 17:54 19106

Vial: 3
Operator: RG
Inst : ms-01
Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
Title : Mass Spec VOA
Last Update : Tue Oct 10 10:31:41 2006
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101306.B\0401006.D
 Acq On : 13 Oct 2006 6:25 pm
 Sample : 3559-0782,,2,
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 17:56 19106

Vial: 4
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration
 DataAcq Meth : VOAMS1

2X

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	1799830	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	769421	50.00	ppb	0.01
54) 1,4-dichlorobenzene-d4	15.18	152	432664	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	465818	43.63	ppb	0.00
Spiked Amount	50.000	Range 66 - 124	Recovery	=	87.26%	
25) 1,2-dichloroethane-d4	9.29	65	569777	42.63	ppb	0.00
Spiked Amount	50.000	Range 70 - 120	Recovery	=	85.26%	
38) toluene-d8	11.09	98	1427978	44.80	ppb	0.00
Spiked Amount	50.000	Range 76 - 120	Recovery	=	89.60%	
57) p-bromofluorobenzene	13.92	176	301796	50.59	ppb	0.00
Spiked Amount	50.000	Range 74 - 127	Recovery	=	101.18%	

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) chloromethane	4.26	50	1410	N.D.		
3) vinyl chloride	0.00	62	0	N.D.		
4) bromomethane	5.02	94	1067	-4.34 ppb		82
5) chloroethane	5.23	49	510	-4.32 ppb	#	1
6) dichlorodifluoromethane	3.82	85	1693	N.D.		
7) trichlorofluoromethane	0.00	101	0	N.D.		
8) acrolein	0.00	56	0	N.D.		
9) acetone	6.94	43	37890	-1.07 ppb		99
10) 1,1-dichloroethene	0.00	96	0	N.D.		
11) methylene chloride	6.89	84	9817	-2.65 ppb		95
12) methyl tert-butyl ether	7.19	73	1685	N.D.		
13) trans-1,2-dichloroethene	7.09	96	1378	N.D.		
14) hexane	7.16	57	10147	N.D.		
15) 1,1-dichloroethane	7.76	63	1182	N.D.		
16) acrylonitrile	0.00	53	0	N.D.		
17) 2-butanone	8.86	43	3812	-0.95 ppb	#	55
18) cis-1,2-dichloroethene	0.00	96	0	N.D.		
19) 2,2-dichloropropane	0.00	77	0	N.D.		
20) chloroform	8.56	83	122452	5.60 ppb		99
21) bromochloromethane	0.00	128	0	N.D.		
22) tetrahydrofuran	8.76	42	5392	1.33 ppb		89
23) 1,1,1-trichloroethane	0.00	97	0	N.D.		
26) 1,2-dichloroethane	0.00	62	0	N.D.		
27) carbon tetrachloride	0.00	117	0	N.D.		
28) 1,1-dichloropropene	8.93	75	1717	N.D.		
29) benzene	9.18	78	21520	N.D.		
30) trichloroethene	9.72	130	1047	N.D.		
31) 1,2-dichloropropane	10.26	63	1444	N.D.		
32) bromodichloromethane	0.00	83	0	N.D.		
33) dibromomethane	0.00	93	0	N.D.		
34) 2-chloroethyl vinyl ether	0.00	63	0	N.D.		
35) cis-1,3-dichloropropene	10.89	75	1100	N.D.		
36) trans-1,3-dichloropropene	11.53	75	1515	N.D.		
37) toluene	11.15	91	4459	N.D.		
39) 1,1,2-trichloroethane	0.00	97	0	N.D.		

(#) = qualifier out of range (m) = manual integration
 0401006.D MS100906.M Fri Oct 13 17:55:43 2006

VOA

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101306.B\0401006.D

Vial: 4

Acq On : 13 Oct 2006 6:25 pm

Operator: RG

Sample : 3559-0782,,2,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 17:56 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	0.00	107	0	N.D.		
42) 1,3-dichloropropane	11.99	76	1119	N.D.		
43) dibromochloromethane	0.00	129	0	N.D.		
44) bromoform	0.00	173	0	N.D.		
45) 4-methyl-2-pentanone	11.44	43	1649	N.D.		
46) 2-hexanone	12.27	43	2609	N.D.		
47) tetrachloroethene	11.56	164	1176	N.D.		
48) chlorobenzene	12.70	112	4596117	180.19	ppb	84
49) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
50) ethylbenzene	12.68	91	10383	-2.39	ppb #	38
51) m,p-xylene	12.79	106	4452	N.D.		
52) o-xylene	13.24	106	1809	N.D.		
53) styrene	13.29	104	3002	N.D.		
55) isopropylbenzene	13.56	105	6349	N.D.		
56) 1,1,2,2-tetrachloroethane	14.06	83	1831	N.D.		
58) bromobenzene	14.09	156	1440	N.D.		
59) 1,2,3-trichloropropane	0.00	110	0	N.D.		
60) n-propylbenzene	14.01	91	12820	N.D.		
61) 2-chlorotoluene	14.25	91	5460	N.D.		
62) 1,3,5-trimethylbenzene	14.18	105	6410	N.D.		
63) 4-chlorotoluene	14.43	91	6573	N.D.		
64) tert-butylbenzene	14.58	119	7723	N.D.		
65) 1,2,4-trimethylbenzene	14.64	105	6845	N.D.		
66) d-Limonene	14.73	68	10500	1.14	ppb	97
67) sec-butylbenzene	14.77	105	19979	0.63	ppb	98
68) p-isopropyltoluene	14.89	119	14973	0.63	ppb	99
69) 1,3-dichlorobenzene	15.10	146	4323	N.D.		
70) 1,4-dichlorobenzene	15.20	146	5440	-1.43	ppb #	63
71) 1,2-dichlorobenzene	15.71	146	4744	N.D.		
72) n-butylbenzene	15.40	91	21864	0.90	ppb	98
73) 1,2-dibromo-3-chloropropan	0.00	75	0	N.D.		
74) 1,2,4-trichlorobenzene	17.61	180	6273	0.96	ppb	96
75) hexachlorobutadiene	17.48	225	4702	2.64	ppb	100
76) naphthalene	18.12	128	15981	1.07	ppb	100
77) 1,2,3-trichlorobenzene	18.42	180	7153	1.22	ppb	96
78) n-heptane	8.86	43	3812	No Calib	#	

360 mg/L

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

0401006.D MS100906.M

Fri Oct 13 17:55:44 2006

VOA

Page 2

Quantitation Report

Data File : J:\98MSV01.I\101306.B\0401006.D

Vial: 4

Acq On : 13 Oct 2006 6:25 pm

Operator: RG

Sample : 3559-0782,,2,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 17:56 19106

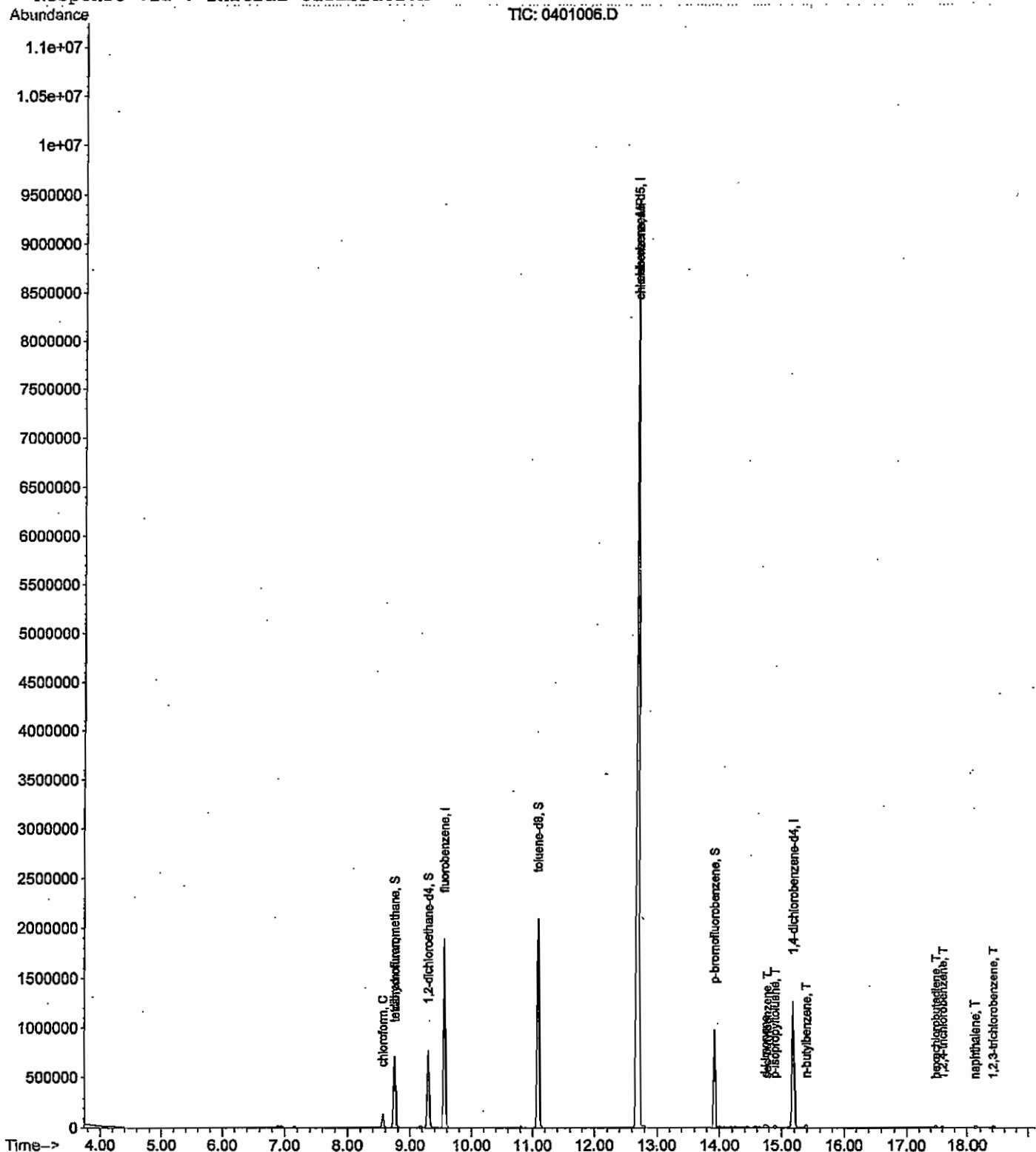
Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration



Data File : J:\98MSV01.I\101306.B\0501007.D

Vial: 5

Acq On : 13 Oct 2006 6:59 pm

Operator: RG

Sample : 3559-0784,,2,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 19:00 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

2X

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	1735766	50.00	ppb	0.00
41) chlorobenzene-d5	12.68	82	752660	50.00	ppb	0.01
54) 1,4-dichlorobenzene-d4	15.18	152	417044	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	443335	43.05	ppb	0.00
Spiked Amount	50.000	Range	66 - 124	Recovery	=	86.10%
25) 1,2-dichloroethane-d4	9.29	65	542461	42.09	ppb	0.00
Spiked Amount	50.000	Range	70 - 120	Recovery	=	84.18%
38) toluene-d8	11.09	98	1371447	44.61	ppb	0.00
Spiked Amount	50.000	Range	76 - 120	Recovery	=	89.22%
57) p-bromofluorobenzene	13.92	176	285727	49.73	ppb	0.00
Spiked Amount	50.000	Range	74 - 127	Recovery	=	99.46%

Target Compounds

						Qvalue
2) chloromethane	0.00	50	0	N.D.		
3) vinyl chloride	0.00	62	0	N.D.		
4) bromomethane	4.99	94	253	-4.56 ppb	#	2
5) chloroethane	5.19	49	593	-4.17 ppb	#	1
6) dichlorodifluoromethane	0.00	85	0	N.D.		
7) trichlorofluoromethane	0.00	101	0	N.D.		
8) acrolein	0.00	56	0	N.D.		
9) acetone	6.95	43	34401	-1.43 ppb		94
10) 1,1-dichloroethene	0.00	96	0	N.D.		
11) methylene chloride	6.89	84	7944	-2.79 ppb		93
12) methyl tert-butyl ether	0.00	73	0	N.D.		
13) trans-1,2-dichloroethene	0.00	96	0	N.D.		
14) hexane	7.16	57	3718	N.D.		
15) 1,1-dichloroethane	0.00	63	0	N.D.		
16) acrylonitrile	0.00	53	0	N.D.		
17) 2-butanone	8.86	43	3274	-1.00 ppb	#	64
18) cis-1,2-dichloroethene	0.00	96	0	N.D.		
19) 2,2-dichloropropane	0.00	77	0	N.D.		
20) chloroform	8.56	83	118898	5.64 ppb		99
21) bromochloromethane	0.00	128	0	N.D.		
22) tetrahydrofuran	8.77	42	4782	1.28 ppb	#	70
23) 1,1,1-trichloroethane	0.00	97	0	N.D.		
26) 1,2-dichloroethane	0.00	62	0	N.D.		
27) carbon tetrachloride	0.00	117	0	N.D.		
28) 1,1-dichloropropene	0.00	75	0	N.D.		
29) benzene	9.18	78	18279	N.D.		
30) trichloroethene	0.00	130	0	N.D.		
31) 1,2-dichloropropane	10.25	63	1030	N.D.		
32) bromodichloromethane	0.00	83	0	N.D.		
33) dibromomethane	0.00	93	0	N.D.		
34) 2-chloroethyl vinyl ether	0.00	63	0	N.D.		
35) cis-1,3-dichloropropene	0.00	75	0	N.D.		
36) trans-1,3-dichloropropene	0.00	75	0	N.D.		
37) toluene	11.13	91	2352	N.D.		
39) 1,1,2-trichloroethane	0.00	97	0	N.D.		

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

0501007.D MS100906.M

Fri Oct 13 18:59:40 2006

VOA

Quantitation Report (QT Reviewed)

Data File : J:\98MSV01.I\101306.B\0501007.D
 Acq On : 13 Oct 2006 6:59 pm
 Sample : 3559-0784,,2,
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 13 19:00 19106

Vial: 5
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration
 DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	0.00	107	0	N.D.		
42) 1,3-dichloropropane	0.00	76	0	N.D.		
43) dibromochloromethane	0.00	129	0	N.D.		
44) bromoform	0.00	173	0	N.D.		
45) 4-methyl-2-pentanone	0.00	43	0	N.D.		
46) 2-hexanone	0.00	43	0	N.D.		
47) tetrachloroethene	0.00	164	0	N.D.		
48) chlorobenzene	12.70	112	4581289	183.61	ppb	84
49) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
50) ethylbenzene	12.67	91	5989	-2.50	ppb #	1
51) m,p-xylene	12.79	106	1743	N.D.		
52) o-xylene	0.00	106	0	N.D.		
53) styrene	13.29	104	1182	N.D.		
55) isopropylbenzene	13.55	105	1948	N.D.		
56) 1,1,2,2-tetrachloroethane	0.00	83	0	N.D.		
58) bromobenzene	0.00	156	0	N.D.		
59) 1,2,3-trichloropropane	0.00	110	0	N.D.		
60) n-propylbenzene	14.00	91	3623	N.D.		
61) 2-chlorotoluene	14.25	91	2109	N.D.		
62) 1,3,5-trimethylbenzene	14.18	105	1851	N.D.		
63) 4-chlorotoluene	14.43	91	1812	N.D.		
64) tert-butylbenzene	14.58	119	1865	N.D.		
65) 1,2,4-trimethylbenzene	14.64	105	1892	N.D.		
66) d-Limonene	14.73	68	3016	N.D.		
67) sec-butylbenzene	14.77	105	4158	N.D.		
68) p-isopropyltoluene	14.90	119	3395	N.D.		
69) 1,3-dichlorobenzene	15.11	146	1498	N.D.		
70) 1,4-dichlorobenzene	15.19	146	2240	-1.67	ppb #	63
71) 1,2-dichlorobenzene	15.72	146	1179	N.D.		
72) n-butylbenzene	15.39	91	5601	N.D.		
73) 1,2-dibromo-3-chloropropan	0.00	75	0	N.D.		
74) 1,2,4-trichlorobenzene	17.60	180	1683	N.D.		
75) hexachlorobutadiene	17.48	225	1578	0.92	ppb	100
76) naphthalene	18.12	128	3364	N.D.		
77) 1,2,3-trichlorobenzene	18.43	180	1565	N.D.		
78) n-heptane	8.86	43	3274	No Calib	#	

370 µg/L

Quantitation Report

Data File : J:\98MSV01.I\101306.B\0501007.D

Vial: 5

Acq On : 13 Oct 2006 6:59 pm

Operator: RG

Sample : 3559-0784,,2,

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 13 19:00 19106

Quant Results File: MS100906.RES

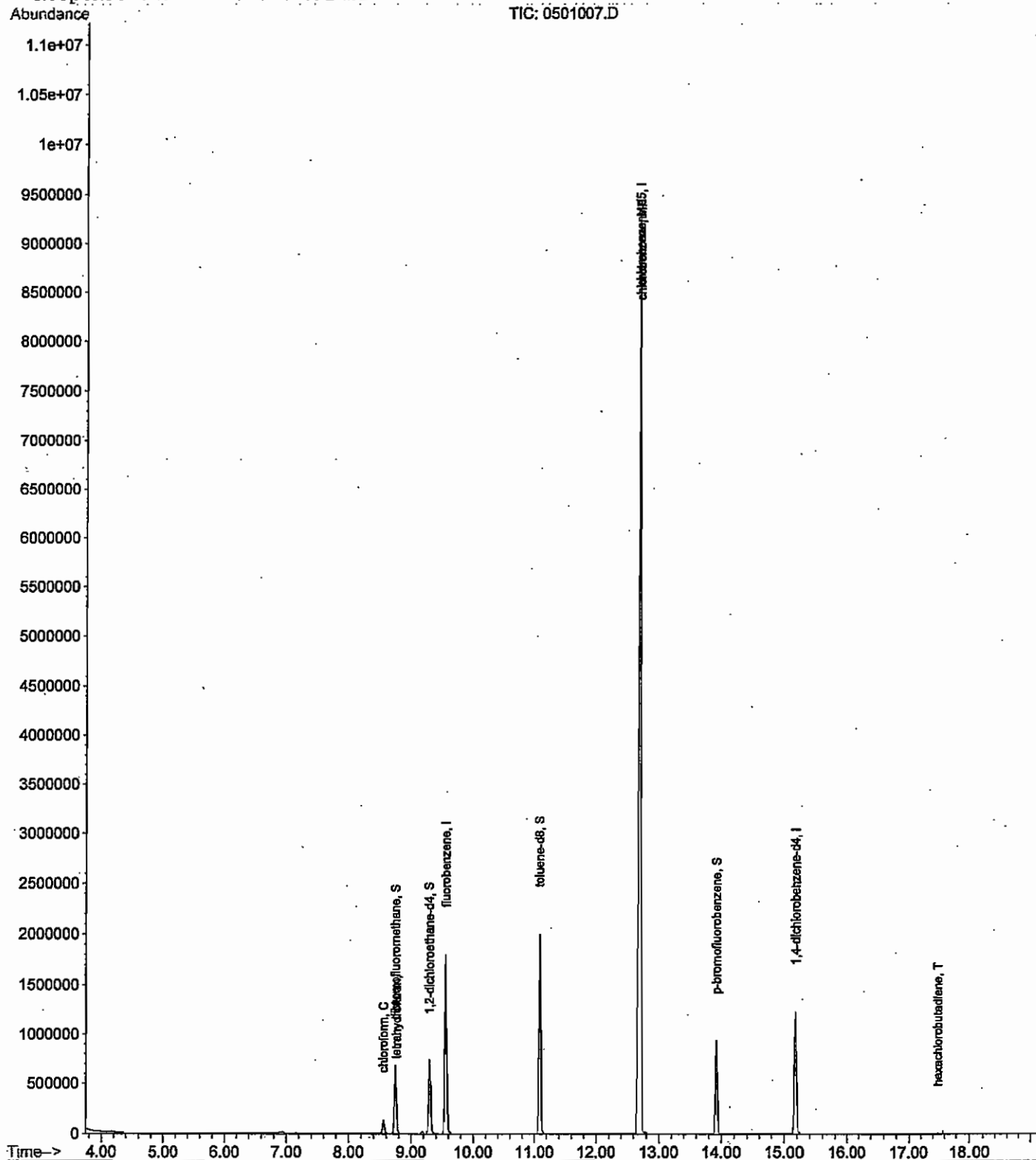
Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

TIC: 0501007.D





El Retiro Industrial Zone
Calle B&C, P.O. Box 325
San German, PR 00683
Phone: (787) 892-2650
Fax: (787) 892-1054

Client Receipt

Mr. Dale S. Weiss
TRC
Boott Mills South
116 John Street
Lowell, MA 01852

Pace Project: 06-3559
No. of Samples: 8
Date Received: 10/11/2006
Date Logged: 10/12/2006
Date Due: 10/25/2006

Client Ref.: Pfizer RFI 378650010
Client Site: Pfizer Closure

Samples were received into Pace Analytical on Wednesday, October 11, 2006. Listed below are the assigned laboratory sample IDs with the requested test programs appearing on subsequent pages. In all correspondence regarding these samples, please make reference to project number 06-3559. This document confirms the receipt of your samples. Project inquiries should be directed to at (787) 892-2650.

Pace Sample ID	Client Reference	Location	Matrix	Date Sampled
0610-0777	TB-10		Aqueous	10/09/2006
0610-0778	MW-04		Aqueous	10/09/2006
0610-0779	MW-03		Aqueous	10/09/2006
0610-0780	MW-05		Aqueous	10/09/2006
0610-0781	MW-06		Aqueous	10/10/2006
0610-0782	MW-01		Aqueous	10/10/2006
0610-0783	MW-02		Aqueous	10/10/2006
0610-0784	Duplicate-01		Aqueous	10/10/2006

Login Notes: None



I. SPECTRUM OF CHLOROBENZENE IN SAMPLES:

MW-06, MW-01(2X), MW-02, DUPLICATE-01(2X)

**PACE PROJECT NUMBER: 06-3559
CLIENT REF: PFIZER RFI 378650010
CLIENT SITE: PFIZER CLOSURE**

Quantitation Report

Data File : J:\98MSV01.I\101206.B\1401014.D

Acq On : 12 Oct 2006 11:13 pm

Sample : 3559-0781,,,

Misc :

Quant Time: Oct 13 12:27 19106

Vial: 14

Operator: RG

Inst : ms-01

Multiplr: 1.00

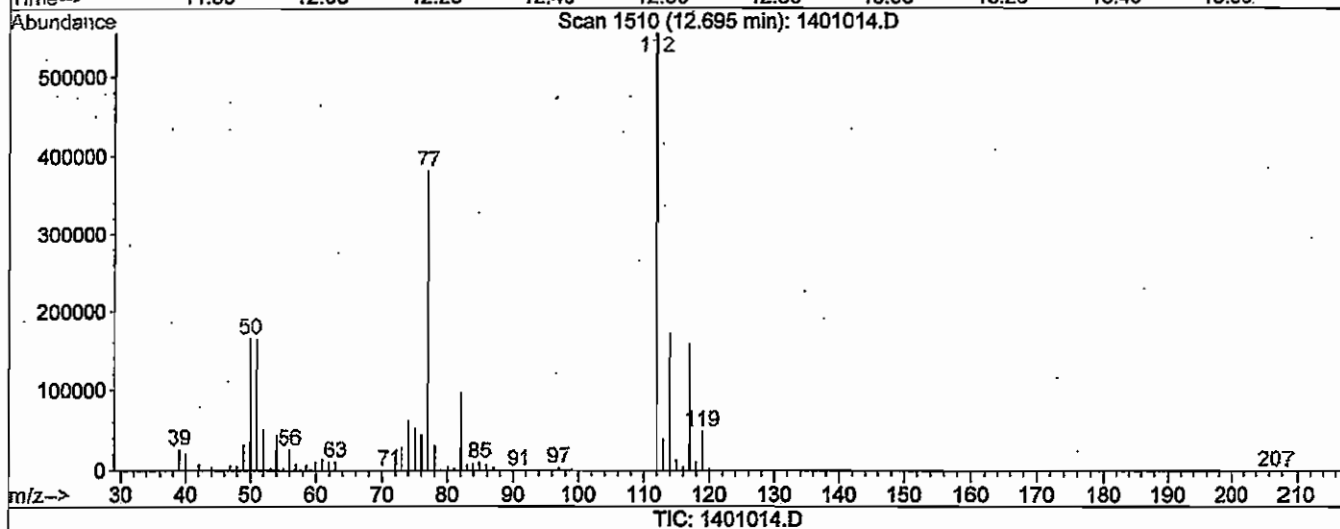
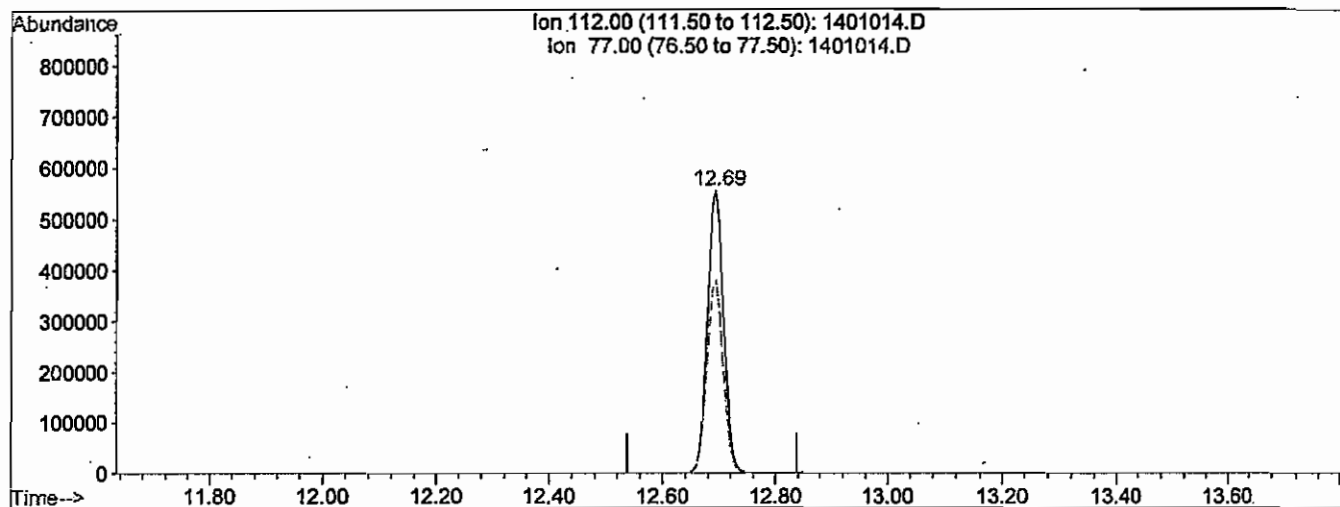
Quant Results File: temp.res

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Multiple Level Calibration



(48) chlorobenzene (MP)

12.69min 47.65ppb

response 1102729

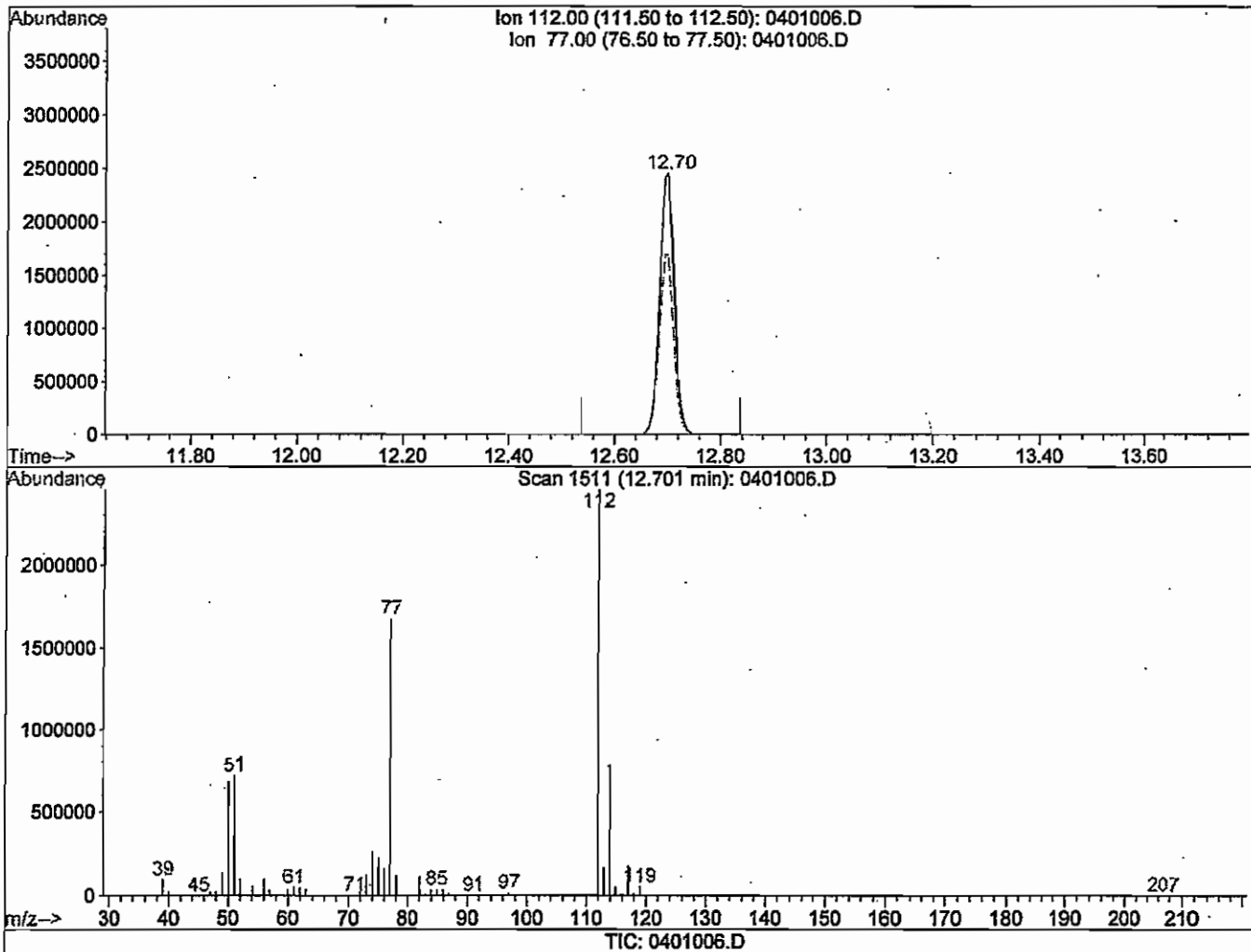
Ion	Exp%	Act%
112.00	100	100
77.00	84.20	69.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : J:\98MSV01.I\101306.B\0401006.D
 Acq On : 13 Oct 2006 6:25 pm
 Sample : 3559-0782,,2,
 Misc :
 Quant Time: Oct 13 17:56 19106

Vial: 4
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00
 Quant Results File: temp.res

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Multiple Level Calibration



(48) chlorobenzene (MP)

12.70min 180.19ppb

response 4596117

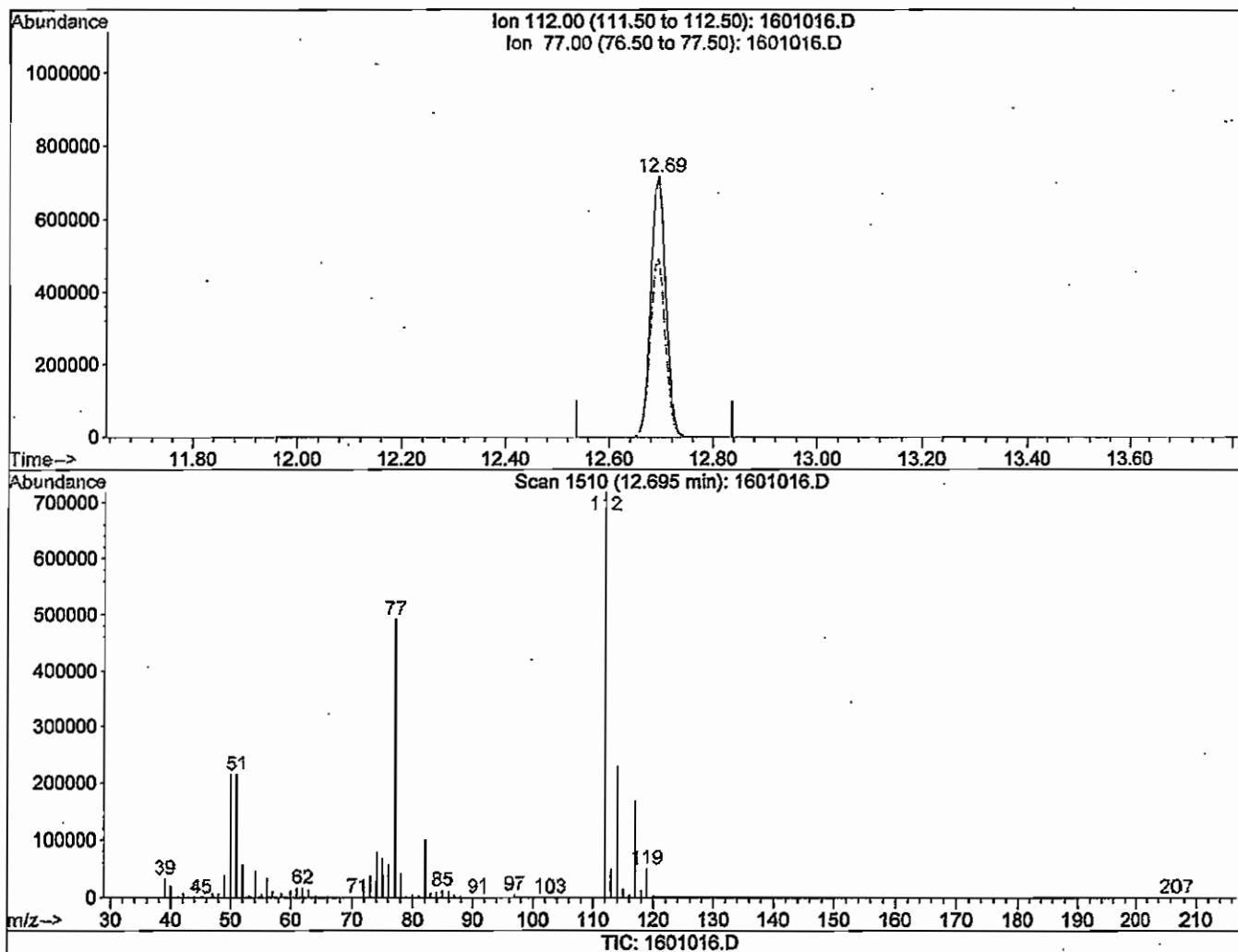
Ion	Exp%	Act%
112.00	100	100
77.00	84.20	69.75
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : J:\98MSV01.I\101206.B\1601016.D
 Acq On : 13 Oct 2006 12:14 am
 Sample : 3559-0783,,,
 Misc :
 Quant Time: Oct 13 12:23 19106

Vial: 16
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00
 Quant Results File: temp.res

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Multiple Level Calibration



(48) chlorobenzene (MP)

12.69min 62.87ppb

response 1425555

Ion	Exp%	Act%
112.00	100	100
77.00	84.20	69.13
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : J:\98MSV01.I\101306.B\0501007.D

Vial: 5

Acq On : 13 Oct 2006 6:59 pm

Operator: RG

Sample : 3559-0784,,2,

Inst : ms-01

Misc :

Multiplr: 1.00

Quant Time: Oct 13 19:00 19106

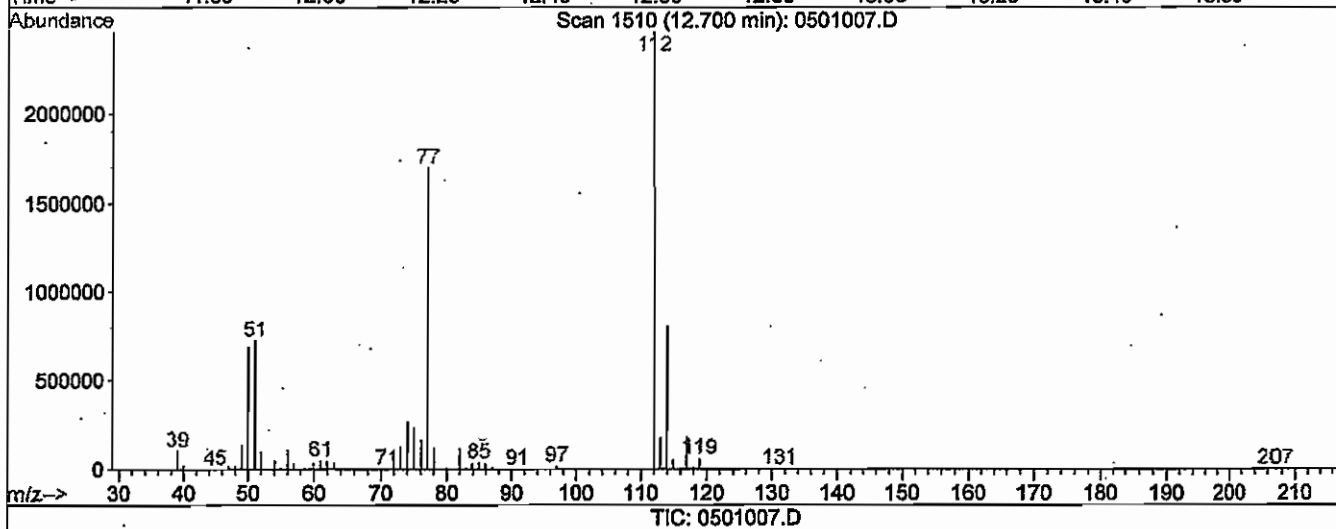
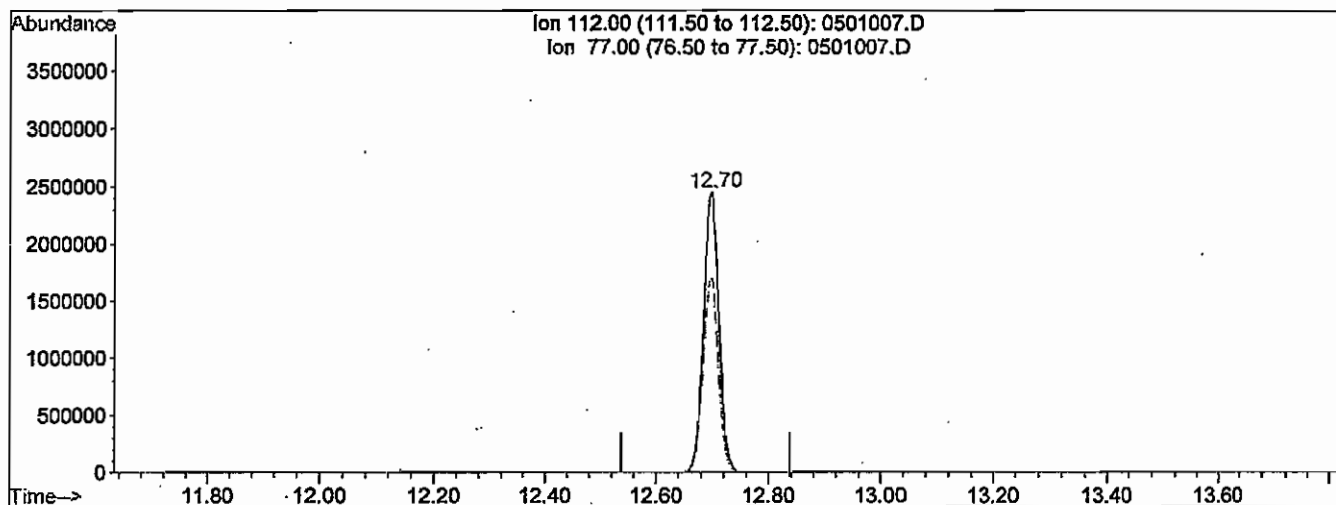
Quant Results File: temp.res

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Multiple Level Calibration



(48) chlorobenzene (MP)

12.70min 183.61ppb

response 4581289

Ion	Exp%	Act%
112.00	100	100
77.00	84.20	69.76
0.00	0.00	0.00
0.00	0.00	0.00



II. SPECTRA OF CHLOROBENZENE AND CHLOROFORM IN SAMPLES:

MW-01(1X), and DUPLICATE-01(1X)

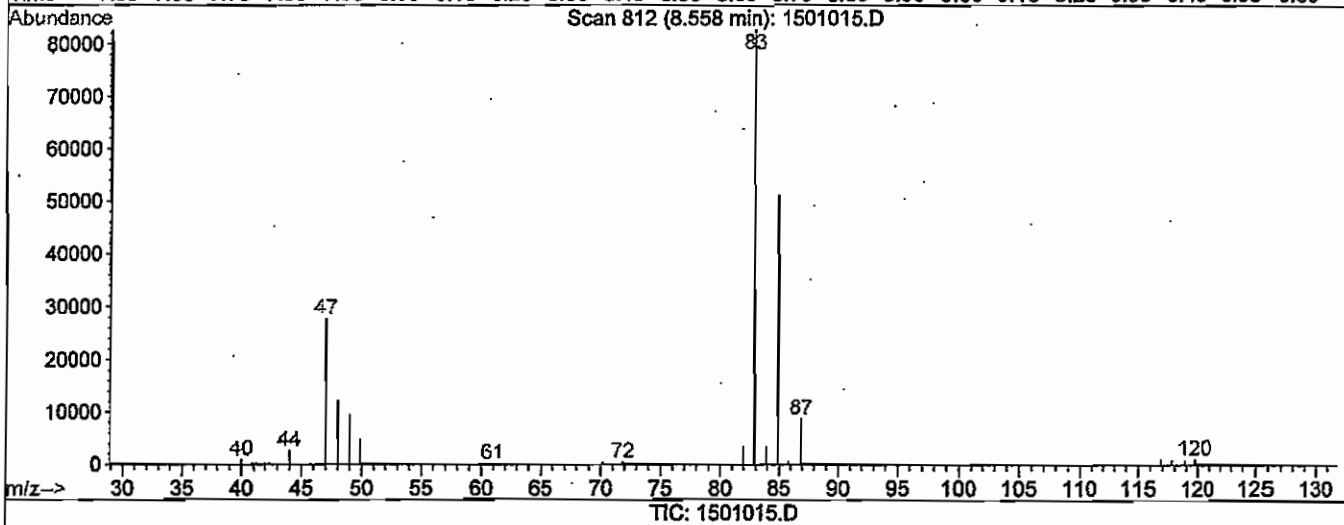
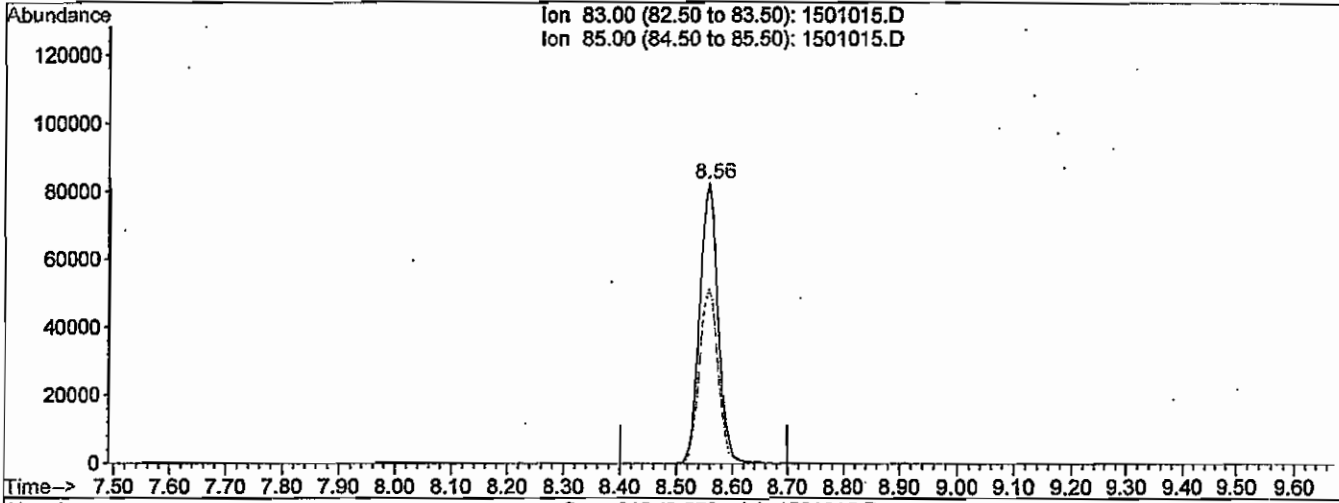
**PACE PROJECT NUMBER: 06-3559
CLIENT REF: PFIZER RFI 378650010
CLIENT SITE: PFIZER CLOSURE**

Quantitation Report

Data File : J:\98MSV01.I\101206.B\1501015.D
 Acq On : 12 Oct 2006 11:44 pm
 Sample : 3559-0782,,,
 Misc :
 Quant Time: Oct 13 12:27 19106

Vial: 15
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00
 Quant Results File: temp.res

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Multiple Level Calibration



(20) chloroform (C)

8.56min 8.51ppb

response 184577

Ion	Exp%	Act%
83.00	100	100
85.00	64.60	64.27
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : J:\98MSV01.I\101206.B\1501015.D

Vial: 15

Acq On : 12 Oct 2006 11:44 pm

Operator: RG

Sample : 3559-0782,,,

Inst : ms-01

Misc :

Multiplr: 1.00

Quant Time: Oct 13 12:27 19106

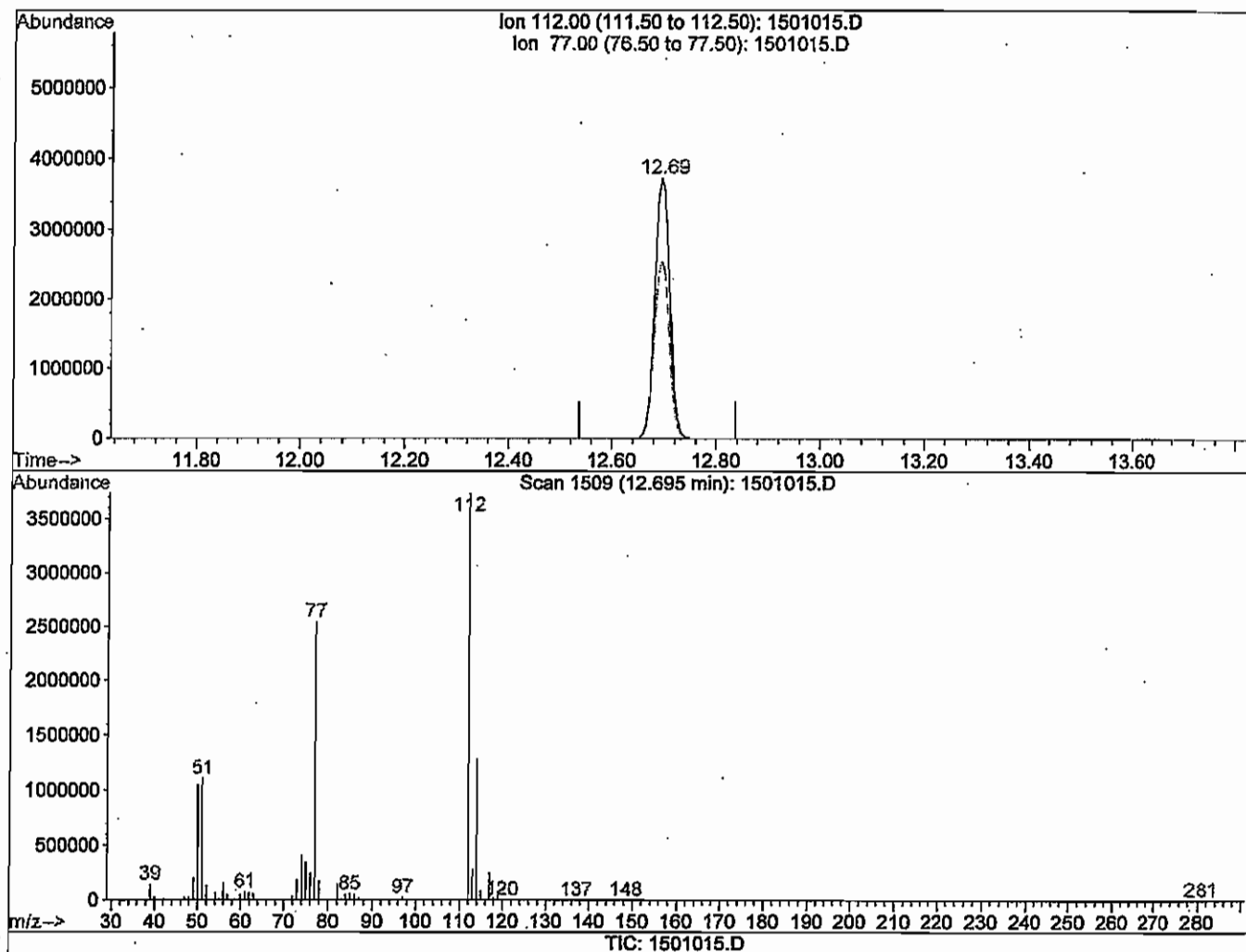
Quant Results File: temp.res

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Multiple Level Calibration



(48) chlorobenzene (MP)

12.69min 274.04ppb

response 7353759

Ion	Exp%	Act%
112.00	100	100
77.00	84.20	69.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : J:\98MSV01.I\101206.B\1701017.D

Vial: 17

Acq On : 13 Oct 2006 12:45 am

Operator: RG

Sample : 3559-0784,,,

Inst : ms-01

Misc :

Multiplr: 1.00

Quant Time: Oct 13 12:21 19106

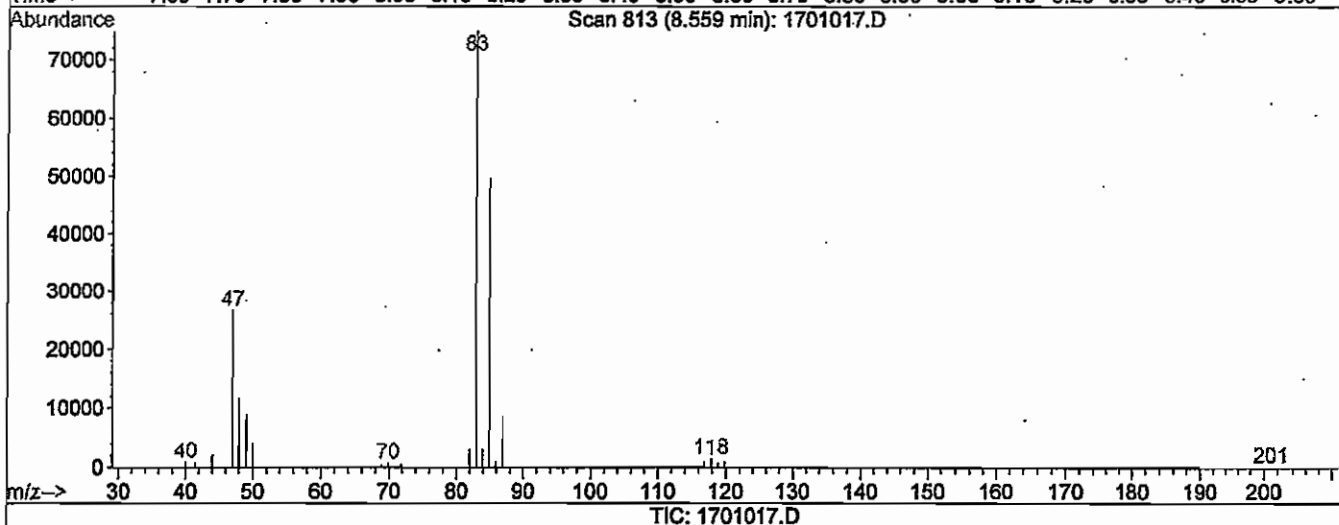
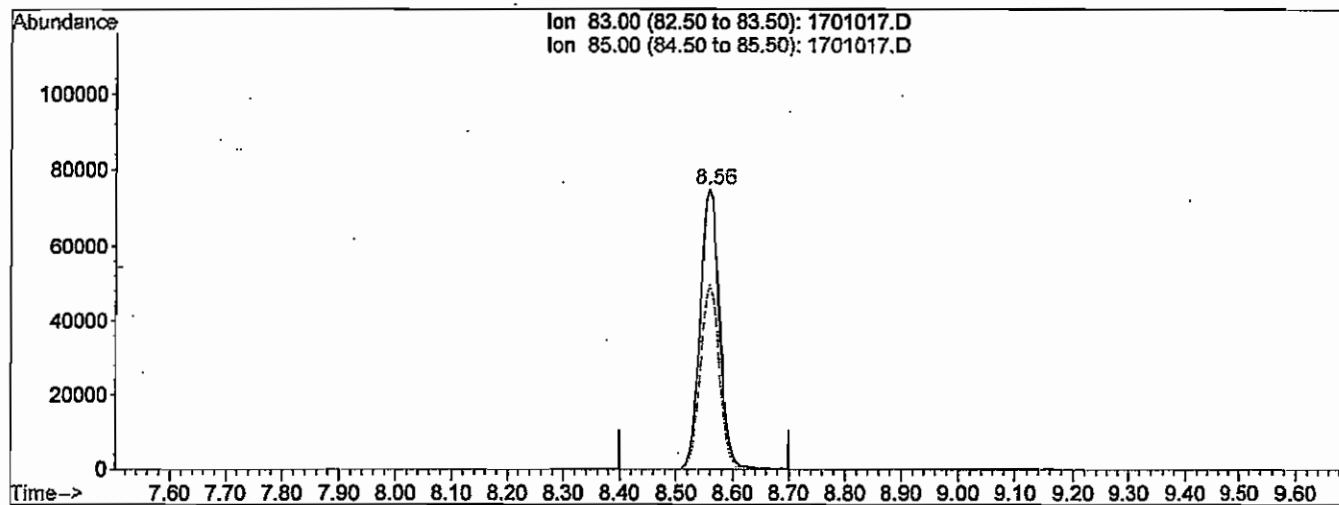
Quant Results File: temp.res

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Multiple Level Calibration



(20) chloroform (C)

8.56min 8.37ppb

response 174588

Ion	Exp%	Act%
83.00	100	100
85.00	64.60	65.70
.000	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : J:\98MSV01.I\101206.B\1701017.D

Acq On : 13 Oct 2006 12:45 am

Sample : 3559-0784,,,

Misc :

Quant Time: Oct 13 12:21 19106

Vial: 17

Operator: RG

Inst : ms-01

Multiplr: 1.00

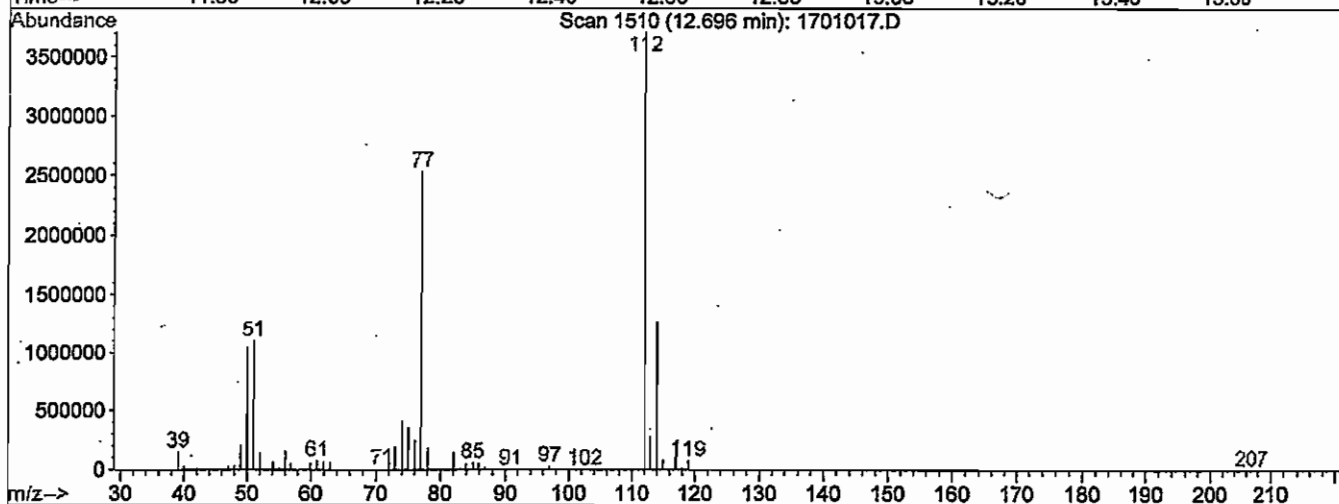
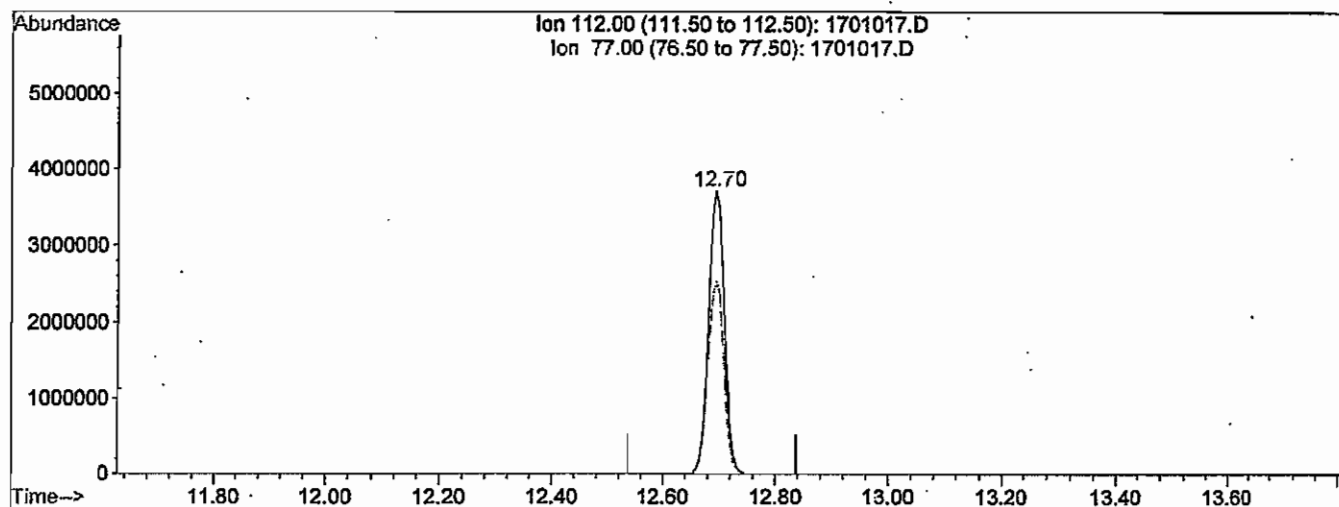
Quant Results File: temp.res

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Multiple Level Calibration



TIC: 1701017.D

(48) chlorobenzene (MP)

12.70min 276.31ppb

response 7219097

Ion	Exp%	Act%
112.00	100	100
77.00	84.20	69.26
0.00	0.00	0.00
0.00	0.00	0.00



III. SUMMARY OF RESPONSE FACTORS AND % RSDs for INITIAL CALIBRATION

**PACE PROJECT NUMBER: 06-3559
CLIENT REF: PFIZER RFI 378650010
CLIENT SITE: PFIZER CLOSURE**



IV. CHROMATOGRAMS AND QUANTITATION REPORTS FOR EACH STANDARD USED IN THE INITIAL CALIBRATION

**PACE PROJECT NUMBER: 06-3559
CLIENT REF: PFIZER RFI 378650010
CLIENT SITE: PFIZER CLOSURE**

Data File : J:\98MSV01.I\100906.B\0103003.D

Vial: 1

Acq On : 9 Oct 2006 5:34 pm

Operator: RG

Sample : 0.5 std 1

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:24 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) fluorobenzene	9.56	96	2303407	50.00	ppb	0.00
41) chlorobenzene-d5	12.67	82	829192	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	472392	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	8418	0.62	ppb	0.00
Spiked Amount	50.000	Range	66 - 124	Recovery	=	1.24%#
25) 1,2-dichloroethane-d4	9.29	65	11406	0.67	ppb	0.00
Spiked Amount	50.000	Range	70 - 120	Recovery	=	1.34%#
38) toluene-d8	11.08	98	28153	0.69	ppb	0.00
Spiked Amount	50.000	Range	76 - 120	Recovery	=	1.38%#
57) p-bromofluorobenzene	13.92	176	6900	3.16	ppb	0.00
Spiked Amount	50.000	Range	74 - 127	Recovery	=	6.32%#

Target Compounds

						Qvalue
2) chloromethane	4.25	50	16085	0.61	ppb	98
3) vinyl chloride	4.41	62	6305	N.D.		
4) bromomethane	5.00	94	5425	-3.44	ppb #	71
5) chloroethane	5.19	49	143	-4.90	ppb #	1
6) dichlorodifluoromethane	3.83	85	12484	0.52	ppb	94
7) trichlorofluoromethane	5.45	101	13581	0.61	ppb	98
8) acrolein	6.61	56	1382	0.63	ppb #	49
9) acetone	6.94	43	57312	N.D.		
10) 1,1-dichloroethene	6.19	96	7326	0.57	ppb #	98
11) methylene chloride	6.90	84	38260	-0.89	ppb	100
12) methyl tert-butyl ether	7.19	73	24785	0.55	ppb	100
13) trans-1,2-dichloroethene	7.09	96	8483	0.55	ppb	97
14) hexane	7.15	57	18732	0.57	ppb	85
15) 1,1-dichloroethane	7.76	63	17437	0.57	ppb	96
16) acrylonitrile	7.80	53	4673	0.56	ppb	90
17) 2-butanone	8.85	43	13205	N.D.		
18) cis-1,2-dichloroethene	8.31	96	9730	0.63	ppb	94
19) 2,2-dichloropropane	8.43	77	12269	0.58	ppb	98
20) chloroform	8.56	83	19576	0.70	ppb	97
21) bromochloromethane	8.52	128	4123	0.58	ppb	94
22) tetrahydrofuran	8.77	42	14001	1.92	ppb	90
23) 1,1,1-trichloroethane	8.81	97	11610	0.59	ppb	96
26) 1,2-dichloroethane	9.36	62	11051	0.55	ppb	97
27) carbon tetrachloride	8.76	117	9406	0.58	ppb	95
28) 1,1-dichloropropene	8.92	75	12513	0.60	ppb	95
29) benzene	9.18	78	32648	0.58	ppb	95
30) trichloroethene	9.73	130	6555	0.55	ppb	81
31) 1,2-dichloropropane	10.26	63	9107	0.59	ppb	97
32) bromodichloromethane	10.27	83	10558	0.56	ppb	95
33) dibromomethane	10.17	93	5750	0.60	ppb	98
34) 2-chloroethyl vinyl ether	10.74	63	5475	0.50	ppb #	82
35) cis-1,3-dichloropropene	10.89	75	12496	0.55	ppb	96
36) trans-1,3-dichloropropene	11.51	75	10448	0.51	ppb	94
37) toluene	11.13	91	28395	0.57	ppb	99
39) 1,1,2-trichloroethane	11.70	97	5958	0.56	ppb #	96

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

0103003.D MS100906.M

Thu Dec 14 10:11:29 2006

VOA

Page 1

Quantitation Report (Not Reviewed)

Data File : J:\98MSV01.I\100906.B\0103003.D

Vial: 1

Acq On : 9 Oct 2006 5:34 pm

Operator: RG

Sample : 0.5 std 1

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:24 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.21	107	5626	0.52	ppb	87
42) 1,3-dichloropropane	12.00	76	12144	0.61	ppb	# 87
43) dibromochloromethane	11.92	129	5600	0.58	ppb	94
44) bromoform	13.40	173	2919	N.D.		
45) 4-methyl-2-pentanone	11.44	43	14103	0.64	ppb	# 91
46) 2-hexanone	12.27	43	9469	0.64	ppb	# 89
47) tetrachloroethene	11.56	164	3962	0.57	ppb	82
48) chlorobenzene	12.69	112	17065	0.62	ppb	# 9
49) 1,1,1,2-tetrachloroethane	12.72	131	5433	0.61	ppb	94
50) ethylbenzene	12.65	91	35257	-1.84	ppb	# 87
51) m,p-xylene	12.78	106	18836	1.13	ppb	89
52) o-xylene	13.24	106	9579	0.65	ppb	86
53) styrene	13.29	104	13248	N.D.		
55) isopropylbenzene	13.56	105	20280	0.60	ppb	100
56) 1,1,2,2-tetrachloroethane	14.06	83	7672	0.60	ppb	# 90
58) bromobenzene	14.08	156	4748	0.58	ppb	94
59) 1,2,3-trichloropropane	14.26	110	1915	0.57	ppb	92
60) n-propylbenzene	14.00	91	26541	0.59	ppb	96
61) 2-chlorotoluene	14.24	91	15767	0.59	ppb	99
62) 1,3,5-trimethylbenzene	14.17	105	14514	0.56	ppb	97
63) 4-chlorotoluene	14.41	91	15787	0.59	ppb	98
64) tert-butylbenzene	14.56	119	12637	0.61	ppb	98
65) 1,2,4-trimethylbenzene	14.63	105	14135	0.53	ppb	95
66) d-Limonene	14.72	68	5380	0.54	ppb	95
67) sec-butylbenzene	14.76	105	20027	0.58	ppb	100
68) p-isopropyltoluene	14.89	119	13788	0.53	ppb	99
69) 1,3-dichlorobenzene	15.10	146	8848	0.61	ppb	99
70) 1,4-dichlorobenzene	15.19	146	11415	-1.05	ppb	91
71) 1,2-dichlorobenzene	15.71	146	7782	0.56	ppb	95
72) n-butylbenzene	15.38	91	13676	0.52	ppb	98
73) 1,2-dibromo-3-chloropropan	16.68	75	1069	1.52	ppb	# 2
74) 1,2,4-trichlorobenzene	17.59	180	4090	0.57	ppb	100
75) hexachlorobutadiene	17.47	225	1365	0.70	ppb	100
76) naphthalene	18.11	128	8311	0.51	ppb	100
77) 1,2,3-trichlorobenzene	18.40	180	3375	0.53	ppb	91
78) n-heptane	8.90	43	1341	No Calib		#

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

0103003.D MS100906.M Thu Dec 14 10:11:30 2006 VOA

Page 2

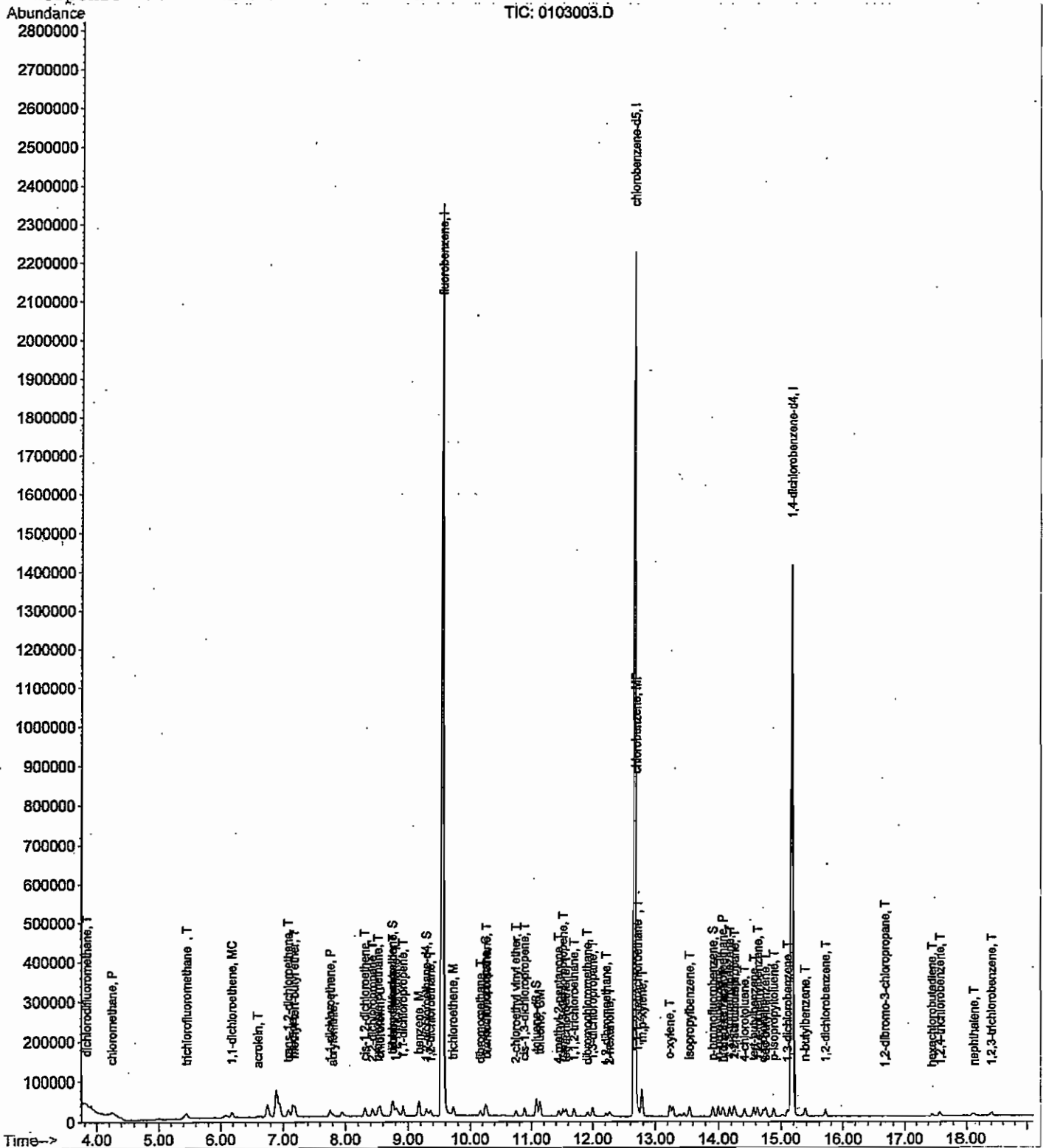
Quantitation Report

Data File : J:\98MSV01.I\100906.B\0103003.D
 Acq On : 9 Oct 2006 5:34 pm
 Sample : 0.5 std 1
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 10 16:24 19106

Vial: 1
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration



Data File : J:\98MSV01.I\100906.B\0201004.D

Vial: 2

Acq On : 9 Oct 2006 6:07 pm

Operator: RG

Sample : 1.0 std 2

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:24 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) fluorobenzene	9.56	96	2240572	50.00	ppb	0.00
41) chlorobenzene-d5	12.67	82	764658	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	444822	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.75	113	14990	1.13	ppb	0.00
Spiked Amount 50.000	Range 66 - 124		Recovery	=	2.26%#	
25) 1,2-dichloroethane-d4	9.29	65	21305	1.28	ppb	0.00
Spiked Amount 50.000	Range 70 - 120		Recovery	=	2.56%#	
38) toluene-d8	11.09	98	45437	1.15	ppb	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	=	2.30%#	
57) p-bromofluorobenzene	13.91	176	8504	3.47	ppb	0.00
Spiked Amount 50.000	Range 74 - 127		Recovery	=	6.94%#	

Target Compounds

						Qvalue
2) chloromethane	4.25	50	30101	1.17	ppb	100
3) vinyl chloride	4.40	62	14119	1.10	ppb	94
4) bromomethane	5.02	94	8886	-2.63	ppb	83
5) chloroethane	5.22	49	1817	-2.94	ppb	95
6) dichlorodifluoromethane	3.83	85	24434	1.04	ppb	95
7) trichlorofluoromethane	5.45	101	26349	1.21	ppb	98
8) acrolein	6.61	56	2660	1.25	ppb	86
9) acetone	6.94	43	62606	0.96	ppb	98
10) 1,1-dichloroethene	6.19	96	13945	1.12	ppb	96
11) methylene chloride	6.90	84	47064	N.D.		
12) methyl tert-butyl ether	7.19	73	49073	1.12	ppb	100
13) trans-1,2-dichloroethene	7.09	96	17594	1.18	ppb	95
14) hexane	7.15	57	35728	1.11	ppb	98
15) 1,1-dichloroethane	7.76	63	34970	1.17	ppb	98
16) acrylonitrile	7.79	53	9721	1.20	ppb	87
17) 2-butanone	8.84	43	20156	N.D.		
18) cis-1,2-dichloroethene	8.31	96	17171	1.13	ppb	98
19) 2,2-dichloropropane	8.43	77	24980	1.22	ppb	98
20) chloroform	8.55	83	32686	1.20	ppb	98
21) bromochloromethane	8.52	128	7774	1.12	ppb	99
22) tetrahydrofuran	8.77	42	19202	2.39	ppb	93
23) 1,1,1-trichloroethane	8.81	97	21260	1.10	ppb	96
26) 1,2-dichloroethane	9.37	62	22466	1.14	ppb	96
27) carbon tetrachloride	8.75	117	17815	1.14	ppb	99
28) 1,1-dichloropropene	8.92	75	22777	1.12	ppb	100
29) benzene	9.18	78	65368	1.19	ppb	98
30) trichloroethene	9.73	130	12857	1.11	ppb	92
31) 1,2-dichloropropane	10.24	63	16640	1.11	ppb	97
32) bromodichloromethane	10.27	83	19252	1.06	ppb	97
33) dibromomethane	10.17	93	10598	1.13	ppb	99
34) 2-chloroethyl vinyl ether	10.75	63	10863	1.02	ppb	95
35) cis-1,3-dichloropropene	10.88	75	23779	1.08	ppb	97
36) trans-1,3-dichloropropene	11.51	75	21314	1.08	ppb	95
37) toluene	11.14	91	52867	1.08	ppb	98
39) 1,1,2-trichloroethane	11.70	97	11052	1.07	ppb #	94

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

0201004.D MS100906.M

Thu Dec 14 10:11:47 2006

VOA

Data File : J:\98MSV01.I\100906.B\0201004.D

Vial: 2

Acq On : 9 Oct 2006 6:07 pm

Operator: RG

Sample : 1.0 std 2

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:24 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.21	107	11329	1.07	ppb	98
42) 1,3-dichloropropane	11.99	76	22306	1.21	ppb	96
43) dibromochloromethane	11.92	129	9397	1.06	ppb	100
44) bromoform	13.39	173	5788	1.02	ppb	96
45) 4-methyl-2-pentanone	11.44	43	23604	1.16	ppb #	97
46) 2-hexanone	12.26	43	15374	1.12	ppb	96
47) tetrachloroethene	11.57	164	7565	1.18	ppb	90
48) chlorobenzene	12.69	112	29996	1.18	ppb #	49
49) 1,1,1,2-tetrachloroethane	12.72	131	9742	1.19	ppb	98
50) ethylbenzene	12.65	91	61455	-1.12	ppb #	91
51) m,p-xylene	12.78	106	35416	2.31	ppb	91
52) o-xylene	13.24	106	14748	1.09	ppb	90
53) styrene	13.28	104	25175	1.03	ppb	88
55) isopropylbenzene	13.55	105	37223	1.17	ppb	99
56) 1,1,2,2-tetrachloroethane	14.06	83	14311	1.20	ppb #	97
58) bromobenzene	14.08	156	8808	1.14	ppb	98
59) 1,2,3-trichloropropane	14.26	110	3902	1.23	ppb #	81
60) n-propylbenzene	14.00	91	50356	1.18	ppb	95
61) 2-chlorotoluene	14.24	91	28934	1.15	ppb	100
62) 1,3,5-trimethylbenzene	14.17	105	26756	1.10	ppb	99
63) 4-chlorotoluene	14.42	91	29585	1.16	ppb	100
64) tert-butylbenzene	14.57	119	22320	1.15	ppb	98
65) 1,2,4-trimethylbenzene	14.63	105	27286	1.08	ppb	98
66) d-Limonene	14.72	68	9262	0.98	ppb	98
67) sec-butylbenzene	14.77	105	35726	1.10	ppb	98
68) p-isopropyltoluene	14.88	119	25549	1.05	ppb	98
69) 1,3-dichlorobenzene	15.09	146	15555	1.13	ppb	98
70) 1,4-dichlorobenzene	15.19	146	20088	N.D.		
71) 1,2-dichlorobenzene	15.70	146	15047	1.16	ppb	96
72) n-butylbenzene	15.38	91	26808	1.08	ppb	99
73) 1,2-dibromo-3-chloropropan	16.67	75	1200	1.65	ppb #	66
74) 1,2,4-trichlorobenzene	17.59	180	7380	1.10	ppb	94
75) hexachlorobutadiene	17.48	225	2188	1.20	ppb	100
76) naphthalene	18.11	128	14436	0.94	ppb	100
77) 1,2,3-trichlorobenzene	18.40	180	6257	1.04	ppb	96
78) n-heptane	8.94	43	1259	No Calib	#	

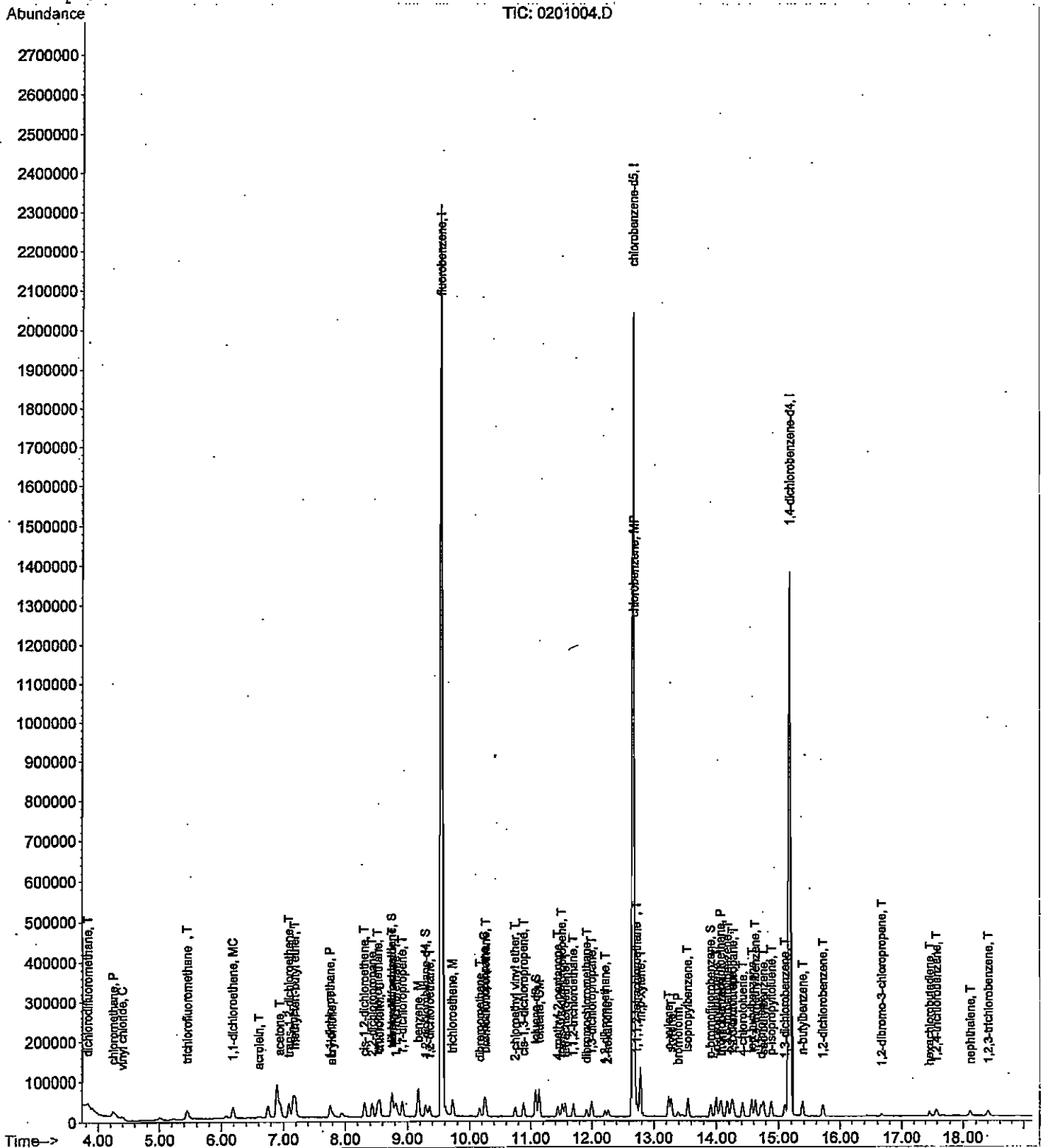
Quantitation Report

Data File : J:\98MSV01.I\100906.B\0201004.D
Acq On : 9 Oct 2006 6:07 pm
Sample : 1.0 std 2
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 10 16:24 19106

Vial: 2
Operator: RG
Inst : ms-01
Multiplr: 1.00

Quant Results File: MS100906.RES

```
Method      : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
Title       : Mass Spec VOA
Last Update  : Tue Oct 10 10:31:41 2006
Response via : Initial Calibration
```



Data File : J:\98MSV01.I\100906.B\0301005.D

Vial: 3

Acq On : 9 Oct 2006 6:41 pm

Operator: RG

Sample : 5.0 std 3

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:25 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.55	96	2186783	50.00	ppb	0.00
41) chlorobenzene-d5	12.67	82	757557	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.17	152	448715	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.74	113	65692	5.06	ppb	0.00
Spiked Amount 50.000	Range 66 - 124		Recovery =	10.12%#		
25) 1,2-dichloroethane-d4	9.29	65	80965	4.99	ppb	0.00
Spiked Amount 50.000	Range 70 - 120		Recovery =	9.98%#		
38) toluene-d8	11.08	98	182476	4.71	ppb	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery =	9.42%#		
57) p-bromofluorobenzene	13.92	176	33056	7.26	ppb	0.00
Spiked Amount 50.000	Range 74 - 127		Recovery =	14.52%#		

Target Compounds

						Qvalue
2) chloromethane	4.26	50	130951	5.22	ppb	99
3) vinyl chloride	4.41	62	64692	5.15	ppb	98
4) bromomethane	5.00	94	33239	3.07	ppb	90
5) chloroethane	5.22	49	6885	3.21	ppb	97
6) dichlorodifluoromethane	3.82	85	116216	5.09	ppb	97
7) trichlorofluoromethane	5.45	101	102137	4.81	ppb	98
8) acrolein	6.60	56	10702	5.14	ppb	100
9) acetone	6.95	43	92416	5.16	ppb	98
10) 1,1-dichloroethene	6.19	96	63423	5.22	ppb	99
11) methylene chloride	6.89	84	111163	4.51	ppb	99
12) methyl tert-butyl ether	7.18	73	227753	5.33	ppb	100
13) trans-1,2-dichloroethene	7.08	96	76653	5.28	ppb	97
14) hexane	7.16	57	167304	5.32	ppb	100
15) 1,1-dichloroethane	7.76	63	151621	5.21	ppb	100
16) acrylonitrile	7.79	53	42031	5.30	ppb	97
17) 2-butanone	8.84	43	68338	4.67	ppb	100
18) cis-1,2-dichloroethene	8.31	96	76024	5.15	ppb	99
19) 2,2-dichloropropane	8.44	77	104084	5.22	ppb	100
20) chloroform	8.55	83	137064	5.16	ppb	99
21) bromochloromethane	8.52	128	33942	5.00	ppb	100
22) tetrahydrofuran	8.76	42	50649	5.21	ppb	95
23) 1,1,1-trichloroethane	8.82	97	94543	5.02	ppb	97
26) 1,2-dichloroethane	9.36	62	98688	5.13	ppb	99
27) carbon tetrachloride	8.76	117	76867	5.04	ppb	96
28) 1,1-dichloropropene	8.92	75	101448	5.12	ppb	99
29) benzene	9.17	78	272824	5.07	ppb	100
30) trichloroethene	9.73	130	55782	4.95	ppb	96
31) 1,2-dichloropropane	10.25	63	73204	5.00	ppb	99
32) bromodichloromethane	10.27	83	87501	4.92	ppb	98
33) dibromomethane	10.17	93	45337	4.96	ppb	96
34) 2-chloroethyl vinyl ether	10.74	63	49654	4.79	ppb	97
35) cis-1,3-dichloropropene	10.89	75	104058	4.86	ppb	99
36) trans-1,3-dichloropropene	11.51	75	92821	4.80	ppb	99
37) toluene	11.14	91	230499	4.84	ppb	99
39) 1,1,2-trichloroethane	11.70	97	48395	4.81	ppb	97

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

0301005.D MS100906.M

Thu Dec 14 10:12:05 2006

VOA

Page 1

Data File : J:\98MSV01.I\100906.B\0301005.D

Vial: 3

Acq On : 9 Oct 2006 6:41 pm

Operator: RG

Sample : 5.0 std 3

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:25 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.21	107	50624	4.89	ppb	99
42) 1,3-dichloropropane	12.00	76	96847	5.30	ppb	97
43) dibromochloromethane	11.92	129	46281	5.28	ppb	99
44) bromoform	13.39	173	27115	4.84	ppb	97
45) 4-methyl-2-pentanone	11.44	43	108701	5.41	ppb	97
46) 2-hexanone	12.26	43	72052	5.30	ppb	97
47) tetrachloroethene	11.56	164	33024	5.19	ppb	99
48) chlorobenzene	12.69	112	131386	5.23	ppb	87
49) 1,1,1,2-tetrachloroethane	12.72	131	41561	5.11	ppb	99
50) ethylbenzene	12.65	91	249624	3.62	ppb	# 97
51) m,p-xylene	12.78	106	155939	10.25	ppb	92
52) o-xylene	13.24	106	65818	4.92	ppb	97
53) styrene	13.28	104	117410	4.83	ppb	97
55) isopropylbenzene	13.54	105	162419	5.06	ppb	99
56) 1,1,2,2-tetrachloroethane	14.06	83	66127	5.47	ppb	99
58) bromobenzene	14.08	156	38969	5.02	ppb	100
59) 1,2,3-trichloropropane	14.26	110	16652	5.21	ppb	100
60) n-propylbenzene	14.00	91	224006	5.21	ppb	98
61) 2-chlorotoluene	14.24	91	132162	5.19	ppb	99
62) 1,3,5-trimethylbenzene	14.17	105	121380	4.95	ppb	98
63) 4-chlorotoluene	14.41	91	130308	5.09	ppb	100
64) tert-butylbenzene	14.57	119	96057	4.89	ppb	98
65) 1,2,4-trimethylbenzene	14.63	105	125020	4.90	ppb	99
66) d-Limonene	14.72	68	48261	5.06	ppb	97
67) sec-butylbenzene	14.76	105	164846	5.03	ppb	100
68) p-isopropyltoluene	14.89	119	119649	4.89	ppb	98
69) 1,3-dichlorobenzene	15.09	146	67454	4.88	ppb	99
70) 1,4-dichlorobenzene	15.19	146	81986	4.13	ppb	98
71) 1,2-dichlorobenzene	15.71	146	67308	5.13	ppb	98
72) n-butylbenzene	15.38	91	125237	4.98	ppb	99
73) 1,2-dibromo-3-chloropropan	16.68	75	8431	6.56	ppb	90
74) 1,2,4-trichlorobenzene	17.59	180	32328	4.76	ppb	100
75) hexachlorobutadiene	17.46	225	9075	4.92	ppb	100
76) naphthalene	18.10	128	68661	4.42	ppb	100
77) 1,2,3-trichlorobenzene	18.40	180	28942	4.76	ppb	98
78) n-heptane	8.84	43	68338	No Calib	#	

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

Quantitation Report

Data File : J:\98MSV01.I\100906.B\0301005.D
 Acq On : 9 Oct 2006 6:41 pm
 Sample : 5.0 std 3
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 10 16:25 19106

Vial: 3
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration



Data File : J:\98MSV01.I\100906.B\0401006.D

Vial: 4

Acq On : 9 Oct 2006 7:14 pm

Operator: RG

Sample : 10 std 4

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:25 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.56	96	2170412	50.00	ppb	0.00
41) chlorobenzene-d5	12.67	82	777008	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.17	152	461916	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.74	113	133066	10.33	ppb	0.00
Spiked Amount	50.000	Range 66 - 124	Recovery	=	20.66%#	
25) 1,2-dichloroethane-d4	9.29	65	161131	10.00	ppb	0.00
Spiked Amount	50.000	Range 70 - 120	Recovery	=	20.00%#	
38) toluene-d8	11.08	98	374906	9.75	ppb	0.00
Spiked Amount	50.000	Range 76 - 120	Recovery	=	19.50%#	
57) p-bromofluorobenzene	13.92	176	67612	12.31	ppb	0.00
Spiked Amount	50.000	Range 74 - 127	Recovery	=	24.62%#	

Target Compounds

						Qvalue
2) chloromethane	4.25	50	281361	11.29	ppb	99
3) vinyl chloride	4.41	62	122860	9.86	ppb	95
4) bromomethane	5.00	94	62072	9.86	ppb	94
5) chloroethane	5.21	49	13384	11.14	ppb	95
6) dichlorodifluoromethane	3.82	85	229208	10.12	ppb	97
7) trichlorofluoromethane	5.45	101	233012	11.05	ppb	100
8) acrolein	6.61	56	21210	10.27	ppb	100
9) acetone	6.95	43	118646	8.80	ppb	98
10) 1,1-dichloroethene	6.19	96	130389	10.81	ppb	99
11) methylene chloride	6.89	84	191632	10.41	ppb	98
12) methyl tert-butyl ether	7.19	73	461264	10.88	ppb	100
13) trans-1,2-dichloroethene	7.09	96	154130	10.69	ppb	98
14) hexane	7.16	57	342617	10.98	ppb	100
15) 1,1-dichloroethane	7.76	63	303998	10.53	ppb	100
16) acrylonitrile	7.79	53	78504	9.97	ppb	98
17) 2-butanone	8.84	43	121722	9.47	ppb	95
18) cis-1,2-dichloroethene	8.32	96	151547	10.33	ppb	98
19) 2,2-dichloropropane	8.43	77	205015	10.36	ppb	99
20) chloroform	8.55	83	273602	10.37	ppb	100
21) bromochloromethane	8.52	128	70968	10.53	ppb	94
22) tetrahydrofuran	8.76	42	95138	9.27	ppb	97
23) 1,1,1-trichloroethane	8.81	97	195009	10.44	ppb	99
26) 1,2-dichloroethane	9.36	62	198871	10.43	ppb	99
27) carbon tetrachloride	8.76	117	153676	10.14	ppb	96
28) 1,1-dichloropropene	8.92	75	204097	10.37	ppb	100
29) benzene	9.18	78	561624	10.51	ppb	100
30) trichloroethene	9.72	130	114374	10.23	ppb	97
31) 1,2-dichloropropane	10.24	63	146143	10.05	ppb	100
32) bromodichloromethane	10.27	83	176899	10.01	ppb	99
33) dibromomethane	10.17	93	90060	9.94	ppb	100
34) 2-chloroethyl vinyl ether	10.75	63	100264	9.74	ppb	98
35) cis-1,3-dichloropropene	10.89	75	209795	9.88	ppb	100
36) trans-1,3-dichloropropene	11.51	75	187531	9.77	ppb	98
37) toluene	11.14	91	483316	10.22	ppb	100
39) 1,1,2-trichloroethane	11.70	97	96385	9.64	ppb	99

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

0401006.D MS100906.M

Thu Dec 14 10:12:22 2006

VOA

Data File : J:\98MSV01.I\100906.B\0401006.D

Vial: 4

Acq On : 9 Oct 2006 7:14 pm

Operator: RG

Sample : 10 std 4

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:25 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.22	107	99067	9.64	ppb	97
42) 1,3-dichloropropane	12.00	76	195777	10.45	ppb	98
43) dibromochloromethane	11.92	129	94838	10.54	ppb	99
44) bromoform	13.40	173	55294	9.63	ppb	99
45) 4-methyl-2-pentanone	11.44	43	211625	10.27	ppb	97
46) 2-hexanone	12.26	43	140654	10.09	ppb	99
47) tetrachloroethene	11.56	164	66666	10.22	ppb	100
48) chlorobenzene	12.68	112	266785	10.36	ppb	92
49) 1,1,1,2-tetrachloroethane	12.73	131	85958	10.30	ppb	99
50) ethylbenzene	12.65	91	516671	9.99	ppb	98
51) m,p-xylene	12.78	106	320250	20.52	ppb	92
52) o-xylene	13.24	106	137499	10.02	ppb	98
53) styrene	13.28	104	245185	9.83	ppb	94
55) isopropylbenzene	13.55	105	338652	10.26	ppb	99
56) 1,1,2,2-tetrachloroethane	14.05	83	130856	10.52	ppb	100
58) bromobenzene	14.08	156	82589	10.33	ppb	99
59) 1,2,3-trichloropropane	14.26	110	32306	9.82	ppb	98
60) n-propylbenzene	14.00	91	463475	10.47	ppb	99
61) 2-chlorotoluene	14.24	91	270801	10.34	ppb	100
62) 1,3,5-trimethylbenzene	14.17	105	259229	10.28	ppb	98
63) 4-chlorotoluene	14.42	91	272267	10.32	ppb	99
64) tert-butylbenzene	14.57	119	208751	10.32	ppb	99
65) 1,2,4-trimethylbenzene	14.63	105	268792	10.23	ppb	100
66) d-Limonene	14.72	68	102527	10.45	ppb	100
67) sec-butylbenzene	14.76	105	338059	10.03	ppb	99
68) p-isopropyltoluene	14.89	119	252984	10.04	ppb	99
69) 1,3-dichlorobenzene	15.10	146	146575	10.30	ppb	100
70) 1,4-dichlorobenzene	15.19	146	172393	10.36	ppb	98
71) 1,2-dichlorobenzene	15.70	146	135920	10.06	ppb	99
72) n-butylbenzene	15.38	91	267537	10.34	ppb	99
73) 1,2-dibromo-3-chloropropan	16.68	75	16858	11.97	ppb	90
74) 1,2,4-trichlorobenzene	17.59	180	69730	9.98	ppb	100
75) hexachlorobutadiene	17.47	225	19564	10.30	ppb	100
76) naphthalene	18.10	128	157008	9.82	ppb	100
77) 1,2,3-trichlorobenzene	18.40	180	62181	9.94	ppb	99
78) n-heptane	8.84	43	121841	No Calib	#	

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

0401006.D MS100906.M

Thu Dec 14 10:12:23 2006

VOA

Page 2

Quantitation Report

Data File : J:\98MSV01.I\100906.B\0401006.D

Acq On : 9 Oct 2006 7:14 pm

Sample : 10 std 4

Misc :

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:25 19106

Vial: 4

Operator: RG

Inst : ms-01

Multiplr: 1.00

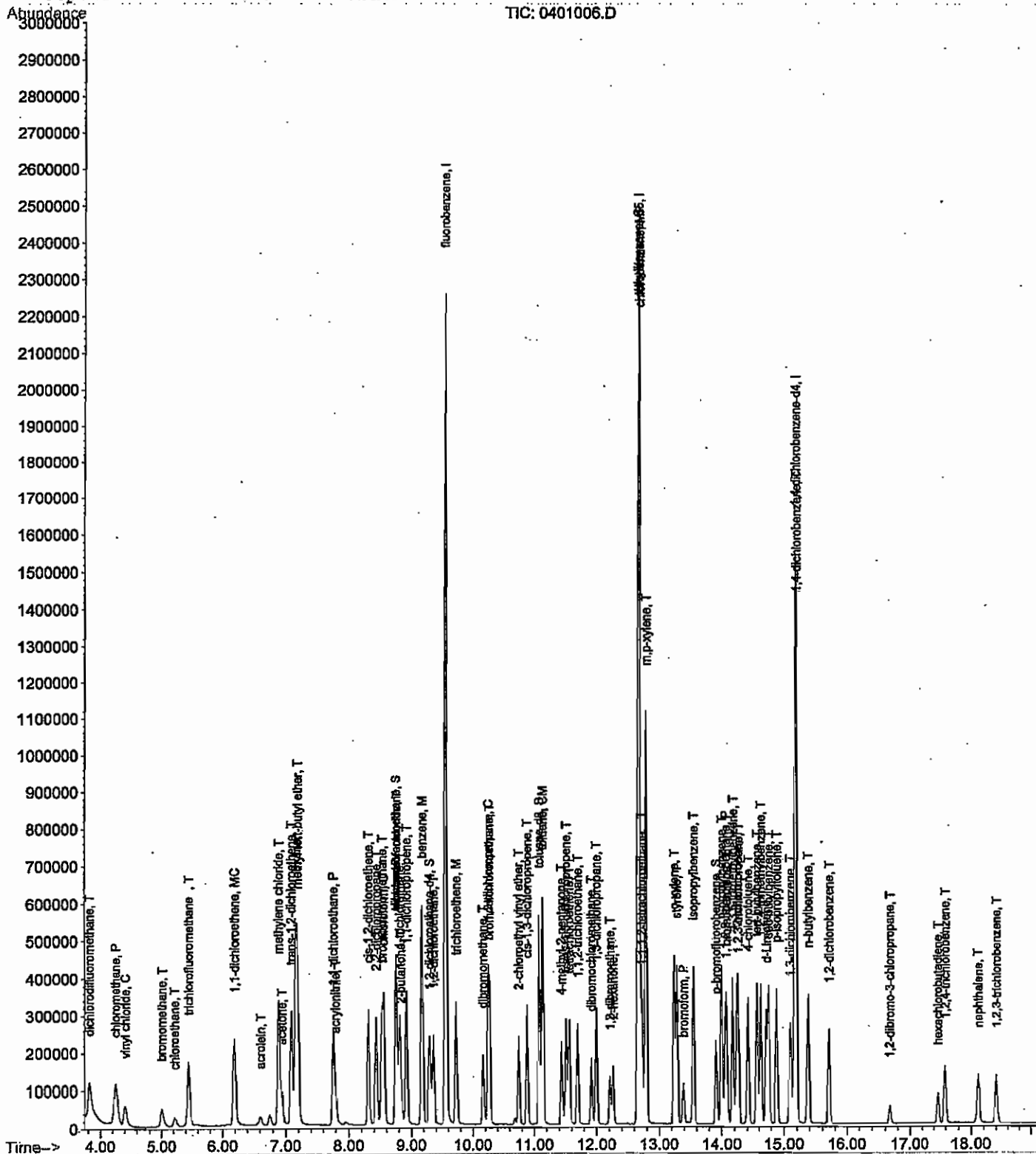
Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : J:\98MSV01.I\100906.B\0501007.D

Vial: 5

Acq On : 9 Oct 2006 7:44 pm

Operator: RG

Sample : 50 std 5

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:26 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.55	96	2222069	50.00	ppb	0.00
41) chlorobenzene-d5	12.67	82	946959	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	584564	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.74	113	623178	47.27	ppb	0.00
Spiked Amount	50.000	Range 66 - 124	Recovery	=	94.54%	
25) 1,2-dichloroethane-d4	9.29	65	741884	44.96	ppb	0.00
Spiked Amount	50.000	Range 70 - 120	Recovery	=	89.92%	
38) toluene-d8	11.08	98	1916305	48.70	ppb	0.00
Spiked Amount	50.000	Range 76 - 120	Recovery	=	97.40%	
57) p-bromofluorobenzene	13.92	176	352968	44.08	ppb	0.00
Spiked Amount	50.000	Range 74 - 127	Recovery	=	88.16%	

Target Compounds

						Qvalue
2) chloromethane	4.25	50	1182917	46.37	ppb	99
3) vinyl chloride	4.40	62	566666	44.43	ppb	99
4) bromomethane	5.00	94	245018	51.24	ppb	99
5) chloroethane	5.22	49	50199	54.30	ppb	98
6) dichlorodifluoromethane	3.82	85	996313	42.96	ppb	97
7) trichlorofluoromethane	5.44	101	1024936	47.48	ppb	99
8) acrolein	6.61	56	93614	44.27	ppb	98
9) acetone	6.94	43	427305	49.22	ppb	99
10) 1,1-dichloroethene	6.18	96	583434	47.26	ppb	99
11) methylene chloride	6.89	84	775343	51.50	ppb	97
12) methyl tert-butyl ether	7.18	73	2097463	48.33	ppb	100
13) trans-1,2-dichloroethene	7.09	96	676115	45.79	ppb	99
14) hexane	7.16	57	1576551	49.37	ppb	99
15) 1,1-dichloroethane	7.76	63	1372474	46.44	ppb	100
16) acrylonitrile	7.79	53	379606	47.10	ppb	98
17) 2-butanone	8.84	43	602474	51.01	ppb	99
18) cis-1,2-dichloroethene	8.31	96	698786	46.55	ppb	99
19) 2,2-dichloropropane	8.43	77	916075	45.22	ppb	100
20) chloroform	8.55	83	1238923	45.89	ppb	100
21) bromochloromethane	8.52	128	319025	46.23	ppb	99
22) tetrahydrofuran	8.76	42	477723	46.69	ppb	97
23) 1,1,1-trichloroethane	8.81	97	901902	47.15	ppb	100
26) 1,2-dichloroethane	9.36	62	905280	46.35	ppb	100
27) carbon tetrachloride	8.75	117	729218	47.01	ppb	99
28) 1,1-dichloropropene	8.92	75	954647	47.38	ppb	100
29) benzene	9.18	78	2592370	47.40	ppb	99
30) trichloroethene	9.73	130	531382	46.43	ppb	99
31) 1,2-dichloropropane	10.25	63	708877	47.60	ppb	99
32) bromodichloromethane	10.27	83	866439	47.90	ppb	99
33) dibromomethane	10.16	93	433600	46.72	ppb	98
34) 2-chloroethyl vinyl ether	10.75	63	522493	49.58	ppb	97
35) cis-1,3-dichloropropene	10.88	75	1038067	47.74	ppb	99
36) trans-1,3-dichloropropene	11.51	75	976466	49.68	ppb	98
37) toluene	11.14	91	2422131	50.02	ppb	99
39) 1,1,2-trichloroethane	11.70	97	487178	47.62	ppb	98

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

0501007.D MS100906.M

Thu Dec 14 10:12:40 2006

VOA

Page 1

Data File : J:\98MSV01.I\100906.B\0501007.D

Vial: 5

Acq On : 9 Oct 2006 7:44 pm

Operator: RG

Sample : 50 std 5

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:26 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.21	107	491110	46.67	ppb	100
42) 1,3-dichloropropane	12.00	76	962245	42.16	ppb	100
43) dibromochloromethane	11.92	129	475773	43.38	ppb	100
44) bromoform	13.39	173	325469	46.52	ppb	100
45) 4-methyl-2-pentanone	11.44	43	1165193	46.38	ppb	98
46) 2-hexanone	12.26	43	768823	45.26	ppb	100
47) tetrachloroethene	11.56	164	346257	43.55	ppb	99
48) chlorobenzene	12.69	112	1395402	44.45	ppb	97
49) 1,1,1,2-tetrachloroethane	12.72	131	436366	42.88	ppb	100
50) ethylbenzene	12.65	91	2657690	50.69	ppb	98
51) m,p-xylene	12.78	106	1817102	95.52	ppb	93
52) o-xylene	13.24	106	727244	43.49	ppb	96
53) styrene	13.29	104	1463874	48.15	ppb	93
55) isopropylbenzene	13.55	105	1912624	45.77	ppb	100
56) 1,1,2,2-tetrachloroethane	14.06	83	682431	43.36	ppb	100
58) bromobenzene	14.08	156	449218	44.42	ppb	100
59) 1,2,3-trichloropropane	14.26	110	184600	44.32	ppb	99
60) n-propylbenzene	14.00	91	2504887	44.72	ppb	99
61) 2-chlorotoluene	14.24	91	1501080	45.28	ppb	100
62) 1,3,5-trimethylbenzene	14.17	105	1450803	45.45	ppb	100
63) 4-chlorotoluene	14.42	91	1495513	44.81	ppb	100
64) tert-butylbenzene	14.57	119	1173520	45.84	ppb	100
65) 1,2,4-trimethylbenzene	14.63	105	1607240	48.34	ppb	99
66) d-Limonene	14.72	68	627863	50.58	ppb	100
67) sec-butylbenzene	14.77	105	2126987	49.87	ppb	100
68) p-isopropyltoluene	14.88	119	1606726	50.38	ppb	99
69) 1,3-dichlorobenzene	15.10	146	835060	46.37	ppb	99
70) 1,4-dichlorobenzene	15.19	146	936423	50.55	ppb	99
71) 1,2-dichlorobenzene	15.70	146	769482	45.02	ppb	99
72) n-butylbenzene	15.38	91	1578974	48.24	ppb	100
73) 1,2-dibromo-3-chloropropan	16.67	75	88045	46.80	ppb	94
74) 1,2,4-trichlorobenzene	17.59	180	396484	44.85	ppb	100
75) hexachlorobutadiene	17.47	225	99471	41.37	ppb	100
76) naphthalene	18.10	128	937105	46.33	ppb	100
77) 1,2,3-trichlorobenzene	18.40	180	355299	44.87	ppb	98
78) n-heptane	9.05	43	1642	No Calib	#	

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

Quantitation Report

Data File : J:\98MSV01.I\100906.B\0501007.D

Acq On : 9 Oct 2006 7:44 pm

Sample : 50 std 5

Misc :

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:26 19106

Vial: 5

Operator: RG

Inst : ms-01

Multiplr: 1.00

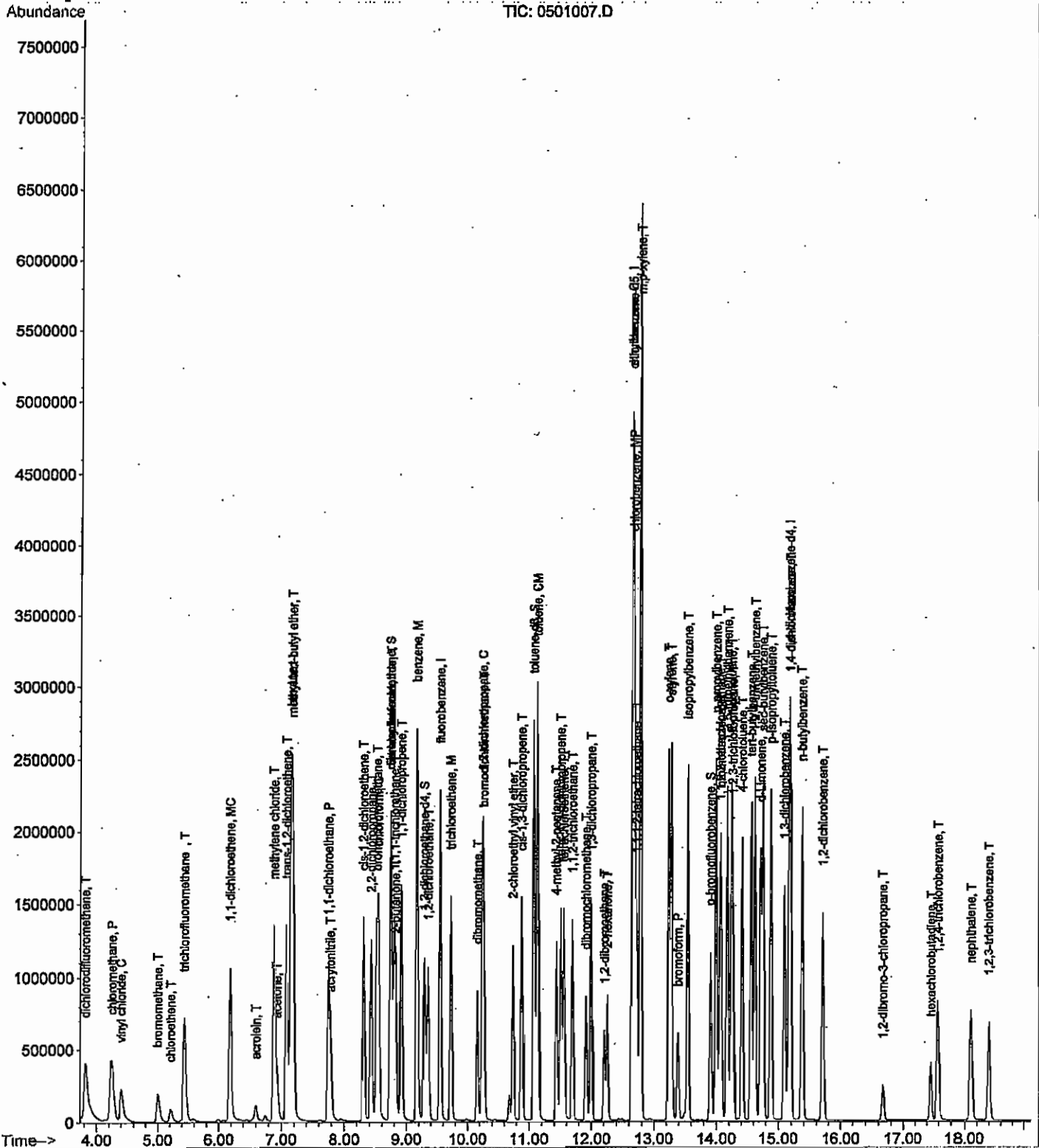
Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration



Data File : J:\98MSV01.I\100906.B\0601008.D

Vial: 6

Acq On : 9 Oct 2006 8:15 pm

Operator: RG

Sample : 100 std 6

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:27 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.55	96	2284976	50.00	ppb	0.00
41) chlorobenzene-d5	12.67	82	976436	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.17	152	640501	50.00	ppb	0.00
System Monitoring Compounds						
24) dibromofluoromethane	8.74	113	1308706	96.55	ppb	0.00
Spiked Amount 50.000	Range 66	- 124	Recovery	=	193.10%#	
25) 1,2-dichloroethane-d4	9.29	65	1552207	91.48	ppb	0.00
Spiked Amount 50.000	Range 70	- 120	Recovery	=	182.96%#	
38) toluene-d8	11.08	98	4041573	99.87	ppb	0.00
Spiked Amount 50.000	Range 76	- 120	Recovery	=	199.74%#	
57) p-bromofluorobenzene	13.92	176	857703	95.16	ppb	0.00
Spiked Amount 50.000	Range 74	- 127	Recovery	=	190.32%#	
Target Compounds						
					Qvalue	
2) chloromethane	4.25	50	2281208	86.96	ppb	100
3) vinyl chloride	4.41	62	1129558	86.13	ppb	98
4) bromomethane	5.00	94	510419	108.56	ppb	100
5) chloroethane	5.21	49	91172	99.78	ppb	100
6) dichlorodifluoromethane	3.82	85	1984577	83.22	ppb	97
7) trichlorofluoromethane	5.45	101	2007778	90.44	ppb	100
8) acrolein	6.60	56	194731	89.54	ppb	100
9) acetone	6.94	43	859661	103.23	ppb	100
10) 1,1-dichloroethene	6.18	96	1171174	92.26	ppb	100
11) methylene chloride	6.89	84	1462524	97.39	ppb	98
12) methyl tert-butyl ether	7.19	73	4159331	93.21	ppb	100
13) trans-1,2-dichloroethene	7.08	96	1369334	90.18	ppb	100
14) hexane	7.16	57	3069913	93.49	ppb	100
15) 1,1-dichloroethane	7.76	63	2808093	92.40	ppb	100
16) acrylonitrile	7.79	53	765694	92.40	ppb	100
17) 2-butanone	8.84	43	1206358	100.62	ppb	100
18) cis-1,2-dichloroethene	8.31	96	1456622	94.36	ppb	100
19) 2,2-dichloropropane	8.43	77	1880601	90.27	ppb	100
20) chloroform	8.55	83	2566801	92.45	ppb	100
21) bromochloromethane	8.52	128	683385	96.30	ppb	100
22) tetrahydrofuran	8.76	42	934231	103.87	ppb	100
23) 1,1,1-trichloroethane	8.81	97	1893603	96.26	ppb	100
26) 1,2-dichloroethane	9.36	62	1875054	93.37	ppb	100
27) carbon tetrachloride	8.75	117	1529536	95.89	ppb	100
28) 1,1-dichloropropene	8.92	75	1982543	95.69	ppb	100
29) benzene	9.17	78	5276889	93.84	ppb	100
30) trichloroethene	9.73	130	1158599	98.44	ppb	100
31) 1,2-dichloropropane	10.25	63	1503512	98.19	ppb	100
32) bromodichloromethane	10.27	83	1860104	100.00	ppb	100
33) dibromomethane	10.16	93	929424	97.39	ppb	100
34) 2-chloroethyl vinyl ether	10.75	63	1142148	105.40	ppb	100
35) cis-1,3-dichloropropene	10.88	75	2248734	100.57	ppb	100
36) trans-1,3-dichloropropene	11.51	75	2042665	101.07	ppb	100
37) toluene	11.14	91	4985871	100.13	ppb	100
39) 1,1,2-trichloroethane	11.70	97	1080055	102.66	ppb	100

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

0601008.D MS100906.M

Thu Dec 14 10:12:58 2006

VOA

Data File : J:\98MSV01.I\100906.B\0601008.D

Vial: 6

Acq On : 9 Oct 2006 8:15 pm

Operator: RG

Sample : 100 std 6

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:27 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.21	107	1086048	100.36	ppb	100
42) 1,3-dichloropropane	12.00	76	2132459	90.62	ppb	100
43) dibromochloromethane	11.92	129	1073369	94.92	ppb	100
44) bromoform	13.39	173	739018	102.45	ppb	100
45) 4-methyl-2-pentanone	11.44	43	2416039	93.27	ppb	100
46) 2-hexanone	12.26	43	1708428	97.53	ppb	100
47) tetrachloroethene	11.56	164	758718	92.55	ppb	100
48) chlorobenzene	12.69	112	2968548	91.71	ppb	100
49) 1,1,1,2-tetrachloroethane	12.72	131	964320	91.91	ppb	100
50) ethylbenzene	12.65	91	5576830	105.90	ppb	100
51) m,p-xylene	12.78	106	3894620	198.56	ppb	100
52) o-xylene	13.24	106	1723692	99.96	ppb	100
53) styrene	13.29	104	3216964	102.62	ppb	100
55) isopropylbenzene	13.55	105	4375959	95.57	ppb	100
56) 1,1,2,2-tetrachloroethane	14.06	83	1558502	90.38	ppb	100
58) bromobenzene	14.08	156	1058345	95.50	ppb	100
59) 1,2,3-trichloropropane	14.26	110	425646	93.27	ppb	100
60) n-propylbenzene	14.00	91	5858233	95.45	ppb	100
61) 2-chlorotoluene	14.24	91	3487496	96.01	ppb	100
62) 1,3,5-trimethylbenzene	14.17	105	3469265	99.18	ppb	100
63) 4-chlorotoluene	14.41	91	3516305	96.16	ppb	100
64) tert-butylbenzene	14.57	119	2720181	96.97	ppb	100
65) 1,2,4-trimethylbenzene	14.63	105	3613565	99.20	ppb	100
66) d-Limonene	14.72	68	1385323	101.85	ppb	100
67) sec-butylbenzene	14.76	105	4596671	98.36	ppb	100
68) p-isopropyltoluene	14.89	119	3513120	100.54	ppb	100
69) 1,3-dichlorobenzene	15.10	146	1938249	98.22	ppb	100
70) 1,4-dichlorobenzene	15.19	146	2051373	102.90	ppb	100
71) 1,2-dichlorobenzene	15.70	146	1802357	96.23	ppb	100
72) n-butylbenzene	15.38	91	3585760	99.98	ppb	100
73) 1,2-dibromo-3-chloropropan	16.67	75	198381	95.37	ppb	100
74) 1,2,4-trichlorobenzene	17.59	180	935076	96.53	ppb	100
75) hexachlorobutadiene	17.47	225	245669	93.24	ppb	100
76) naphthalene	18.10	128	2428182	109.55	ppb	100
77) 1,2,3-trichlorobenzene	18.40	180	879056	101.33	ppb	100
78) n-heptane	8.98	43	1895	No Calib		

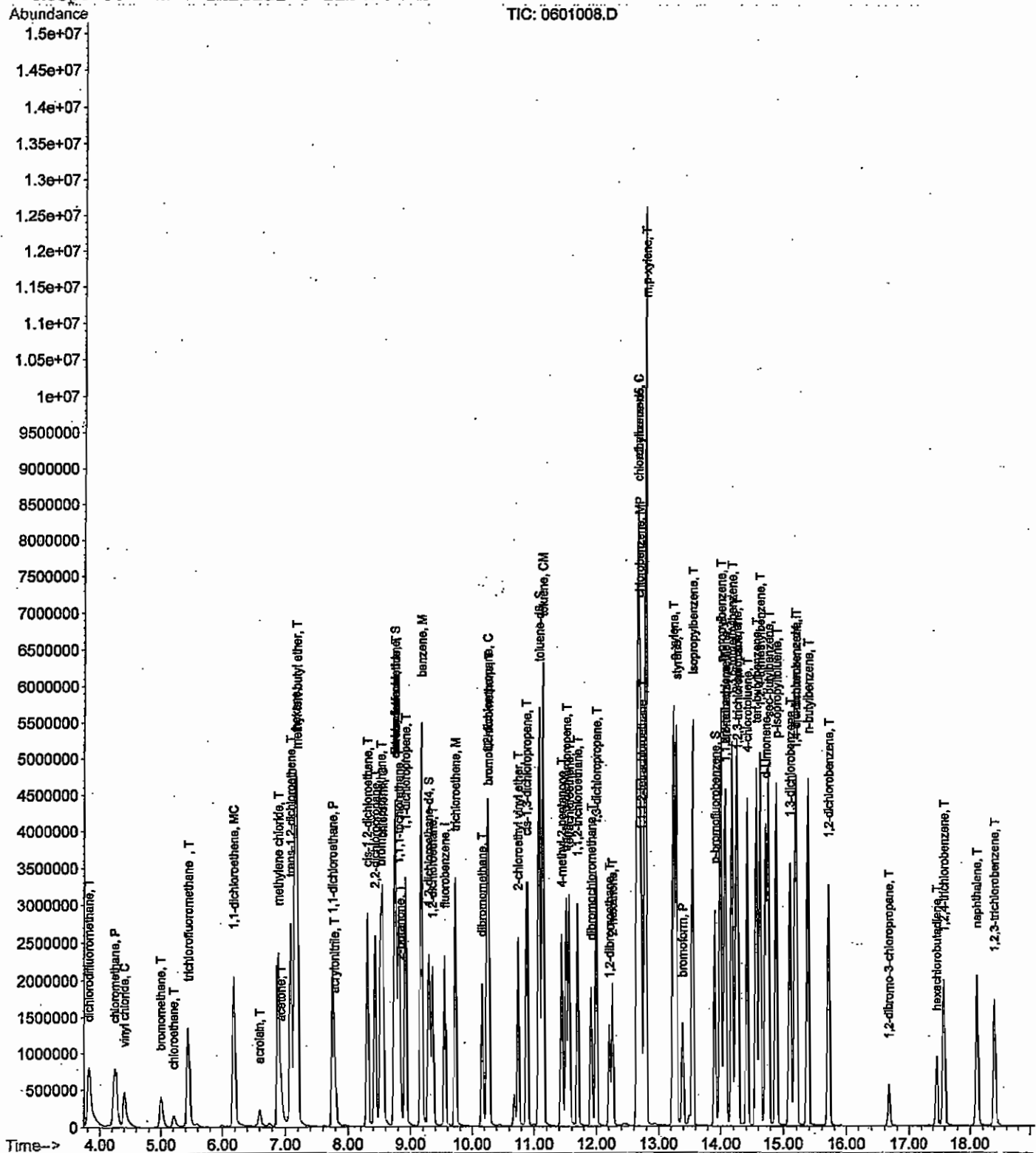
Quantitation Report

Data File : J:\98MSV01.I\100906.B\0601008.D
Acq On : 9 Oct 2006 8:15 pm
Sample : 100 std 6
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 10 16:27 19106

Vial: 6
Operator: RG
Inst : ms-01
Multiplr: 1.00

Quant Results File: MS100906.RES

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Method      : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
Title       : Mass Spec VOA
Last Update : Tue Oct 10 10:31:41 2006
Response via : Initial Calibration
```



Data File : J:\98MSV01.I\100906.B\0701009.D

Vial: 7

Acq On : 9 Oct 2006 8:45 pm

Operator: RG

Sample : 200 std 7

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:27 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.55	96	2301345	50.00	ppb	0.00
41) chlorobenzene-d5	12.67	82	968937	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.18	152	671074	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.74	113	2501727	183.24	ppb	0.00
Spiked Amount	50.000	Range	66 - 124	Recovery	=	366.48%#
25) 1,2-dichloroethane-d4	9.29	65	3109514	181.96	ppb	0.00
Spiked Amount	50.000	Range	70 - 120	Recovery	=	363.92%#
38) toluene-d8	11.08	98	7868285	193.05	ppb	0.00
Spiked Amount	50.000	Range	76 - 120	Recovery	=	386.10%#
57) p-bromofluorobenzene	13.92	176	1947418	203.71	ppb	0.00
Spiked Amount	50.000	Range	74 - 127	Recovery	=	407.42%#

Target Compounds

						Qvalue
2) chloromethane	4.25	50	4450317	168.43	ppb	99
3) vinyl chloride	4.40	62	2222785	168.29	ppb	98
4) bromomethane	5.00	94	905757	194.80	ppb	98
5) chloroethane	5.21	49	168661	187.51	ppb	91
6) dichlorodifluoromethane	3.82	85	3712666	154.59	ppb	97
7) trichlorofluoromethane	5.44	101	3891982	174.07	ppb	99
8) acrolein	6.60	56	402101	183.58	ppb	100
9) acetone	6.94	43	1613509	198.64	ppb	100
10) 1,1-dichloroethene	6.19	96	2262810	176.99	ppb	97
11) methylene chloride	6.89	84	2853269	191.94	ppb	99
12) methyl tert-butyl ether	7.18	73	7414383	164.97	ppb	100
13) trans-1,2-dichloroethene	7.09	96	2678316	175.14	ppb	97
14) hexane	7.15	57	5314895	160.71	ppb	100
15) 1,1-dichloroethane	7.76	63	5364868	175.27	ppb	100
16) acrylonitrile	7.79	53	1469861	176.10	ppb	99
17) 2-butanone	8.84	43	2384180	198.75	ppb	99
18) cis-1,2-dichloroethene	8.31	96	2890840	185.93	ppb	98
19) 2,2-dichloropropane	8.43	77	3738059	178.15	ppb	100
20) chloroform	8.55	83	4970057	177.74	ppb	100
21) bromochloromethane	8.52	128	1348439	188.66	ppb	99
22) tetrahydrofuran	8.76	42	1262120	194.65	ppb	94
23) 1,1,1-trichloroethane	8.81	97	3746164	189.08	ppb	99
26) 1,2-dichloroethane	9.35	62	3759762	185.88	ppb	100
27) carbon tetrachloride	8.75	117	3024719	188.29	ppb	98
28) 1,1-dichloropropene	8.92	75	3817110	182.92	ppb	97
29) benzene	9.17	78	9773033	172.56	ppb	99
30) trichloroethene	9.72	130	2276854	192.08	ppb	98
31) 1,2-dichloropropane	10.24	63	2945811	191.01	ppb	99
32) bromodichloromethane	10.27	83	3758036	200.60	ppb	99
33) dibromomethane	10.16	93	1872312	194.80	ppb	100
34) 2-chloroethyl vinyl ether	10.75	63	2186371	200.32	ppb	99
35) cis-1,3-dichloropropene	10.89	75	4484905	199.15	ppb	98
36) trans-1,3-dichloropropene	11.51	75	4009359	196.96	ppb	99
37) toluene	11.14	91	9298868	185.42	ppb	97
39) 1,1,2-trichloroethane	11.70	97	2172515	205.02	ppb	99

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

0701009.D MS100906.M

Thu Dec 14 10:13:15 2006

VOA

Data File : J:\98MSV01.I\100906.B\0701009.D

Vial: 7

Acq On : 9 Oct 2006 8:45 pm

Operator: RG

Sample : 200 std 7

Inst : ms-01

Misc :

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Oct 10 16:27 19106

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.21	107	2299271	210.97	ppb	100
42) 1,3-dichloropropane	12.00	76	4361349	186.77	ppb	100
43) dibromochloromethane	11.92	129	2274014	202.64	ppb	100
44) bromoform	13.40	173	1557982	217.65	ppb	100
45) 4-methyl-2-pentanone	11.44	43	4461644	173.57	ppb	99
46) 2-hexanone	12.26	43	3231315	185.89	ppb	98
47) tetrachloroethene	11.56	164	1568852	192.86	ppb	100
48) chlorobenzene	12.69	112	5965010	185.70	ppb	97
49) 1,1,1,2-tetrachloroethane	12.73	131	2054948	197.37	ppb	100
50) ethylbenzene	12.65	91	10174967	196.92	ppb	97
51) m,p-xylene	12.78	106	6606499	339.42	ppb	91
52) o-xylene	13.24	106	3602127	210.51	ppb	94
53) styrene	13.28	104	6452550	207.42	ppb	99
55) isopropylbenzene	13.55	105	8829949	184.05	ppb	99
56) 1,1,2,2-tetrachloroethane	14.06	83	3204410	177.37	ppb	99
58) bromobenzene	14.08	156	2264025	194.99	ppb	99
59) 1,2,3-trichloropropane	14.26	110	886007	185.30	ppb	100
60) n-propylbenzene	14.00	91	11324491	176.11	ppb	96
61) 2-chlorotoluene	14.24	91	6963251	182.97	ppb	98
62) 1,3,5-trimethylbenzene	14.17	105	7174125	195.76	ppb	98
63) 4-chlorotoluene	14.42	91	7105379	185.46	ppb	99
64) tert-butylbenzene	14.57	119	5635225	191.73	ppb	99
65) 1,2,4-trimethylbenzene	14.63	105	7326286	191.95	ppb	100
66) d-Limonene	14.73	68	2653507	186.21	ppb	99
67) sec-butylbenzene	14.77	105	8895850	181.68	ppb	99
68) p-isopropyltoluene	14.89	119	6975560	190.53	ppb	100
69) 1,3-dichlorobenzene	15.10	146	3927234	189.94	ppb	100
70) 1,4-dichlorobenzene	15.19	146	4109131	198.42	ppb	100
71) 1,2-dichlorobenzene	15.70	146	3721394	189.65	ppb	100
72) n-butylbenzene	15.38	91	6973943	185.59	ppb	98
73) 1,2-dibromo-3-chloropropan	16.67	75	444393	202.97	ppb	96
74) 1,2,4-trichlorobenzene	17.59	180	2212481	217.99	ppb	99
75) hexachlorobutadiene	17.47	225	569538	206.32	ppb	100
76) naphthalene	18.10	128	5441318	234.31	ppb	100
77) 1,2,3-trichlorobenzene	18.40	180	2007372	220.84	ppb	99
78) n-heptane	9.05	43	3615	No Calib	#	

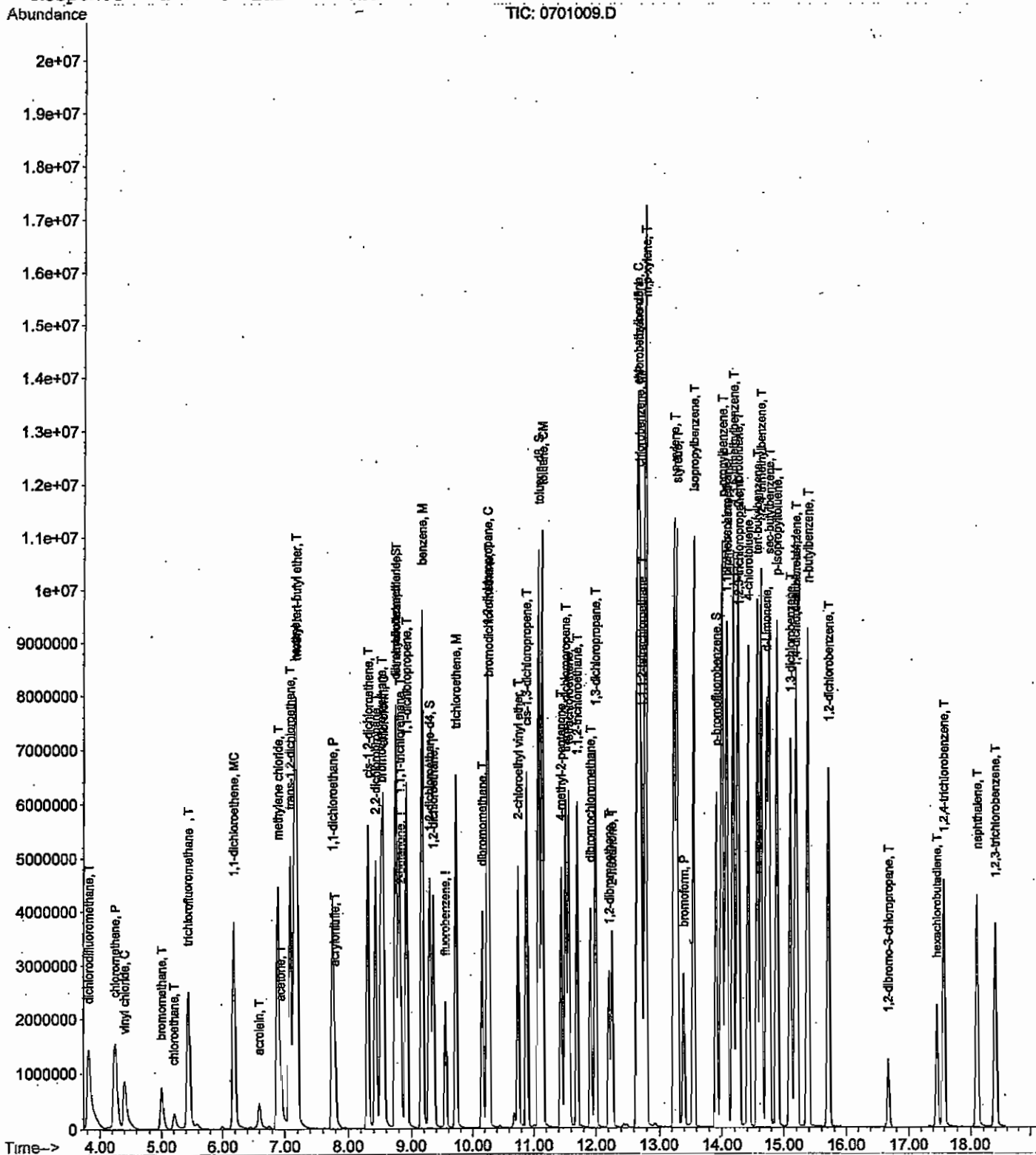
Quantitation Report

Data File : J:\98MSV01.I\100906.B\0701009.D
Acq On : 9 Oct 2006 8:45 pm
Sample : 200 std 7
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 10 16:27 19106

Vial: 7
Operator: RG
Inst : ms-01
Multiplr: 1.00

Quant Results File: MS100906.RES

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
Title : Mass Spec VOA
Last Update : Tue Oct 10 10:31:41 2006
Response via : Initial Calibration



Data File : J:\98MSV01.I\100906.B\0901011.D
 Acq On : 9 Oct 2006 9:46 pm
 Sample : icv
 Misc :
 MS Integration Params: RTEINT.P
 Quant Time: Oct 10 10:34 19106

Vial: 9
 Operator: RG
 Inst : ms-01
 Multiplr: 1.00

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration
 DataAcq Meth : VOAMS1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorobenzene	9.55	96	2287367	50.00	ppb	0.00
41) chlorobenzene-d5	12.66	82	973574	50.00	ppb	0.00
54) 1,4-dichlorobenzene-d4	15.17	152	647258	50.00	ppb	0.00

System Monitoring Compounds

24) dibromofluoromethane	8.74	113	618747	45.60	ppb	0.00
Spiked Amount	50.000	Range	66 - 124	Recovery	=	91.20%
25) 1,2-dichloroethane-d4	9.29	65	714462	42.06	ppb	0.00
Spiked Amount	50.000	Range	70 - 120	Recovery	=	84.12%
38) toluene-d8	11.08	98	1850301	45.68	ppb	0.00
Spiked Amount	50.000	Range	76 - 120	Recovery	=	91.36%
57) p-bromofluorobenzene	13.91	176	379766	42.90	ppb	0.00
Spiked Amount	50.000	Range	74 - 127	Recovery	=	85.80%

Target Compounds

						Qvalue
2) chloromethane	4.25	50	2108915	80.30	ppb	100
3) vinyl chloride	4.40	62	1093850m	83.32	ppb	
4) bromomethane	5.00	94	450207	95.10	ppb	99
5) chloroethane	5.21	49	88624	96.74	ppb	98
6) dichlorodifluoromethane	3.82	85	1712172m	71.73	ppb	
7) trichlorofluoromethane	5.44	101	1703579	76.66	ppb	100
8) acrolein	6.60	56	253503	116.45	ppb	99
9) acetone	6.94	43	818674	97.85	ppb	97
10) 1,1-dichloroethene	6.18	96	1077633	84.80	ppb	99
11) methylene chloride	6.89	84	1431925m	95.18	ppb	
12) methyl tert-butyl ether	7.18	73	3881434	86.89	ppb	100
13) trans-1,2-dichloroethene	7.09	96	1324629	87.15	ppb	100
14) hexane	7.16	57	2150555	65.42	ppb	95
15) 1,1-dichloroethane	7.76	63	2599826	85.45	ppb	100
16) acrylonitrile	7.79	53	705086	84.99	ppb	97
17) 2-butanone	8.84	43	1137320	94.68	ppb	99
18) cis-1,2-dichloroethene	8.31	96	1372090	88.79	ppb	99
19) 2,2-dichloropropane	8.43	77	1711687	82.08	ppb	100
20) chloroform	8.55	83	2421730	87.13	ppb	100
21) bromochloromethane	8.52	128	633616	89.19	ppb	100
22) tetrahydrofuran	8.75	42	700144	70.62	ppb	96
23) 1,1,1-trichloroethane	8.81	97	1758856	89.32	ppb	100
26) 1,2-dichloroethane	9.36	62	1758247	87.46	ppb	100
27) carbon tetrachloride	8.75	117	1430471	89.59	ppb	98
28) 1,1-dichloropropene	8.92	75	1835154	88.48	ppb	99
29) benzene	9.17	78	4887702	86.83	ppb	100
30) trichloroethene	9.72	130	1043690	88.59	ppb	98
31) 1,2-dichloropropane	10.25	63	1364069	88.99	ppb	99
32) bromodichloromethane	10.27	83	1797421	96.53	ppb	99
33) dibromomethane	10.16	93	867824	90.84	ppb	99
34) 2-chloroethyl vinyl ether	10.75	63	1014310	93.50	ppb	99
35) cis-1,3-dichloropropene	10.88	75	2019266	90.21	ppb	100
36) trans-1,3-dichloropropene	11.51	75	1848304	91.35	ppb	100
37) toluene	11.13	91	4576196	91.81	ppb	100
39) 1,1,2-trichloroethane	11.70	97	972829	92.37	ppb	99

(#) = qualifier out of range (m) = manual integration
 0901011.D MS100906.M Thu Dec 14 10:13:33 2006

VOA

Data File : J:\98MSV01.I\100906.B\0901011.D

Acq On : 9 Oct 2006 9:46 pm

Sample : icv

Misc :

MS Integration Params: RTEINT.P

Quant Time: Oct 10 10:34 19106

Vial: 9

Operator: RG

Inst : ms-01

Multiplr: 1.00

Quant Results File: MS100906.RES

Quant Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)

Title : Mass Spec VOA

Last Update : Tue Oct 10 10:31:41 2006

Response via : Initial Calibration

DataAcq Meth : VOAMS1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) 1,2-dibromoethane	12.21	107	1005863	92.86	ppb	99
42) 1,3-dichloropropane	11.99	76	1965118	83.75	ppb	100
43) dibromochloromethane	11.92	129	1021362	90.58	ppb	100
44) bromoform	13.39	173	663799	92.29	ppb	99
45) 4-methyl-2-pentanone	11.44	43	2097568	81.21	ppb	99
46) 2-hexanone	12.25	43	1436254	82.23	ppb	99
47) tetrachloroethene	11.56	164	691338	84.58	ppb	100
48) chlorobenzene	12.69	112	2729083	84.56	ppb	99
49) 1,1,1,2-tetrachloroethane	12.72	131	887592	84.85	ppb	99
50) ethylbenzene	12.65	91	5091604	96.74	ppb	100
51) m,p-xylene	12.78	106	3636006	185.92	ppb	100
52) o-xylene	13.24	106	1599365	93.02	ppb	99
53) styrene	13.28	104	2950087	94.38	ppb	94
55) isopropylbenzene	13.55	105	4129253	89.24	ppb	100
56) 1,1,2,2-tetrachloroethane	14.06	83	1409202	80.87	ppb	99
58) bromobenzene	14.08	156	982664	87.75	ppb	99
59) 1,2,3-trichloropropane	14.26	110	388826	84.31	ppb	100
60) n-propylbenzene	13.99	91	5422856	87.44	ppb	100
61) 2-chlorotoluene	14.24	91	3223089	87.81	ppb	100
62) 1,3,5-trimethylbenzene	14.17	105	3209790	90.81	ppb	100
63) 4-chlorotoluene	14.41	91	3245386	87.83	ppb	100
64) tert-butylbenzene	14.56	119	2537866	89.52	ppb	100
65) 1,2,4-trimethylbenzene	14.63	105	3303239	89.73	ppb	100
66) d-Limonene	14.72	68	1217596	88.52	ppb	100
67) sec-butylbenzene	14.76	105	4016790	85.05	ppb	100
68) p-isopropyltoluene	14.88	119	3230542	91.48	ppb	100
69) 1,3-dichlorobenzene	15.10	146	1773973	88.96	ppb	100
70) 1,4-dichlorobenzene	15.19	146	1829133	90.58	ppb	99
71) 1,2-dichlorobenzene	15.70	146	1653472	87.36	ppb	100
72) n-butylbenzene	15.38	91	3299866	91.05	ppb	100
73) 1,2-dibromo-3-chloropropan	16.67	75	186284	88.68	ppb	99
74) 1,2,4-trichlorobenzene	17.58	180	847128	86.54	ppb	100
75) hexachlorobutadiene	17.47	225	228977	86.00	ppb	100
76) naphthalene	18.10	128	2131251	95.15	ppb	100
77) 1,2,3-trichlorobenzene	18.40	180	796133	90.81	ppb	99
78) n-heptane	8.84	43	1145865	No Calib	#	

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

0901011.D MS100906.M

Thu Dec 14 10:13:34 2006

VOA

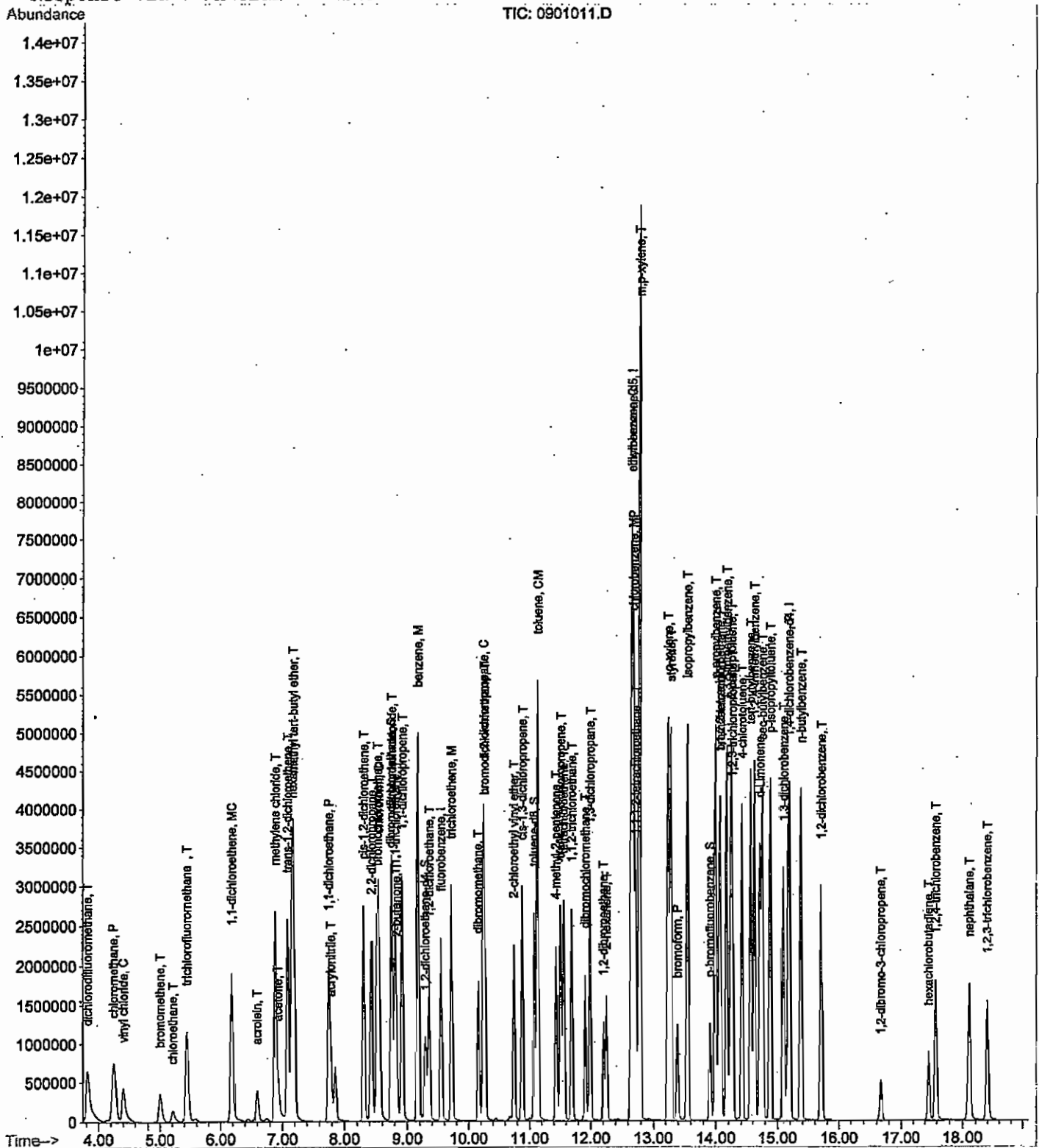
Quantitation Report

Data File : J:\98MSV01.I\100906.E\0901011.D
Acq On : 9 Oct 2006 9:46 pm
Sample : icv
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 10 10:34 19106

Vial: 9
Operator: RG
Inst : ms-01
Multiplr: 1.00

Quant Results File: MS100906.RES

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Method      : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
Title       : Mass Spec VOA
Last Update  : Tue Oct 10 10:31:41 2006
Response via : Initial Calibration
```



Response Factor Report ms-01

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration

2/14/06

L = linear @ > 0.990
 Q = Quadratic @ > 0.990
 Otherwise Average of
 R.F. was used

Calibration Files

2 =0201004.D 3 =0301005.D 4 =0401006.D
 5 =0501007.D 6 =0601008.D 7 =0701009.D

R 12/14/06

Compound	2	3	4	5	6	7	Avg	%RSD
-----ISTD-----								
1) I fluorobenzene								
2) P chloromethane	0.674	0.599	0.648	0.533	0.500	0.490	0.574	13.59
3) C vinyl chloride	0.315	0.312	0.314	0.268	0.259	0.254	0.287	10.34
4) T bromomethane	0.201	0.153	0.143	0.111	0.112	0.099	0.137	27.84 L
5) T chloroethane	0.041	0.031	0.031	0.023	0.020	0.019	0.028	29.76 L
6) T dichlorodifluoromet	0.615	0.557	0.567	0.487	0.467	0.439	0.522	12.99
7) T trichlorofluorometh	0.587	0.467	0.537	0.461	0.439	0.423	0.486	13.02
8) T acrolein	0.059	0.049	0.049	0.042	0.043	0.044	0.048	13.63
9) T acetone	1.396	0.423	0.273	0.192	0.188	0.175	0.441	108.05 L
10) MC 1,1-dichloroethene	0.311	0.290	0.301	0.263	0.256	0.246	0.278	9.47
11) T methylene chloride	1.049	0.508	0.441	0.350	0.329	0.322	0.500	55.78 L
12) T methyl tert-butyl e	1.094	1.041	1.063	0.944	0.911	0.806	0.976	11.21
13) T trans-1,2-dichloroe	0.392	0.351	0.355	0.305	0.300	0.291	0.332	12.00
14) hexane	0.796	0.765	0.790	0.710	0.672	0.578	0.719	11.70
15) P 1,1-dichloroethane	0.780	0.694	0.701	0.618	0.615	0.583	0.665	10.99
16) T acrylonitrile	0.217	0.192	0.181	0.171	0.168	0.160	0.181	11.39
17) T 2-butanone	0.449	0.313	0.280	0.272	0.265	0.260	0.307	23.62 L
18) T cis-1,2-dichloroeth	0.383	0.348	0.349	0.314	0.319	0.314	0.338	8.08
19) T 2,2-dichloropropane	0.557	0.476	0.472	0.412	0.412	0.406	0.456	12.87
20) C chloroform	0.729	0.627	0.630	0.558	0.562	0.540	0.608	11.57
21) T bromochloromethane	0.173	0.155	0.163	0.144	0.150	0.147	0.155	7.27
22) tetrahydrofuran	0.428	0.232	0.219	0.215	0.204	0.137	0.239	41.11 Q
23) T 1,1,1-trichlorethan	0.474	0.432	0.449	0.406	0.414	0.407	0.430	6.29
24) S dibromofluoromethan	0.334	0.300	0.307	0.280	0.286	0.272	0.297	7.55
25) S 1,2-dichloroethane-	0.475	0.370	0.371	0.334	0.340	0.338	0.371	14.39
26) T 1,2-dichloroethane	0.501	0.451	0.458	0.407	0.410	0.409	0.439	8.56
27) T carbon tetrachlorid	0.397	0.352	0.354	0.328	0.335	0.329	0.349	7.48
28) T 1,1-dichloropropene	0.508	0.464	0.470	0.430	0.434	0.415	0.453	7.50
29) M benzene	1.457	1.248	1.294	1.167	1.155	1.062	1.231	11.13
30) M trichloroethene	0.287	0.255	0.263	0.239	0.254	0.247	0.258	6.37
31) C 1,2-dichloropropane	0.371	0.335	0.337	0.319	0.329	0.320	0.335	5.68
32) T bromodichloromethan	0.429	0.400	0.408	0.390	0.407	0.408	0.407	3.17
33) T dibromomethane	0.236	0.207	0.207	0.195	0.203	0.203	0.209	6.78
34) T 2-chloroethyl vinyl	0.242	0.227	0.231	0.235	0.250	0.238	0.237	3.44
35) T cis-1,3-dichloropro	0.530	0.476	0.483	0.467	0.492	0.487	0.489	4.46
36) T trans-1,3-dichlorop	0.475	0.424	0.432	0.439	0.447	0.436	0.442	4.02
37) CM toluene	1.179	1.054	1.113	1.090	1.091	1.010	1.090	5.20
38) S toluene-d8	1.013	0.834	0.864	0.863	0.884	0.855	0.885	7.28
39) T 1,1,2-trichloroetha	0.246	0.221	0.222	0.219	0.236	0.236	0.230	4.75
40) T 1,2-dibromoethane	0.253	0.231	0.228	0.221	0.238	0.250	0.237	5.24
-----ISTD-----								
41) I chlorobenzene-d5								
42) T 1,3-dichloropropane	1.459	1.278	1.260	1.016	1.092	1.125	1.205	13.25
43) T dibromochloromethan	0.614	0.611	0.610	0.502	0.550	0.587	0.579	7.74
44) P bromoform	0.378	0.358	0.356	0.344	0.378	0.402	0.369	5.68
45) T 4-methyl-2-pentanone	1.543	1.435	1.362	1.230	1.237	1.151	1.326	11.08
46) T 2-hexanone	1.005	0.951	0.905	0.812	0.875	0.834	0.897	8.11
47) T tetrachloroethene	0.495	0.436	0.429	0.366	0.389	0.405	0.420	10.70
48) MP chlorobenzene	1.961	1.734	1.717	1.474	1.520	1.539	1.658	11.08
49) T 1,1,1,2-tetrachloro	0.637	0.549	0.553	0.461	0.494	0.530	0.537	11.20
50) C ethylbenzene	4.018	3.295	3.325	2.807	2.856	2.625	3.154	16.08 L
51) T m,p-xylene	1.158	1.029	1.030	0.959	0.997	0.852	1.004	9.96

Response Factor Report ms-01

Method : J:\98MSV01.I\METHOD\MS100906.M (RTE Integrator)
 Title : Mass Spec VOA
 Last Update : Tue Oct 10 10:31:41 2006
 Response via : Initial Calibration

Calibration Files

2 =0201004.D 3 =0301005.D 4 =0401006.D
 5 =0501007.D 6 =0601008.D 7 =0701009.D

	Compound	2	3	4	5	6	7	Avg	%RSD
52) T	o-xylene	0.964	0.869	0.885	0.768	0.883	0.929	0.883	7.55
53) T	styrene	1.646	1.550	1.578	1.546	1.647	1.665	1.605	3.34
54) I	1,4-dichlorobenzene-d	-----ISTD-----							
55) T	isopropylbenzene	4.184	3.620	3.666	3.272	3.416	3.289	3.574	9.53
56) P	1,1,2,2-tetrachloro	1.609	1.474	1.416	1.167	1.217	1.194	1.346	13.37
57) S	p-bromofluorobenzene	0.956	0.737	0.732	0.604	0.670	0.725	0.737	16.09 L
58) T	bromobenzene	0.990	0.868	0.894	0.768	0.826	0.843	0.865	8.62
59) T	1,2,3-trichloroprop	0.439	0.371	0.350	0.316	0.332	0.330	0.356	12.52
60) T	n-propylbenzene	5.660	4.992	5.017	4.285	4.573	4.219	4.791	11.35
61) T	2-chlorotoluene	3.252	2.945	2.931	2.568	2.722	2.594	2.836	9.16
62) T	1,3,5-trimethylbenz	3.007	2.705	2.806	2.482	2.708	2.675	2.731	6.31
63) T	4-chlorotoluene	3.325	2.904	2.947	2.558	2.745	2.647	2.854	9.60
64) T	tert-butylbenzene	2.509	2.141	2.260	2.008	2.123	2.099	2.190	8.04
65) T	1,2,4-trimethylbenz	3.067	2.786	2.910	2.749	2.821	2.729	2.844	4.45
66) T	d-Limonene	1.041	1.076	1.110	1.074	1.081	0.989	1.062	3.96
67) T	sec-butylbenzene	4.016	3.674	3.659	3.639	3.588	3.314	3.648	6.14
68) T	p-isopropyltoluene	2.872	2.666	2.738	2.749	2.742	2.599	2.728	3.35
69) T	1,3-dichlorobenzene	1.748	1.503	1.587	1.429	1.513	1.463	1.540	7.46
70) T	1,4-dichlorobenzene	2.258	1.827	1.866	1.602	1.601	1.531	1.781	15.15 L
71) T	1,2-dichlorobenzene	1.691	1.500	1.471	1.316	1.407	1.386	1.462	8.87
72) T	n-butylbenzene	3.013	2.791	2.896	2.701	2.799	2.598	2.800	5.18
73) T	1,2-dibromo-3-chlor	0.244	0.188	0.182	0.151	0.155	0.166	0.181	19.02 L
74) T	1,2,4-trichlorobenz	0.830	0.720	0.755	0.678	0.730	0.824	0.756	7.95
75) T	hexachlorobutadiene	0.246	0.202	0.212	0.170	0.192	0.212	0.206	12.24
76) T	naphthalene	1.623	1.530	1.700	1.605	1.896	2.028	1.730	11.11
77) T	1,2,3-trichlorobenz	0.703	0.645	0.673	0.608	0.686	0.748	0.677	7.13
78) T	M n-heptane							0.000	-1.00

Appendix C
RAGS Part D Tables

TABLE 1
SELECTION OF EXPOSURE PATHWAYS
Pfizer - Barcelonaeta, Puerto Rico

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current	Soil	Soil	Comb. Surface/Subsurface Soil	Industrial Worker	Adult	Dermal	Quant	Considered complete pathway
						Ingestion	Quant	Considered complete pathway
		Air	Fugitive dusts	Industrial Worker	Adult	Inhalation	None	Insignificant exposure pathway
			Outdoor Air Volatiles	Industrial Worker	Adult	Inhalation	None	Insignificant exposure pathway
	Ground Water	Ground Water	Tap Water	Industrial Worker	Adult	Dermal	Quant	Considered complete pathway
			Indoor Air	Industrial Worker	Adult	Ingestion	Quant	Considered complete pathway
						Inhalation	None	Ground Water is 300' deep. VI Guidance recommends evaluation at 100' or less
		Soil Gas	Indoor Air	Industrial Worker	Adult	Inhalation	Quant	Considered complete pathway

TABLE 1
SELECTION OF EXPOSURE PATHWAYS
Pfizer - Barceloneta, Puerto Rico

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway	
Future	Soil	Soil	Comb. Surface/Subsurface Soil	Construction Worker	Adult	Dermal	Quant	Considered complete pathway	
						Ingestion	Quant	Considered complete pathway	
				Resident	Adult	Dermal	Quant	Considered complete pathway	
						Ingestion	Quant	Considered complete pathway	
					Child	Dermal	Quant	Considered complete pathway	
						Ingestion	Quant	Considered complete pathway	
					Construction Worker	Adult	Inhalation	Quant	Considered complete pathway
						Adult	Inhalation	None	Insignificant exposure pathway
				Air	Fugitive dusts	Child	Inhalation	None	Insignificant exposure pathway
						Adult	Inhalation	Quant	Considered complete pathway
	Outdoor Air Volatiles	Adult	Inhalation		None	Insignificant exposure pathway			
		Child	Inhalation		None	Insignificant exposure pathway			
		Adult	Inhalation		None	Insignificant exposure pathway			
	Ground Water	Ground Water	Ground Water	Construction Worker	Adult	Dermal	None	Ground Water is 300' deep, incomplete exposure pathway	
						Ingestion	None	Ground Water is 300' deep, incomplete exposure pathway	
						Dermal	Quant	Considered complete pathway	
						Ingestion	Quant	Considered complete pathway	
						Dermal	Quant	Considered complete pathway	
		Tap Water	Resident	Adult	Dermal	Quant	Considered complete pathway		
					Ingestion	Quant	Considered complete pathway		
					Dermal	Quant	Considered complete pathway		
					Ingestion	Quant	Considered complete pathway		
					Inhalation	None	Ground Water is 300' deep, VI Guidance recommends evaluation at 100' or less		
		Air	Indoor Air	Resident	Adult	Inhalation	None	Ground Water is 300' deep, VI Guidance recommends evaluation at 100' or less	
						Inhalation	None	Ground Water is 300' deep, VI Guidance recommends evaluation at 100' or less	
Inhalation						None	Ground Water is 300' deep, VI Guidance recommends evaluation at 100' or less		
Inhalation						None	Ground Water is 300' deep, VI Guidance recommends evaluation at 100' or less		
Inhalation						None	Ground Water is 300' deep, VI Guidance recommends evaluation at 100' or less		
Soil Gas	Indoor Air	Construction Worker	Adult	Inhalation	None	Considered incomplete pathway			
				Inhalation	Quant	Considered complete pathway			
				Inhalation	Quant	Considered complete pathway			
				Inhalation	Quant	Considered complete pathway			
				Inhalation	Quant	Considered complete pathway			

TABLE 2.1
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Pfizer - Barceloneta, Puerto Rico

Scenario Timeframe	Current/Future
Medium:	Soil
Exposure Medium:	Soil

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value	Screening Toxicity Value (N/C) (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (3)
Soil	87641	Acetone	0.0081	19	mg/kg	AB-12, 8-10'	23.91%	0.01-100	19		14128 NC			N	BSL
	71432	Benzene	0.043	23	mg/kg	B-04, 1-2'	10.87%	0.006-1.4	23		0.64 C			Y	ASL
	75150	Carbon Disulfide	0.006	0.012	mg/kg	VB-13, 9-10'	12.50%	0.006-1.4	0.012		360 NC			N	BSL
	108907	Chlorobenzene	-	-	mg/kg		ND	0.006-1.4	-					N	ND
	67663	Chloroform	-	-	mg/kg		ND	0.01-10	-					N	ND
	100414	Ethylbenzene	2	94	mg/kg	B-04, 1-2'	6.52%	0.006-1.4	94		400 NC			N	BSL
	78933	MEK	0.0014	2.8	mg/kg	AB-12, 8-10'	31.25%	0.01-1.5	2.8		22311 NC			N	BSL
	75092	Methylene Chloride	0.0011	1.1	mg/kg	AB-12, 8-10'	10.87%	0.006-20	1.1		9.1 C			N	BSL
	1634044	MTBE	-	-	mg/kg		ND	0.01-1.4	-					N	ND
	71410	Pentanol	0.03	0.03	mg/kg	AB-21, 8-10'	20.00%	0.01-0.61	0.03		12514 NC (isobutanol surrogate)			N	BSL
	109999	Tetrahydrofuran	0.08	13.9	mg/kg	B-01, 5-7'	77.14%	0.01-10	13.9		2.5 NC (furan surrogate)			Y	ASL
	108883	Toluene	0.002	131	mg/kg	B-04, 1-2'	10.87%	0.006-1.4	131		520 NC			N	BSL
	1330207	Xylenes	0.0051	420	mg/kg	B-04, 1-2'	13.04%	0.006-1.4	420		270 NC			Y	ASL

(1) Maximum Detected Concentration

(2) Region IX Residential PRGs

(3) Rationale Codes:

BSL - Below Screening Level

ASL - Above Screening Level

ND - Not Detected

TABLE 2.2
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Pfizer, Barceloneta, Puerto Rico

Scenario Timeframe: Current/Future Medium: Ground Water Exposure Medium: Ground Water		Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value	Screening Toxicity Value (NTC) (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (3)
		Ground Water		Dichloropropene, cis-1,3-	-	-	ug/L		ND	5	-					N	ND
				Dichloropropene, trans-1,3-	-	-	ug/L		ND	5	-					N	ND
				Ethylbenzene	-	-	ug/L		ND	5	-					N	ND
				Hexachlorobutadiene	-	-	ug/L		ND	5	-					N	ND
				Hexane	-	-	ug/L		ND	10	-					N	ND
				Hexanone, 2-	-	-	ug/L		ND	10	-					N	ND
				Isopropyl toluene, 4-	-	-	ug/L		ND	5	-					N	ND
				Methyl tert-butyl ether	-	-	ug/L		ND	5	-					N	ND
				Methyl-2-pentanone, 4-	-	-	ug/L		ND	10	-					N	ND
				Methylene chloride	-	-	ug/L		ND	5	-					N	ND
				Naphthalene	-	-	ug/L		ND	5	-					N	ND
				Propylbenzene, n-	-	-	ug/L		ND	5	-					N	ND
				Propanol, 2-	-	-	ug/L		ND	5	-					N	ND
				Styrene	-	-	ug/L		ND	5	-					N	ND
				Tetrachloroethane, 1,1,2	-	-	ug/L		ND	5	-					N	ND
				Tetrachloroethane, 1,1,2,2	-	-	ug/L		ND	5	-					N	ND
				Tetrachloroethene	-	-	ug/L		ND	5	-					N	ND
				Tetrahydrofuran	-	-	ug/L		ND	5	-					N	ND
				Toluene	-	-	ug/L		ND	5	-					N	ND
				Trichlorobenzene, 1,2,3-	-	-	ug/L		ND	5	-					N	ND
				Trichlorobenzene, 1,2,4-	-	-	ug/L		ND	5	-					N	ND
				Trichloroethane, 1,1,1-	-	-	ug/L		ND	5	-					N	ND
				Trichloroethane, 1,1,2-	-	-	ug/L		ND	5	-					N	ND
				Trichloroethene	-	-	ug/L		ND	5	-					N	ND
				Trichlorofluoromethane	-	-	ug/L		ND	5	-					N	ND
				Trichloropropane, 1,2,3-	-	-	ug/L		ND	5	-					N	ND
				Trimethylbenzene, 1,2,4-	-	-	ug/L		ND	5	-					N	ND
				Trimethylbenzene, 1,3,5-	-	-	ug/L		ND	5	-					N	ND
				Vinyl chloride	-	-	ug/L		ND	5	-					N	ND
				Xylene (total)	-	-	ug/L		ND	5	-					N	ND
				Xylene, m,p-	-	-	ug/L		ND	10	-					N	ND
				Xylene, o-	-	-	ug/L		ND	5	-					N	ND

(1) Maximum Detected Concentration
(2) Region IX Commercial Industrial PRGs
(3) Rationale Codes:
BSL - Below Screening Level
ASL - Above Screening Level
ESL - Equal to Screening Level
ND - Not Detected
NTX - No Toxicity Value

TABLE 2.2
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Pfizer, Barceloneta, Puerto Rico

Scenario Timeframe: Current/Future Medium: Ground Water Exposure Medium: Ground Water		Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value	Screening Toxicity Value (NIC) (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (3)
Ground Water				Acetone	-	-	ug/L		ND	10	-					N	ND
				Benzene	-	-	ug/L		ND	5	-					N	ND
				Bromobenzene	-	-	ug/L		ND	5	-					N	ND
				Bromochloromethane	-	-	ug/L		ND	5	-					N	ND
				Bromodichloromethane	-	-	ug/L		ND	5	-					N	ND
				Bromofom	-	-	ug/L		ND	5	-					N	ND
				Bromomethane	-	-	ug/L		ND	5	-					N	ND
				Butanone, 2-	-	-	ug/L		ND	10	-					N	ND
				Butyl benzene, n-	-	-	ug/L		ND	5	-					N	ND
				Butyl benzene, s-	-	-	ug/L		ND	5	-					N	ND
				Butyl benzene, t-	-	-	ug/L		ND	5	-					N	ND
				Carbon Tetrachloride	-	-	ug/L		ND	5	-					N	ND
				Chlorobenzene	25	450	ug/L	MW-1, 1/10/2007	68.70%	5	450		110 NC	100	MCL	Y	ASL
				Chloroethane	-	-	ug/L		ND	5	-					N	ND
				Chloroform	8.45	10.5	ug/L	MW-1, 1/10/2007	22.20%	5	10.5		0.17 C			Y	ASL
				Chloromethane	-	-	ug/L		ND	5	-					N	ND
				Chloroethane, 2-	-	-	ug/L		ND	5	-					N	ND
				Chlorotoluene, 4-	-	-	ug/L		ND	5	-					N	ND
				Cumene	-	-	ug/L		ND	5	-					N	ND
				Dibromo-3-chloropropane	-	-	ug/L		ND	5	-					N	ND
				Dibromochloromethane	-	-	ug/L		ND	5	-					N	ND
				Dibromomethane, 1,2-	-	-	ug/L		ND	5	-					N	ND
				Dibromomethane	-	-	ug/L		ND	5	-					N	ND
				Dichlorobenzene, 1,2-	-	-	ug/L		ND	5	-					N	ND
				Dichlorobenzene, 1,3-	-	-	ug/L		ND	5	-					N	ND
				Dichlorobenzene, 1,4-	-	-	ug/L		ND	5	-					N	ND
				Dichlorodifluoromethane	-	-	ug/L		ND	5	-					N	ND
				Dichloroethane, 1,1-	-	-	ug/L		ND	5	-					N	ND
				Dichloroethane, 1,2-	-	-	ug/L		ND	5	-					N	ND
				Dichloroethene, 1,1-	-	-	ug/L		ND	5	-					N	ND
				Dichloroethene, cis-1,2-	-	-	ug/L		ND	5	-					N	ND
				Dichloroethene, trans-1,2-	-	-	ug/L		ND	5	-					N	ND
				Dichloropropane, 1,2-	-	-	ug/L		ND	5	-					N	ND
				Dichloropropane, 1,3-	-	-	ug/L		ND	5	-					N	ND
				Dichloropropane, 2,2-	-	-	ug/L		ND	5	-					N	ND
				Dichloropropene, 1,1-	-	-	ug/L		ND	5	-					N	ND

TABLE 2.3
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Pfizer, Barceloneta, Puerto Rico

Scenario Timeframe	Current/Future
Medium:	Soil
Exposure Medium:	Soil Gas

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value	Screening Toxicity Value (NC) (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (3)
Air		Acetone	2.05	1963	ppmv	B-8	43.48%	0.456	1963.125		7.4E+01 N			Y	ASL
		Benzene	6.09	81763	ppmv	B-1	69.57%	0.459	81763.0625		4.9E-02 C			Y	ASL
		Chlorobenzene	2.79	18	ppmv	AB-10	39.13%	0.594	18.015		6.5 NC			Y	ASL
		Chloroform	2.755	137	ppmv	B-4	52.17%	0.594	137		1.1E-02 C			Y	ASL
		Ethylbenzene	9.05	12240	ppmv	B-1	56.52%	0.542	12239.84		2.5E-01 NC			Y	ASL
		Isopropanol	2.26	1153	ppmv	B-8	34.78%	0.302	1152.5		NA			N	NTX
		Methanol	6.355	53686	ppmv	B-1	34.78%	2.51	53686		NA			N	NTX
		Methylene chloride	8.935	2739	ppmv	AB-10b	43.48%	1.93	2736.75		5.9E-01 C			Y	ASL
		m,p-Xylene	3.92	27519	ppmv	B-1	60.87%	1.1	27519.3835		8.1E+02 NC			Y	ASL
		o-Xylene	2.97	11740	ppmv	B-1	47.83%	0.984	11740.176		8.1E+02 NC			Y	ASL
		Tetrahydrofuran	4.16	68580	ppmv	B-8	56.52%	0.719	68560		6.3E-1 NC (furan)			Y	ASL
		Toluene	0.99	80042	ppmv	B-1	56.52%	0.456	80042.391		5.3E+01 NC			Y	ASL

(1) Maximum Detected Concentration

(2) Region IX Commercial Industrial PRGs

(3) Rationale Codes:

BSL - Below Screening Level

ASL - Above Screening Level

ESL - Equal to Screening Level

ND - Not Detected

NTX - No Toxicity Value

TABLE 3.1
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Pfizer, Barceloneta, Puerto Rico

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration		
						Value	Units	Statistic (2)
Surface/Subsurface Soil	Benzene	mg/kg	6.42E-01	5.6E+00	2.3E+01	5.6E+00	mg/kg	99% Chebyshev (Mean, SD)
	Tetrahydrofuran	mg/kg	4.22E+00	1.1E+01	1.4E+01	1.1E+01	mg/kg	99% Chebyshev (Mean, SD)
	Xylenes	mg/kg	1.01E+01	1.0E+02	4.2E+02	1.0E+02	mg/kg	99% Chebyshev (Mean, SD)
								ProUCL
								ProUCL
								ProUCL

TABLE 3.2
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Pfizer, Barceloneta, Puerto Rico

Scenario Timeframe:	Current/Future
Medium:	Ground Water
Exposure Medium:	Ground Water

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Ground Water	Chlorobenzene	mg/kg	1.15E+02	4.9E+02	4.5E+02	4.5E+02	mg/kg	Maximum Detect	UCL>Max Detect
	Chloroform	mg/kg	4.05E+00	8.6E+00	1.1E+01	8.6E+00	mg/kg	95% Chebyshev (Mean, SD)	ProUCL

TABLE 3.3
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Pfizer, Barceloneta, Puerto Rico

Scenario Timeframe:			Current/Future
Medium:		Soil Gas	
Exposure Medium:		Soil Gas	

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Air	Acetone	ppmv	2.36E+02	1.16E+03	1.96E+03	1.2E+03	ppmv	Hall's Bootstrap UCL	ProUCL
	Benzene	ppmv	1.37E+04	4.67E+04	8.18E+04	4.7E+04	ppmv	Adjusted Gamma UCL	ProUCL
	Chlorobenzene	ppmv	3.96E+00	1.54E+01	1.80E+01	1.5E+01	ppmv	99% Chebyshev (Mean, SD)	ProUCL
	Chloroform	ppmv	1.45E+01	7.89E+01	1.37E+02	7.9E+01	ppmv	99% Chebyshev (Mean, SD)	ProUCL
	Ethylbenzene	ppmv	1.43E+03	3.32E+03	1.22E+04	3.3E+03	ppmv	Hall's Bootstrap UCL	ProUCL
	Methylene chloride	ppmv	1.94E+02	1.43E+03	2.74E+03	1.4E+03	ppmv	99% Chebyshev (Mean, SD)	ProUCL
	m,p-Xylene	ppmv	2.99E+03	1.28E+04	2.75E+04	1.3E+04	ppmv	Hall's Bootstrap UCL	ProUCL
	o-Xylene	ppmv	1.16E+03	5.37E+03	1.17E+04	5.4E+03	ppmv	Hall's Bootstrap UCL	ProUCL
	Tetrahydrofuran	ppmv	1.11E+04	2.12E+04	6.86E+04	2.1E+04	ppmv	Hall's Bootstrap UCL	ProUCL
	Toluene	ppmv	5.27E+03	3.08E+04	8.00E+04	3.1E+04	ppmv	Hall's Bootstrap UCL	ProUCL

Table 4.1
Values Used For Daily Intake Calculations
Pfizer - Barcelona, Puerto Rico

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil

Receptor Population	Exposure Route	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Industrial Worker	Ingestion	Adult	Combined Surface/Subsurface Soil	EPC	Soil Exposure Point Concentration	—	mg/kg	To Be Determined	Chronic Daily Intake (CDI) = $[EPC \times CF \times IR \times EF \times ED] / [BW \times AT]$
				CF	Units Conversion Factor	1.00E-06	kg/mg		
				IR	Soil Ingestion Rate	50	mg/day	USEPA 1997b	
				EF	Exposure Frequency	250	days/year	Professional Judgement	
				ED	Exposure Duration	25	years	USEPA 1997b	
				BW	Body Weight	70	kg	USEPA 1997b	
				ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	9125	days	USEPA 1989	
	Dermal	Adult	Combined Surface/Subsurface Soil	DAevent	Absorbed Dose per Event	Calculated	mg/cm2-event	USEPA 2004b	Dermal Absorbed Dose (DAD) = $(DA_{event} \times EV \times EF \times ED \times SA) / (BW \times AT)$ where: $DA_{event} = EPC \times CF1 \times AF \times ABS$
				EPC	Soil Exposure Point Concentration	—	mg/kg	To Be Determined	
				CF1	Units Conversion Factor	1.00E-06	kg/mg		
				AF	Adherence Factor	0.02	mg/cm2-event	USEPA 2004b	
				ABSd	Dermal Absorption Fraction	Chemical Specific	unitless	USEPA 2004b	
				EV	Event Frequency	1	event/day	Professional Judgement	
				EF	Exposure Frequency	250	days/year	Professional Judgement	
				ED	Exposure Duration	25	years	USEPA 1997b	
				SA	Skin Surface Area available for contact	3300	cm2	USEPA 2004b	
				BW	Body Weight	70	kg	USEPA 1997b	
				ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	9125	days	USEPA 1989	
	Inhalation	Adult	Indoor Air	EPC	Soil Gas EPC	—	ppmv	To Be Determined	J & E Spreadsheets SG-Screen Version 3.1 02/04
				EF	Exposure Frequency	250	d/yr	USEPA 1989	
				ED	Exposure Duration	25	yr	USEPA 1989	
				ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	9125	days	USEPA 1989	

Table 4.1
Values Used For Daily Intake Calculations
Pfizer - Barceloneta, Puerto Rico

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil

Receptor Population	Exposure Route	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Future Construction Worker	Ingestion	Adult	Combined Surface/Subsurface Soil	EPC	Soil Exposure Point Concentration	—	mg/kg	To Be Determined	Chronic Daily Intake (CDI) = [EPC x CF x IR x EF x ED]/(BW x AT)
				CF	Units Conversion Factor	1.00E-06	kg/mg		
				IR	Soil Ingestion Rate	330	mg/day	USEPA 2002b	
				EF	Exposure Frequency	250	days/year	Professional Judgement	
				ED	Exposure Duration	1	years	Professional Judgement	
				BW	Body Weight	70	kg	USEPA 1997b	
				ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	365	days	USEPA 1989	
	Dermal	Adult	Combined Surface/Subsurface Soil	DAevent	Absorbed Dose per Event	Calculated	mg/cm ² -event	USEPA 2004b	Dermal Absorbed Dose (DAD) = [DAevent x EV x EF x EO x SA]/(BW x AT) where DA _{event} = EPC x CF1 x AF x ABS _d
				EPC	Soil Exposure Point Concentration	—	mg/kg	To Be Determined	
				CF1	Units Conversion Factor	1.00E-06	kg/mg		
				AF	Adherence Factor	0.3	mg/cm ² -event	USEPA 2004b	
				ABS _d	Dermal Absorption Fraction	Chemical Specific	unitless	USEPA 2004b	
				EV	Event Frequency	1	event/day	Professional Judgement	
				EF	Exposure Frequency	250	days/year	Professional Judgement	
				ED	Exposure Duration	1	years	Professional Judgement	
				SA	Skin Surface Area available for contact	3300	cm ²	USEPA 2004b	
				BW	Body Weight	70	kg	USEPA 1997b	
				ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	365	days	USEPA 1989	
	Inhalation	Adult	Fugitive Gasts	EPC	Soil Exposure Point Concentration	—	mg/kg	To Be Determined	MPC = EPC x 1/PEF or MPC = EPC x 1/VF Adjusted Air conc = MPC x EF x ED/AT And: PEF (m ³ /kg) = Q/C x UC1/(0.036 x (1-V) x (Um/U1) ² x F(x))
				MPC	Modeled Particulate concentration	—	mg/m ³	USEPA 2002a	
				PEF	Particulate Emission Factor	1.08E+08	m ³ /kg	Calculated per USEPA 2002a	
				Q/C	Emissions coefficient	3.02E+01	g/m ³ -s/kg/m ³	calculated, USEPA 2002a	
				UC1	Units Conversion Factor	3.60E+03	s/hr		
				V	Fraction of vegetative cover	1.00E-01	—	BPJ	
				Um	Mean Annual Windspeed	3.71E+00	m/s	NOAA, 2006 for San Juan, PR	
				U1	Equivalent threshold value of windspeed at 7 m	1.13E+01	m/s	default, USEPA 2002a	
				F(x)	Function dependent on Um/U1	1.94E-01	—	default, USEPA 2002a	
				EF	Exposure Frequency	250	days/year	Professional Judgement	
				ED	Exposure Duration	1	years	Professional Judgement	
				ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	365	days	USEPA 1989	
Future Resident	Ingestion	Adult	Combined Surface/Subsurface Soil	EPC	Soil Exposure Point Concentration	—	mg/kg	To Be Determined	Chronic Daily Intake (CDI) = [EPC x CF x IR x EF x ED]/(BW x AT)
				CF	Units Conversion Factor	1.00E-06	kg/mg		
				IR	Soil Ingestion Rate	100	mg/day	USEPA 1997b	
				EF	Exposure Frequency	350	days/year	USEPA 1997b	
				ED	Exposure Duration	24	years	USEPA 1997b	
				BW	Body Weight	70	kg	USEPA 1997b	
				ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	365	days	USEPA 1989	
		Child	Combined Surface/Subsurface Soil	EPC	Soil Exposure Point Concentration	—	mg/kg	To Be Determined	Chronic Daily Intake (CDI) = [EPC x CF x IR x EF x ED]/(BW x AT)
				CF	Units Conversion Factor	1.00E-06	kg/mg		
				IR	Soil Ingestion Rate	200	mg/day	USEPA 1997b	
				EF	Exposure Frequency	350	days/year	USEPA 1997b	
				ED	Exposure Duration	6	years	USEPA 1997b	
				BW	Body Weight	16	kg	USEPA 1997b	
				ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	2190	days	USEPA 1989	

Table 4.1
Values Used For Daily Intake Calculations
Pfizer - Barceloneta, Puerto Rico

Scenario Timeframe	Current/Future
Medium	Soil
Exposure Medium	Soil

Receptor Population	Exposure Route	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Future Resident	Dermal	Adult	Combined Surface/Subsurface Soil	DAevent	Absorbed Dose per Event	Calculated	mg/cm2-event	USEPA 2004b	Dermal Absorbed Dose (DAD) = (DAevent x EV x EF x ED x SA)/(BW x AT) where: DA _{event} = EPC x CF1 x AF x ABS _d
				EPC	Soil Exposure Point Concentration	--	mg/kg	To Be Determined	
				CF1	Units Conversion Factor	1.00E-06	kg/mg		
				AF	Adherence Factor	0.07	mg/cm2-event	USEPA 2004b	
				ABSd	Dermal Absorption Fraction	Chemical Specific	unitless	USEPA 2004b	
				EV	Event Frequency	1	event/day	Professional Judgement	
				EF	Exposure Frequency	350	days/year	USEPA 1997b	
				ED	Exposure Duration	24	years	USEPA 1997b	
				SA	Skin Surface Area available for contact	5700	cm2	USEPA 2004b	
				BW	Body Weight	70	kg	USEPA 1997b	
				ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	8760	days	USEPA 1989	
		Child	Combined Surface/Subsurface Soil	DAevent	Absorbed Dose per Event	Calculated	mg/cm2-event	USEPA 2004b	Dermal Absorbed Dose (DAD) = (DAevent x EV x EF x ED x SA)/(BW x AT) where: DA _{event} = EPC x CF1 x AF x ABS _d
				EPC	Soil Exposure Point Concentration	--	mg/kg	To Be Determined	
				CF1	Units Conversion Factor	1.00E-06	kg/mg		
				AF	Adherence Factor	0.2	mg/cm2-event	USEPA 2004b	
				ABSd	Dermal Absorption Fraction	Chemical Specific	unitless	USEPA 2004b	
				EV	Event Frequency	1	event/day	Professional Judgement	
				EF	Exposure Frequency	350	days/year	Professional Judgement	
				ED	Exposure Duration	6	years	USEPA 1997b	
				SA	Skin Surface Area available for contact	2800	cm2	USEPA 2004b	
				BW	Body Weight	16	kg	USEPA 1997b (ages 12 - 18)	
	ATc	Averaging Time - cancer	25550	days	USEPA 1989				
	ATnc	Averaging Time - non-cancer	2190	days	USEPA 1989				
	Inhalation	Adult	Indoor Air	EPC	Soil Gas EPC	--	ppmv	To Be Determined	J & E Spreadsheets SG-Screen Version 3.1 02/04
				EF	Exposure Frequency	350	d/yr	USEPA 1989	
				ED	Exposure Duration	30	yr	USEPA 1989	
				ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	10950	days	USEPA 1989	

Table 4.2
Values Used For Daily Intake Calculations
 Pfizer - Barceloneta, Puerto Rico

Scenario Timeframe:	Current/Future
Medium:	Ground Water
Exposure Medium:	Ground Water

Receptor Population	Exposure Route	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Current/Future Office Worker	Ingestion	Adult	Tap Water	EPC	Ground Water Exposure Point Concentration	—	ug/L	To Be Determined	Chronic Daily Intake (CDI) = [EPC x IR x EF x ED]/[BW x AT]
				IR	Ground Water Ingestion Rate	2	L/d	USEPA 1997b	
				EF	Exposure Frequency	250	days/year	USEPA 1997b	
				ED	Exposure Duration	25	years	USEPA 1997b	
				BW	Body Weight	70	kg	USEPA 1997b	
				ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	9125	days	USEPA 1989	
	Dermal	Adult	Tap Water	CW	Ground Water Exposure Point Concentration	--	ug/L	USEPA 2004b	DAD=D(AeventxEVxEFxEDxSA)/(BWxAT) D(Aevent Model - EPA RAGS Part E (2004b))
				D(Aevent	Absorbed Dose per event		mg/cm ² -event	USEPA 2004b	
				t _{event}	Exposure Duration	0.56	hours/day	USEPA 2004b	
				EV	Event Frequency	1	event/day	BPJ	
				EF	Exposure Frequency	250	days/year	USEPA 1989	
				ED	Exposure Duration	25	years	USEPA 1989	
				SA	Skin Surface Area Available for Contact	18000	cm ²	USEPA 2004b	
				AT	Averaging Time	25	years	USEPA 1989	
				BW	Body Weight	70	kg	USEPA 1989	
Future Resident	Ingestion	Adult	Tap Water	EPC	Ground Water Exposure Point Concentration	—	ug/L	To Be Determined	Chronic Daily Intake (CDI) = [EPC x IR x EF x ED]/[BW x AT]
				IR	Ground Water Ingestion Rate	2	L/d	USEPA 1997b	
				EF	Exposure Frequency	350	days/year	Professional Judgement	
				ED	Exposure Duration	24	years	USEPA 1997b	
				BW	Body Weight	70	kg	USEPA 1997b	
				ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	8760	days	USEPA 1989	
		Child	Tap Water	EPC	Ground Water Exposure Point Concentration	—	ug/L	To Be Determined	Chronic Daily Intake (CDI) = [EPC x IR x EF x ED]/[BW x AT]
				IR	Ground Water Ingestion Rate	1	L/d	USEPA 1997b	
				EF	Exposure Frequency	350	days/year	Professional Judgement	
				ED	Exposure Duration	6	years	Professional Judgement	
				BW	Body Weight	16	kg	USEPA 1997b	
	Dermal	Adult	Tap Water	ATc	Averaging Time - cancer	25550	days	USEPA 1989	
				ATnc	Averaging Time - non-cancer	2190	days	USEPA 1989	
				CW	Ground Water Exposure Point Concentration	--	ug/L	USEPA 2004b	DAD=D(AeventxEVxEFxEDxSA)/(BWxAT) D(Aevent Model - EPA RAGS Part E (2004b))
				D(Aevent	Absorbed Dose per event		mg/cm ² -event	USEPA 2004b	
t _{event}	Exposure Duration	0.56	hours/day	USEPA 2004b					
EV	Event Frequency	1	event/day	BPJ					
Dermal	Child	Tap Water	EF	Exposure Frequency	350	days/year	USEPA 1989		
			ED	Exposure Duration	24	years	USEPA 1989		
			SA	Skin Surface Area Available for Contact (1)	18000	cm ²	USEPA 2004b		
			AT	Averaging Time	24	years	USEPA 1989		
			BW	Body Weight	70	kg	USEPA 1989		
			CW	Ground Water Exposure Point Concentration	--	ug/L	USEPA 2004b	DAD=D(AeventxEVxEFxEDxSA)/(BWxAT) D(Aevent Model - EPA RAGS Part E (2004b))	
			D(Aevent	Absorbed Dose per event		mg/cm ² -event	USEPA 2004b		
			t _{event}	Exposure Duration	0.56	hours/day	USEPA 2004b		
			EV	Event Frequency	1	event/day	BPJ		
			EF	Exposure Frequency	350	days/year	USEPA 1989		
			ED	Exposure Duration	6	years	USEPA 1989		
			SA	Skin Surface Area Available for Contact (1)	6600	cm ²	USEPA 2004b		
			AT	Averaging Time	6	years	USEPA 1989		
			BW	Body Weight	16	kg	USEPA 1989		

TABLE 5.1
NON-CANCER TOXICITY DATA – ORAL/DERMAL
Pfizer, Barcelona, Puerto Rico

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD		Oral Absorption Efficiency for Dermal (GAF) (1)	Absorbed RfD for Dermal (2)		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RID: Target Organ(s)	
		Value	Units		Value (3)	Units			Source(s)	Date(s) (MM/DD/YYYY)
Benzene	Chronic	4.0E-03	mg/kg-d	9.70E-01	4.0E-03	mg/kg-d	Blood	300	IRIS	2/7/2007
Chlorobenzene	Chronic	2.0E-02	mg/kg-d	3.10E-01	6.2E-03	mg/kg-d	Liver	1000	IRIS	2/7/2007
Chloroform	Chronic	1.0E-02	mg/kg-d	2.00E-01	2.0E-03	mg/kg-d	Liver	100	IRIS	2/7/2007
Tetrahydrofuran (a)	Chronic	1.0E-03	mg/kg-d	8.00E-01	1.0E-03	mg/kg-d	Liver	1000	IRIS	2/7/2007
Xylenes	Chronic	2.0E-01	mg/kg-d	9.20E-01	2.0E-01	mg/kg-d	Increased Mortality	1000	IRIS	2/7/2007

Footnote Instructions:

(a) Furan used as surrogate for Tetrahydrofuran

(1) USEPA, 2004

(2) Only derived for those COPCs evaluated in a dermal pathway

(3) Derivation of Absorbed RfD for Dermal

IF GAF > 50%, Then Dermal Reference Dose = Oral Reference Dose

IF GAF < 50%, Then Dermal Reference Dose = Oral Reference Dose x GAF

TABLE 5.2
NON-CANCER TOXICITY DATA -- INHALATION
Pfizer, Barceloneta, Puerto Rico

Chemical of Potential Concern	Chronic/ Subchronic	Inhalation RfC (1)		Inhalation RfD (2)		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfC : Target Organ(s)	
		Value	Units					Source(s)	Date(s) (MM/DD/YYYY)
Acetone	Chronic	3.15E+00	mg/m3	9.00E-01	mg/kg-d	PNS	1000	Region IX PRG	2/7/2007
Benzene	Chronic	3.00E-02	mg/m3			Blood	300	IRIS	2/7/2007
Chlorobenzene	Chronic	5.95E-02						Region IX PRG	2/7/2007
Chloroform	Chronic	NA							2/7/2007
Ethylbenzene	Chronic	1.00E+00	mg/m3			Developmental	300	IRIS	2/7/2007
Methylene Chloride	Chronic	3.00E+00	mg/m3			Liver	100	HEAST '97	2/7/2007
Tetrahydrofuran (a)	Chronic	3.50E-03	mg/m3	1.00E-03	mg/kg-d	Liver	1000	Region IX PRG	2/7/2007
Toluene	Chronic	5.00E+00	mg/m3			CNS	10	IRIS	2/7/2007
Xylenes	Chronic	1.00E-01	mg/m3			CNS	300	IRIS	2/7/2007

(1) Inhalation criteria only for those COPCs evaluated in an inhalation pathway

(2) Extrapolated from oral RfD from Region IX PRG Table (10/2004)

TABLE 6.1
CANCER TOXICITY DATA – ORAL/DERMAL
Pfizer, Barceloneta, Puerto Rico

Chemical of Potential Concern	Oral Cancer Slope Factor		Oral Absorption Efficiency for Dermal (1)	Absorbed Cancer Slope Factor for Dermal		Weight of Evidence/ Cancer Guideline Description	Oral CSF	
	Value	Units		Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
Benzene	5.50E-02	(mg/kg-d) ⁻¹	9.70E-01	5.50E-02	(mg/kg-d) ⁻¹	A	IRIS	02/07/07
Chlorobenzene	NA					D	IRIS	02/07/07
Chloroform	NA ¹	(mg/kg-d) ⁻¹				B2	IRIS	02/07/07
Tetrahydrofuran (a)	NA						IRIS	02/07/07
Xylenes	NA						IRIS	02/07/07

¹ Per IRIS, RfD of 1E-02 mg/kg-d can be considered protective of carcinogenic risk

(a) Furan used as surrogate for Tetrahydrofuran

TABLE 6.2
CANCER TOXICITY DATA -- INHALATION
Pfizer, Barceloneta, Puerto Rico

Chemical of Potential Concern	Unit Risk		Inhalation Cancer Slope Factor		Weight of Evidence/ Cancer Guideline Description	Unit Risk : Inhalation CSF	
	Value	Units	Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
Acetone	NA					IRIS	02/07/07
Benzene	7.8E-06	(ug/m3)-1			A	IRIS	02/07/07
Chlorobenzene	NA					IRIS	02/07/07
Chloroform	2.3E-05	(ug/m3)-1			B2	IRIS	02/07/07
1,2-Dichlorobenzene	NA				D	IRIS	02/07/07
Ethylbenzene	NA				D	IRIS	02/07/07
Methylene Chloride	4.7E-07	(ug/m3)-1			B2	IRIS	02/07/07
Tetrahydrofuran (a)	NA					IRIS	02/07/07
Toluene	NA					IRIS	02/07/07
Xylenes	NA					IRIS	02/07/07

TABLE 7.1
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
Pfizer, Barceloneta, Puerto Rico

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration	CSF/Unit Risk	Cancer Risk	Intake/Exposure Concentration	Units	Value	Units	Hazard Quotient	
Soil	Soil	Combined Surface/Subsurface Soil	Ingestion	Benzene	5.6E+00	mg/kg	2.6E-07	mg/kg-d	5.5E-02	(mg/kg-d)-1	2E-09	1.8E-05	mg/kg-d	4.5E-03	
				Tetrahydrofuran	1.1E+01	mg/kg	5.3E-07	mg/kg-d	NA	NA	3.7E-05	mg/kg-d	3.7E-02		
				Xylenes	1.0E+02	mg/kg	4.7E-06	mg/kg-d	NA	NA	3.3E-04	mg/kg-d	1.6E-03		
		Exp. Route Total											4.3E-02		
			Dermal	Benzene	5.6E+00	mg/kg	2.6E-09	mg/kg-d	5.5E-02	(mg/kg-d)-1	1E-10	1.8E-07	mg/kg-d	4.6E-05	
			Tetrahydrofuran	1.1E+01	mg/kg	5.3E-09	mg/kg-d	NA	(mg/kg-d)-1	NA	3.7E-07	mg/kg-d	3.7E-04		
		Exp. Route Total		Xylenes	1.0E+02	mg/kg	4.7E-09	mg/kg-d	NA	(mg/kg-d)-1	NA	3.3E-06	mg/kg-d	1.6E-05	
														4.3E-04	
														4.3E-02	
														4.3E-02	
Air	Air	Fugitive Dusts	Inhalation	Benzene	5.2E-09	mg/m3	5.1E-11	mg/m3	7.8E-03	(mg/m3)-1	2E-09	3.6E-09	mg/m3	1.2E-07	
				Tetrahydrofuran	1.1E-08	mg/m3	1.0E-10	mg/m3	NA	(mg/m3)-1	NA	7.2E-09	mg/m3	2.1E-06	
				Xylenes	8.3E-08	mg/m3	9.1E-10	mg/m3	NA	(mg/m3)-1	NA	6.4E-08	mg/m3	6.4E-07	
		Exp. Route Total												2.8E-06	
														2.8E-06	
														2.8E-06	
		Exp. Route Total												4.3E-02	
														4.3E-02	
														4.3E-02	
														4.3E-02	
Medium Total	Medium Total	Medium Total	Total of Receptor Risks Across All Media											4.3E-02	
															4.3E-02
															4.3E-02
			Total of Receptor Hazards Across All Media												4.3E-02
															4.3E-02
															4.3E-02
			Total of Receptor Hazards Across All Media												4.3E-02
															4.3E-02
															4.3E-02
															4.3E-02

TABLE 7.2
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
Píxer, Barceloneta, Puerto Rico

Scenario Timeframe: Current/Future
Receptor Population: Commercial/Industrial
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations			Non-Cancer Hazard Calculations			Hazard Quotient																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
					Value	Units	Intake/Exposure Concentration	CSF/Unit Risk	Cancer Risk	Intake/Exposure Concentration	Value	Units		RfD/RfC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Soil	Soil	Combined Surface/Subsurface Soil	Ingestion	Benzene Tetrahydrofuran Xylenes	5.6E+00	mg/kg	9.8E-07	5.5E-02	5E-08	2.7E-06	mg/kg-d	4.0E-03	mg/kg-d	6.8E-04																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					1.1E+01	mg/kg	2.0E-06	NA	NA	5.6E-06	mg/kg-d	1.0E-03	mg/kg-d	5.6E-03																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					1.0E+02	mg/kg	1.8E-05	NA	NA	4.9E-05	mg/kg-d	2.0E-01	mg/kg-d	2.5E-04																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			Dermal						5E-08					6.5E-03																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					5.6E+00	mg/kg	1.3E-05	5.5E-02	7E-10	3.6E-08	mg/kg-d	4.0E-03	mg/kg-d	9.0E-06																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					1.1E+01	mg/kg	2.6E-08	NA	NA	7.4E-08	mg/kg-d	1.0E-03	mg/kg-d	7.4E-05																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					1.0E+02	mg/kg	2.3E-07	NA	NA	6.5E-07	mg/kg-d	2.0E-01	mg/kg-d	3.3E-05																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			Exp. Route Total						7E-10					8.6E-05																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			Exposure Point Total						5E-08					6.8E-03																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			Exposure Medium Total						5E-08					6.8E-03																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Ground Water	Ground Water	Indoor Air Modified Using JAE Compared against OSHA PELs See Text	Inhalation	Acetone Chloroform Benzene Methylene chloride o-Xylene Ethylbenzene m-Xylene Toluene Chlorobenzene Furan (for Tetrahydrofuran)	1E+03	ppmv				2.4E+00	mg/m3	2.4E+03	mg/m3	9.8E-04																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					8E+01	ppmv				3.0E-01	mg/m3	2.4E+02	mg/m3	1.3E-03																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					5E+04	ppmv				1.1E+02	mg/m3	3.2E+00	mg/m3	3.4E+01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					1E+03	ppmv				3.9E+00	mg/m3	8.7E+01	mg/m3	4.5E-02																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					5E+03	ppmv				1.7E+01	mg/m3	4.4E+02	mg/m3	3.9E-02																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					3E+03	ppmv				9.7E+00	mg/m3	4.4E+02	mg/m3	2.2E-02																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					1E+04	ppmv				3.6E+01	mg/m3	4.4E+02	mg/m3	8.2E-02																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					3E+04	ppmv				6.4E+01	mg/m3	7.5E+02	mg/m3	1.1E-01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					2E+01	ppmv				5.9E-02	mg/m3	7.5E+02	mg/m3	7.8E-05																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			Exp. Route Total											6.2E-02																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Exposure Medium Total											3.4E+01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Ground Water	Ground Water	Tap Water	Ingestion	Chlorobenzene Chloroform	5E-01	mg/l	3.1E-03	NA	NA	3.5E-05	mg/kg-d	2.0E-02	mg/kg-d	1.8E-03																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					9E-03	mg/l	6.0E-05	NA	NA	6.7E-07	mg/kg-d	1.0E-02	mg/kg-d	6.7E-05																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					Exp. Route Total						NA				1.8E-03																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
							5E-01	mg/l	1.1E-03	NA	NA	3.2E-03	mg/kg-d	2.0E-02	mg/kg-d	5.1E-01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
							9E-03	mg/l	5.5E-05	NA	NA	1.5E-05	mg/kg-d	1.0E-02	mg/kg-d	7.7E-03																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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					Exposure Point Total						5E-08					3.5E+01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Total of Receptor Hazards Across All Media																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

TABLE 7.3
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
Pfizer, Barceloneta, Puerto Rico

Scenario Timeframe: Future
Receptor Population: Residential
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations				Hazard Quotient	
					Value	Units	Inhaled/Exposure Concentration		CSF/FUR Risk		Cancer Risk	Inhaled/Exposure Concentration		RfD/RfC		
							Value	Units	Value	Units		Value	Units	Value		Units
Soil	Soil	Combined Surface/Subsurface Soil	Ingestion	Benzene Tetrahydrofuran Xylenes	5.6E+00	mg/kg	8.4E-06	mg/kg-d	5.5E-02	(mg/kg-d)-1	5E-07	1.7E-05	mg/kg-d	4.0E-03	mg/kg-d	4.2E-03
					1.1E+01	mg/kg	2.9E-07	mg/kg-d	NA	NA	NA	3.4E-05	mg/kg-d	1.0E-03	mg/kg-d	3.4E-02
					1.0E+02	mg/kg	1.0E-05	mg/kg-d	NA	NA	NA	3.0E-04	mg/kg-d	2.0E-01	mg/kg-d	1.5E-03
					Exp. Route Total						5E-07					4.0E-02
			Dermal	Benzene Tetrahydrofuran Xylenes	5.6E+00 1.1E+01 1.0E+02	mg/kg mg/kg mg/kg	2.7E-07 5.4E-07 4.8E-06	mg/kg-d mg/kg-d mg/kg-d	5.5E-02 NA NA	(mg/kg-d)-1 (mg/kg-d)-1 (mg/kg-d)-1	1E-08 NA NA	4.7E-07 9.8E-07 8.5E-06	mg/kg-d mg/kg-d mg/kg-d	4.0E-03 1.0E-03 2.00E-01	mg/kg-d mg/kg-d mg/kg-d	1.2E-04 9.8E-04 4.2E-05
Exp. Route Total								1E-08							1.1E-03	
Exposure Point Total																
Exposure Medium Total																
Ground Water	Ground Water	Indoor Air Modeled Using J&E	Inhalation	Acetone Chloroform Benzene Methylene chloride o-Xylene Ethylbenzene m-Xylene Toluene Chlorobenzene Furan (for Tetrahydrofuran)	1E+03	ppmv	Modeled	NA	(ug/m3)-1	NA	Modeled	3.2E+00	mg/m3	1.4E+00	mg/m3	4.1E-02
					8E+01	ppmv	J&E	2.3E-05	(ug/m3)-1	5E-03	NA	NA	mg/m3	NA		
					5E+04	ppmv		7.8E-06	(ug/m3)-1	6E-01		3.0E-02	mg/m3	6.1E+03		
					1E+03	ppmv		4.7E-07	(ug/m3)-1	1E-03		3.0E+00	mg/m3	2.2E+00		
					5E+03	ppmv		NA	(ug/m3)-1	NA		1.0E-01	mg/m3	2.0E+02		
					3E+03	ppmv		NA	(ug/m3)-1	NA		1.0E+00	mg/m3	1.6E+01		
					1E+04	ppmv		NA	(ug/m3)-1	NA		1.0E-01	mg/m3	5.7E+02		
					3E+04	ppmv		NA	(ug/m3)-1	NA		5.0E+00	mg/m3	2.8E+01		
					2E+01	ppmv		NA	(ug/m3)-1	NA		6.0E-02	mg/m3	1.3E+00		
					2E+04	ppmv		NA	(ug/m3)-1	NA		3.5E-03	mg/m3	2.3E+04		
Exp. Route Total						6E-01									3.0E+04	
Exposure Point Total																
Exposure Medium Total																
Tap Water	Tap Water	Ground Water	Ingestion	Chlorobenzene Chloroform	5E-01	mg/l	6.7E-03	mg/kg-d	NA	NA	2.9E-02	2.0E-02	mg/kg-d	1.4E+00	mg/kg-d	3.0E+04
					9E-03	mg/l	1.3E-04	mg/kg-d	NA	NA	5.5E-04	1.0E-02	mg/kg-d	5.5E-02		
					Exp. Route Total						NA					1.5E+00
					Chlorobenzene Chloroform	5E-01	mg/l	2.2E-03	mg/kg-d	NA	NA	7.8E-03	2.0E-02	mg/kg-d	1.2E+00	
			9E-03	mg/l		1.1E-05	mg/kg-d	NA	NA	3.7E-05	1.0E-02	mg/kg-d	1.8E-02			
Exp. Route Total						NA										1.2E+00
Exp. Route Total						NA										2.7E+00
Exposure Point Total																
Exposure Medium Total																
Medium Total	Total of Receptor Risks Across All Media															
Medium Total	Total of Receptor Hazards Across All Media															

TABLE 9.1
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Pfizer, Barceloneta, Puerto Rico

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Soil	Combined Surface and Subsurface	Benzene	2E-09	4.0E-13	1.4E-10		2E-09	Blood	4.5E-03	1.2E-07	4.6E-05	4.6E-03
			Tetrahydrofuran	NA	NA	NA		NA	Liver	3.7E-02	2.1E-06	3.7E-04	3.7E-02
			Xylenes	NA	NA	NA		NA	BW, CNS	1.6E-03	6.4E-07	1.6E-05	1.6E-03
			Chemical Total	2E-09	4E-13	1E-10				4.3E-02	2.8E-06	4.3E-04	
			Exposure Point Total										4.3E-02
			Exposure Medium Total										4.3E-02
Medium Total													4.3E-02
Receptor Total				Receptor Risk Total						Receptor HI Total			4.3E-02

TABLE 9.2
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
REASONABLE MAXIMUM EXPOSURE
Pfizer, Barcelona, Puerto Rico

Scenario Timeframe: Current/Future Receptor Population: Commercial/Industrial Receptor Age: Adult			Non-Carcinogenic Hazard Quotient												
Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total	
				Ingestion	Inhalation	Dermal	External (Radiation)								
Soil	Soil	Combined Surface/Subsurface	Benzene	5E-08		7E-10		5E-08	Blood	6.8E-04			9.0E-06	6.9E-04	
			Tetrahydrofuran	NA		NA		NA	Liver	5.6E-03			7.4E-05	5.6E-03	
			Xylenes	NA		NA		NA	BW, CNS	2.5E-04			3.3E-06	2.5E-04	
			Chemical Total	5E-08		7.1E-10		5E-08		6.5E-03			8.6E-05	6.6E-03	
Exposure Point Total														6.6E-03	
Exposure Medium Total														6.6E-03	
Ground Water	Ground Water	Indoor Air	Acetone						PNS			9.8E-04		9.8E-04	
			Chloroform						Blood			1.3E-03		1.3E-03	
			Benzene						Liver			3.4E+01		3.4E+01	
			Methylene chloride						CNS			4.5E-02		4.5E-02	
			o-Xylene						Developmental			3.9E-02		3.9E-02	
			Ethylbenzene						CNS			2.2E-02		2.2E-02	
			m-Xylene						CNS			8.2E-02		8.2E-02	
			Toluene						CNS			1.1E-01		1.1E-01	
			Chlorobenzene						Liver			7.8E-05		7.8E-05	
			Furan (for Tetrahydrofuran)									8.2E-02		8.2E-02	
			Chemical Total									3.4E+01		3.4E+01	
			Exposure Point Total												3.4E+01
Exposure Medium Total												3.4E+01			
Ground Water	Ground Water	Tap Water	Chlorobenzene	NA		NA		5E-08						3.4E+01	
			Chloroform	NA		NA		NA					5.1E-01		
			Chemical Total	NA		NA		NA					7.7E-03		
			Exposure Point Total	NA		NA		NA					5.2E-01		
Exposure Medium Total														5.2E-01	
Receptor Risk Total														5.2E-01	
Receptor HI Total														5.2E-01	
Receptor HI Across All Media =														3.5E+01	
Total Blood HI Across All Media =														3.4E+01	

TABLE 9.3
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR CQPCs
REASONABLE MAXIMUM EXPOSURE
Pfizer, Barceloneta, Puerto Rico

Scenario Timeframe: Future Receptor Population: Resident Receptor Age: Adult/Child																
Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient							
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total			
Soil	Soil	Combined Surface/Subsurface	Benzene	5E-07		1E-08		5E-07	Blood	4.2E-03		1.2E-04	4.3E-03			
			Tetrahydrofuran	NA		NA		NA	Liver	3.4E-02		9.6E-04	3.5E-02			
			Xylenes	NA		NA		NA	BW, CNS	1.5E-03		4.2E-05	1.6E-03			
			Chemical Total	5E-07		1E-08		5E-07		4.0E-02		1.1E-03	4.1E-02			
Exposure Point Total				5E-07					4.1E-02							
Exposure Medium Total				5E-07					4.1E-02							
Soil Gas	Soil Gas	Indoor Air	Acetone		NA			NA	PNS		1.4E+00		1.4E+00			
			Chloroform		5E-03			5E-03			NA		NA			
			Benzene		8E-01			6E-01	Blood		8.1E+03		6.1E+03			
			Methylene chloride		1E-03			1E-03	Liver		2.2E+00		2.2E+00			
			o-Xylene		NA			NA	CNS		2.8E+02		2.8E+02			
			Ethylbenzene		NA			NA	Developmental		1.6E+01		1.6E+01			
			m-Xylene		NA			NA	CNS		5.7E+02		5.7E+02			
			Toluene		NA			NA	CNS		2.8E+01		2.8E+01			
			Chlorobenzene		NA			NA	CNS		1.3E+00		1.3E+00			
			Furan (for Tetrahydrofuran)		NA			NA	Liver		2.3E+04		2.3E+04			
			Chemical Total		6E-01			6E-01			3.0E+04		3.0E+04			
			Exposure Point Total				6E-01					3.0E+04				
			Exposure Medium Total				6E-01					3.0E+04				
			Ground Water	Ground Water	Tap Water	Chlorobenzene	NA		NA		NA		1.4E+00		1.2E+00	2.7E+00
Chloroform	NA					NA		NA		5.5E-02		1.8E-02	7.3E-02			
Chemical Total	NA					NA		NA		1.5E+00		1.2E+00	2.7E+00			
Exposure Point Total								NA					2.7E+00			
Exposure Medium Total				NA					2.7E+00							
Medium Total	Medium Total			Receptor Risk Total					Receptor HI Total							
				6E-01					3.0E+04							
Total PNS HI Across All Media = 1.4E+00																
Total Blood HI Across All Media = 8.1E+03																
Total Liver HI Across All Media = 2.3E+04																
Total CNS HI Across All Media = 8.8E+02																
Total Developmental HI Across All Media = 1.6E+01																
Total Blood HI Across All Media = 5.7E+02																

Appendix D

Data Tables

Appendix H - 1
Surface and Subsurface Soils
Pfizer, Barceloneta, Puerto Rico

Sample Location Notes Measured Depth (feet) Date Collected	AB-1 5-6.5 1/23/92	AB-2 5-6.5 6/14/91	AB-5 2.5-4.0 1/30/92	AB-7 1-2.5 6/14/91	AB-10 10-11.5 1/28/92	AB-11 5-6.5 1/22/92	AB-12 8-10 10/15/92	VB-13 4-6 10/22/92	VB-13 9-10 10/22/92	VB-14 0-2 10/23/92
Volatile Organics (mg/kg)										
Acetone	0.012 U	0.024	0.012 U	0.024	9.5	0.012 U	19	0.022 U	0.028 U	9.3 U
Benzene	0.012 U	0.006 U	0.012 U	0.006 U	0.075	0.012 U	1.3 U	0.01 U	0.012 U	1.3 U
Carbon Disulfide	0.012 U	0.006 U	0.012 U	0.006 U	0.012 U	0.012 U	1.3 U	0.006	0.012	1.3 U
Chlorobenzene	0.012 U	0.006 U	0.012 U	0.006 U	0.012 U	0.012 U	1.3 U	0.01 U	0.012 U	1.3 U
Chloroform										
Ethylbenzene	0.012 U	0.006 U	0.012 U	0.006 U	0.012 U	0.012 U	2	0.01 U	0.012 U	1.3 U
MEK	0.012 U	0.012 U	0.012 U	0.012 U	0.37	0.012 U	2.6	0.01 U	0.012 U	1.5 U
Methylene Chloride	0.012 U	0.008 U	0.012 U	0.006 U	0.17	0.012 U	1.1	0.01 U	0.017 U	1.4 U
MTBE	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	1.3 U	0.01 U	0.012 U	1.3 U
Pentanol										
Tetrahydrofuran										
Toluene	0.006 U	0.006 U	0.002	0.003	0.012 U	0.002	1.3 U	0.01 U	0.012 U	1.3 U
Xylenes	0.012 U	0.006 U	0.012 U	0.006 U	0.18	0.012 U	16	0.01 U	0.012 U	1.3 U

Appendix H - 1
Surface and Subsurface Soils
Pfizer, Barceloneta, Puerto Rico

Sample Location Notes Measured Depth (feet) Date Collected	VB-14 10-12 10/23/92	AB-16 14-16 8/22/93	AB-18 6-8 8/18/93	AB-19 12-14 8/26/93	AB-21 8-10 8/18/93	AB-22 0-2 8/29/93	AB-1S 1-2 3/27/00	AB-1S 2-4 3/27/00	AB-1S 4-6 3/27/00	AB-2S 1-3 3/27/00
Volatile Organics (mg/kg)										
Acetone	6.3 U	0.0081	0.01 U	0.71	9	0.01 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzene	1.4 U	0.01 U	0.01 U	0.61 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carbon Disulfide	1.4 U	0.01 U	0.01 U	0.61 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chlorobenzene	1.4 U	0.01 U	0.01 U	0.61 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chloroform	1.4 U	0.01 U	0.01 U	0.61 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Ethylbenzene	1.4 U	0.01 U	0.01 U	0.61 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
MEK	1.4 U	0.0014	0.0014	0.61 U	0.058	0.01 U	0.02 U	0.02 U	0.02 U	0.0194
Methylene Chloride	1.4 U	0.0011	0.01 U	0.61 U	0.074	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
MTBE	1.4 U	0.01 U	0.01 U	0.61 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Pentanol	1.4 U	0.01 U	0.01 U	0.61 U	0.03	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Tetrahydrofuran	1.4 U	0.08	0.01 U	1.5	1.3	0.2	0.01 U	0.01 U	0.01 U	0.01 U
Toluene	1.4 U	0.01 U	0.01 U	0.61 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Xylenes	1.4 U	0.01 U	0.01 U	0.61 U	0.0051	0.01 U	0.02 U	0.02 U	0.02 U	0.02 U

Appendix H - 1
Surface and Subsurface Soils
Pfizer, Barceloneta, Puerto Rico

Sample Location Notes Measured Depth (feet) Date Collected	AB-2S 3-5 3/27/00	AB-2S 5-7 3/27/00	B-01 1-3 3/22/00	B-01 3-5 3/22/00	B-01 5-7 3/22/00	B-02 Dup Dup. Comb. 1-2 3/23/00	B-02 2-4 3/23/00	B-02 4-6 3/23/00	B-03 Dup. Comb. 1-2 3/23/00	B-03 2-4 3/23/00
Volatile Organics (mg/kg)										
Acetone	0.1 U	0.1 U	5 U	0.5 U	2 U	5 U	5 U	5 U	5 U	5 U
Benzene	0.01 U	0.01 U	0.5 U	0.775	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide										
Chlorobenzene	0.01 U	0.01 U	0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.01 U	0.01 U	0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.01 U	0.01 U	0.5 U	3.7	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MEK										
Methylene Chloride	0.02 U	0.02 U	1 U	1 U	0.4 U	1 U	1 U	1 U	1 U	1 U
MTBE										
Pentanol										
Tetrahydrofuran	0.01 U	0.01 U	2.09	11.2	13.9	4.3	6	12.5	5.2	4.8
Toluene	0.01 U	0.01 U	0.5 U	5.215	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes	0.02 U	0.02 U	1 U	19.565	0.4 U	1 U	1 U	1 U	1 U	1 U

Appendix H - 1
Surface and Subsurface Soils
Pfizer, Barceloneta, Puerto Rico

Sample Location Notes Measured Depth (feet) Date Collected	B-03 4-6 3/23/00	B-04 1-2 3/22/00	B-04 2-4 3/22/00	B-04 4-6 3/22/00	B-05 1-2 3/23/00	B-05 4-6 3/23/00	B-05 4-6 3/23/00	B-06 1-2 3/23/00	B-06 2-4 3/23/00	B-06 4-6 3/23/00
Volatile Organics (mg/kg)										
Acetone	0.5 U	100 U	2 U	5 U	5 U	0.1 U	0.1 U	5 U	5 U	5 U
Benzene	0.05 U	23	0.2 U	0.5 U	0.5 U	0.01 U	0.01 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide										
Chlorobenzene	0.05 U	10 U	0.2 U	0.5 U	0.5 U	0.01 U	0.01 U	0.5 U	0.5 U	0.5 U
Chloroform	0.05 U	10 U	0.2 U	0.5 U	0.5 U	0.01 U	0.01 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.05 U	94	0.2 U	0.5 U	0.5 U	0.01 U	0.01 U	0.5 U	0.5 U	0.5 U
MEK										
Methylene Chloride	0.1 U	20 U	0.4 U	1 U	1 U	0.02 U	0.02 U	1 U	1 U	1 U
MTBE										
Pentanol										
Tetrahydrofuran	0.13	10 U	4.9	3.6	8.7	0.11	0.114	9.8	6.27	4.17
Toluene	0.05 U	131	0.2 U	0.5 U	0.5 U	0.01 U	0.01 U	0.5 U	0.5 U	0.5 U
Xylenes	0.1 U	420	0.4 U	1 U	1 U	0.02 U	0.02 U	1 U	1 U	1 U

Appendix H - 1
Surface and Subsurface Soils
Pfizer, Barceloneta, Puerto Rico

Sample Location Notes	DUPLICATES									
	B-08	B-08	B-08	B-09	B-09	B-09	B-02	B-02 Dup	B-03	B-03 Dup
Measured Depth (feet)	1-2	2-4	4-6	1-2	2-4	4-6		1-2	1-2	1-2
Date Collected	3/29/00	3/29/00	3/29/00	3/29/00	3/29/00	3/29/00		3/23/00	3/23/00	3/23/00
Volatile Organics (mg/kg)										
Acetone	2.9	1.1	3.9	4.3	1 U	1 U		5 U	5 U	5 U
Benzene	0.043	0.01 U	0.01 U	0.144	0.1 U	0.1 U		0.5 U	0.5 U	0.5 U
Carbon Disulfide										
Chlorobenzene	0.01 U	0.01 U	0.01 U	0.1 U	0.1 U	0.1 U		0.5 U	0.5 U	0.5 U
Chloroform	0.01 U	0.01 U	0.01 U	0.1 U	0.1 U	0.1 U		0.5 U	0.5 U	0.5 U
Ethylbenzene	0.01 U	0.01 U	0.01 U	0.1 U	0.1 U	0.1 U		0.5 U	0.5 U	0.5 U
MEK										
Methylene Chloride	0.02 U	0.02 U	0.02 U	0.2 U	0.2 U	0.2 U		1 U	1 U	1 U
MTBE										
Pentanol										
Tetrahydrofuran	8.4	0.68	10.7	9.2	8.74	4.25		4.3	5.6	4.8
Toluene	0.01 U	0.01 U	0.01 U	0.1 U	0.1 U	0.1 U		0.5 U	0.5 U	0.5 U
Xylenes	0.072	0.02 U	0.02 U	0.3 U	0.3 U	0.3 U		1 U	1 U	1 U

Sample Location Date Collected	MW-1		MW-2		MW-5		MW-6	
	10/10/2006	1/10/2007	10/10/2006	1/10/2007	10/10/2006	1/10/2007	10/10/2006	1/10/2007
VOCs (ug/L)								
Acetone	10 U	10 U						
Benzene	5 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Butanone, 2-	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Butyl benzene, n-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Butyl benzene, s-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Butyl benzene, t-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	365	450	63	76	5 U	5 U	48	25
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	8.45	10.5	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorotoluene, 2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorotoluene, 4-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cumene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromo-3-chloropropane, 1,2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromoethane, 1,2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorobenzene, 1,2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorobenzene, 1,3-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorobenzene, 1,4-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichloroethane, 1,1-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichloroethane, 1,2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichloroethene, 1,1-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichloroethene, cis-1,2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichloroethene, trans-1,2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichloropropane, 1,2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichloropropane, 1,3-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichloropropane, 2,2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichloropropene, 1,1-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichloropropene, cis-1,3-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichloropropene, trans-1,3-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexanone, 2-	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Isopropyl toluene, 4-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-2-pentanone, 4-	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Propylbenzene, n-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Propanol, 2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethane, 1,1,1,2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethane, 1,1,2,2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrahydrofuran	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorobenzene, 1,2,3-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorobenzene, 1,2,4-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethane, 1,1,1-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethane, 1,1,2-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloropropane, 1,2,3-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trimethylbenzene, 1,2,4-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trimethylbenzene, 1,3,5-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Xylene (total)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Xylene, m,p-	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylene, o-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U

Sample Location Date Collected	DUPLICATES				
	PSSW-1 1/10/2007	MW-1 10/10/2006	MW-1 dup 10/10/2006	MW-1 1/11/2007	MW-10 (DUP MW-1) 1/11/2007
VOCs (ug/L)					
Acetone	10 U	10 U	10 U	10 U	10 U
Benzene	5 U	5 U	5 U	5 U	5 U
Bromobenzene	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	5 U	5 U	5 U	5 U	5 U
Bromoform	5 U	5 U	5 U	5 U	5 U
Bromomethane	5 U	5 U	5 U	5 U	5 U
Butanone, 2-	10 U	10 U	10 U	10 U	10 U
Butyl benzene, n-	5 U	5 U	5 U	5 U	5 U
Butyl benzene, s-	5 U	5 U	5 U	5 U	5 U
Butyl benzene, t-	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	5 U	360	370	450	450
Chloroethane	5 U	5 U	5 U	5 U	5 U
Chloroform	5 U	8.5	8.4	11	10
Chloromethane	5 U	5 U	5 U	5 U	5 U
Chlorotoluene, 2-	5 U	5 U	5 U	5 U	5 U
Chlorotoluene, 4-	5 U	5 U	5 U	5 U	5 U
Cumene	5 U	5 U	5 U	5 U	5 U
Dibromo-3-chloropropane, 1,2-	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	5 U	5 U	5 U	5 U	5 U
Dibromoethane, 1,2-	5 U	5 U	5 U	5 U	5 U
Dibromomethane	5 U	5 U	5 U	5 U	5 U
Dichlorobenzene, 1,2-	5 U	5 U	5 U	5 U	5 U
Dichlorobenzene, 1,3-	5 U	5 U	5 U	5 U	5 U
Dichlorobenzene, 1,4-	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	5 U	5 U	5 U	5 U	5 U
Dichloroethane, 1,1-	5 U	5 U	5 U	5 U	5 U
Dichloroethane, 1,2-	5 U	5 U	5 U	5 U	5 U
Dichloroethene, 1,1-	5 U	5 U	5 U	5 U	5 U
Dichloroethene, cis-1,2-	5 U	5 U	5 U	5 U	5 U
Dichloroethene, trans-1,2-	5 U	5 U	5 U	5 U	5 U
Dichloropropane, 1,2-	5 U	5 U	5 U	5 U	5 U
Dichloropropane, 1,3-	5 U	5 U	5 U	5 U	5 U
Dichloropropane, 2,2-	5 U	5 U	5 U	5 U	5 U
Dichloropropene, 1,1-	5 U	5 U	5 U	5 U	5 U
Dichloropropene, cis-1,3-	5 U	5 U	5 U	5 U	5 U
Dichloropropene, trans-1,3-	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	5 U	5 U	5 U	5 U	5 U
Hexane	10 U	10 U	10 U	10 U	10 U
Hexanone, 2-	10 U	10 U	10 U	10 U	10 U
Isopropyl toluene, 4-	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	5 U	5 U	5 U	5 U	5 U
Methyl-2-pentanone, 4-	10 U	10 U	10 U	10 U	10 U
Methylene chloride	5 U	5 U	5 U	5 U	5 U
Naphthalene	5 U	5 U	5 U	5 U	5 U
Propylbenzene, n-	5 U	5 U	5 U	5 U	5 U
Propanol, 2-	5 U	5 U	5 U	5 U	5 U
Styrene	5 U	5 U	5 U	5 U	5 U
Tetrachloroethane, 1,1,1,2-	5 U	5 U	5 U	5 U	5 U
Tetrachloroethane, 1,1,2,2-	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5 U	5 U	5 U	5 U	5 U
Tetrahydrofuran	5 U	5 U	5 U	5 U	5 U
Toluene	5 U	5 U	5 U	5 U	5 U
Trichlorobenzene, 1,2,3-	5 U	5 U	5 U	5 U	5 U
Trichlorobenzene, 1,2,4-	5 U	5 U	5 U	5 U	5 U
Trichloroethane, 1,1,1-	5 U	5 U	5 U	5 U	5 U
Trichloroethane, 1,1,2-	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	5 U	5 U	5 U	5 U	5 U
Trichloropropane, 1,2,3-	5 U	5 U	5 U	5 U	5 U
Trimethylbenzene, 1,2,4-	5 U	5 U	5 U	5 U	5 U
Trimethylbenzene, 1,3,5-	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	5 U	5 U	5 U	5 U	5 U
Xylene (total)	5 U	5 U	5 U	5 U	5 U
Xylene, m,p-	10 U	10 U	10 U	10 U	10 U
Xylene, o-	5 U	5 U	5 U	5 U	5 U

Appendix H -3
Soil Gas
Pfizer, Barceloneta, Puerto Rico

Sample Location Date Collected	AB-1 6/2006	AB-10 6/2006	AB-10b 6/2006	AB-12 6/2006	AB-16 6/2006	AB-18 6/2006	AB-19 6/2006	AB-2 6/2006
VOCs (ppmv)								
Acetone	0.456 U	3.735	730.875	0.456 U	0.456 U	0.456 U	3.36	0.456 U
Benzene	0.459 U	7717.005	74317.29	0.459 U	246.675	0.459 U	630.085	0.459 U
Chlorobenzene	0.594 U	18.015	0.594 U	0.594 U	9.855	0.594 U	9.77	5.555
Chloroform	1.03 U	11.405	1.03 U	1.03 U	71.205	12.465	10.465	1.03 U
Ethylbenzene	0.542 U	4390.85	336.5933	0.542 U	2293.215	0.542 U	4604.335	0.542 U
Isopropanol	0.302 U	2.26	281.75	0.302 U	0.302 U	0.302 U	0.302 U	0.302 U
Methanol	2.51 U	1.255	29523.75	2.51 U	2.51 U	2.51 U	6.355	2.51 U
Methylene Chloride	1.93 U	11.68	2738.75	1.93 U	8.935	1.93 U	51.36	1.93 U
m,p-Xylene	1.1 U	7680.1	951.7824	1.1 U	8305.5	1.1 U	8509.1	1.1 U
o-Xylene	0.492 U	2517.66	504.9581	0.492 U	440.94	0.492 U	3782.8	0.492 U
Tetrahydrofuran	0.719 U	169.15	67384.61	0.719 U	89.865	0.719 U	4.16	0.719 U
Toluene	0.456 U	6894.76	3434.27	0.456 U	285.37	0.456 U	6604.2	0.456 U

Appendix H -3

Soil Gas

Pfizer, Barceloneta, Puerto Rico

Sample Location Date Collected	AB-20 6/2006	AB-21 6/2006	AB-22 6/2006	AB-23 6/2006	AB-5 6/2006	AB-8 6/2006	AB-9 6/2006	B-1 6/2006
VOCs (ppmv)								
Acetone	0.456 U	38.565	0.456 U	1878.375	0.456 U	0.456 U	0.456 U	392
Benzene	61840.5	11097.4	182.34	19421.25	0.459 U	38.6	19.175	81763.08
Chlorobenzene	0.594 U	13.81	0.594 U	0.594 U	5.735	0.594 U	0.594 U	0.594 U
Chloroform	20.445	22.46	1.03 U	1.03 U	1.03 U	1.03 U	1.03 U	1.03 U
Ethylbenzene	151.635	3681.935	0.542 U	113.35	0.542 U	0.542 U	0.542 U	12239.84
Isopropanol	0.302 U	6.99	0.302 U	460.825	0.302 U	0.302 U	0.302 U	137
Methanol	2.51 U	1943.295	2.51 U	79.56	2.51 U	2.51 U	2.51 U	53686
Methylene Chloride	1.93 U	38.865	1.93 U	310.41	1.93 U	1.93 U	1.93 U	554
m,p-Xylene	194.905	7257.91	3.92	429.95	1.1 U	1.1 U	1.1 U	27519.38
o-Xylene	0.492 U	2635.8	0.492 U	83.285	0.492 U	0.492 U	0.492 U	11740.18
Tetrahydrofuran	7.255	9250.85	7.7	35752.5	0.719 U	0.719 U	0.719 U	37284.15
Toluene	2.89	9581.35	0.99	834.75	0.456 U	0.456 U	0.456 U	80042.39

Appendix H -3

Soil Gas

Pfizer, Barceloneta, Puerto Rico

Sample Location Date Collected	B-4 6/2006	B-6 6/2006	B-8 6/2006	VB-13 6/2006	VB-14 6/2006	VB-15 6/2006	VB-15a 6/2006
VOCs (ppmv)							
Acetone	271.85	148.05	1963.125	0.456 U	0.456 U	2.05	0.456 U
Benzene	33919.61	34355.67	4267.875	0.459 U	8.09	133.22	0.459 U
Chlorobenzene	10.925	11.525	2.79	0.594 U	0.594 U	0.594 U	0.594 U
Chloroform	137	21.825	7.73	18.145	5.62	2.755	1.03 U
Ethylbenzene	5877.117	484.839	57.79	0.542 U	9.05	9.925	0.542 U
Isopropanol	18.875	63.425	1152.5	0.302 U	0.302 U	0.302 U	0.302 U
Methanol	21346.5	984.875	1511	2.51 U	2.51 U	2.51 U	2.51 U
Methylene Chloride	15.15	885.425	22.54	1.93 U	1.93 U	1.93 U	1.93 U
m,p-Xylene	9792.844	1068	71.065	1.1 U	8.425	38.82	1.1 U
o-Xylene	5598.565	452.691	7.07	0.492 U	0.492 U	2.97	0.492 U
Tetrahydrofuran	27078	21869.5	68580	0.719 U	0.719 U	25.075	0.719 U
Toluene	17048.64	1740.605	21.39	0.456 U	0.456 U	1.9	0.456 U

Appendix E
SG-1 Spreadsheets for Evaluation of
Volatilization into Indoor Air

RESULTS SHEET

Appendix I - 1a
 SG - Screen , Version 3.1
 Volatilization into Indoor Air
 Current/Future Commercial Industrial Worker
 Pfizer, Barceloneta, Puerto Rico

Chemical	OSHA PEL (mg/m3)	Infinite source bldg. conc., Cbuilding (mg/m3)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
VOCs			
Acetone	2400.00	2.36	0.001
Chloroform	240.00	0.30	0.001
Benzene	3.19	108.57	34.04
Methylene chloride	86.75	3.88	0.04
o-Xylene	435.00	16.88	0.04
Ethylbenzene	435.00	9.66	0.02
m-Xylene	435.00	35.81	0.08
Toluene	754.00	84.15	0.11
Chlorobenzene	754.00	0.06	0.0001
Furan (for Tetrahydrofuran)	754.00	46.56	0.06

HQ = Infinite Source Bldg Conc/OSHA PEL

34.40

= HQ > 1

DATA ENTRY SHEET

Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g (ppmv)	Chemical	Depth below grade to bottom of enclosed space floor, L_f (15 or 200 cm)	Soil gas sampling depth below grade, L_s (cm)	Average soil temperature, T_s (°C)	Vadose zone SCS soil type soil vapor (used to estimate permeability)	Vadose zone SCS soil type Lookup Soil Parameters	Vadose zone soil dry bulk density, $\rho_{s,d}$ (g/cm ³)	Vadose zone soil total porosity, n^v (unitless)	Vadose zone soil water-filled porosity, q_w^v (cm ³ /cm ³)	Average vapor flow rate into bldg. (Leave blank to calculate) Q_{tot} (L/m)
67641	1.16E+03	Acetone	15	504.75	25	S	S	1.66	0.375	0.054	5
67663	7.89E+01	Chloroform	15	504.75	25	S	S	1.66	0.375	0.054	5
71432	4.67E+04	Benzene	15	504.75	25	S	S	1.66	0.375	0.054	5
75092	1.43E+03	Methylene chloride	15	504.75	25	S	S	1.66	0.375	0.054	5
95476	5.37E+03	o-Xylene	15	504.75	25	S	S	1.66	0.375	0.054	5
100414	3.32E+03	Ethylbenzene	15	504.75	25	S	S	1.66	0.375	0.054	5
108383	1.26E+04	m-Xylene	15	504.75	25	S	S	1.66	0.375	0.054	5
108883	3.08E+04	Toluene	15	504.75	25	S	S	1.66	0.375	0.054	5
108907	1.54E+01	Chlorobenzene	15	504.75	25	S	S	1.66	0.375	0.054	5
110009	2.12E+04	Furan (for Tetrahydrofuran)	15	504.75	25	S	S	1.66	0.375	0.054	5

CHEMICAL PROPERTIES SHEET

Appendix I - 1c
 SG - Screen , Version 3.1
 Volatilization into Indoor Air
 Current/Future Commercial Industrial Worker
 Pfizer, Barceloneta, Puerto Rico

Chemical	Diffusivity in air, D_a (cm ² /s)	Diffusivity in water, D_w (cm ² /s)	Henry's law constant at reference temperature, H (atm-m ³ /mol)	Henry's law constant reference temperature, T_R (°C)	Enthalpy of vaporization at the normal boiling point, $DH_{v,b}$ (cal/mol)	Normal boiling point, T_b (°K)	Critical temperature, T_c (°K)	OSHA PEL (mg/m ³)	Molecular weight, MW (g/mol)
VOCs									
Acetone	1.24E-01	1.14E-05	3.87E-05	25	6,955	329.20	508.10	2.4E+03	58.08
Chloroform	1.04E-01	1.00E-05	3.66E-03	25	6,988	334.32	536.40	2.4E+02	119.38
Benzene	8.80E-02	9.80E-06	5.54E-03	25	7,342	353.24	562.16	3.2E+00	78.11
Methylene chloride	1.01E-01	1.17E-05	2.18E-03	25	6,706	313.00	510.00	8.7E+01	84.93
o-Xylene	8.70E-02	1.00E-05	5.18E-03	25	8,661	417.60	630.30	4.4E+02	106.17
Ethylbenzene	7.50E-02	7.80E-06	7.86E-03	25	8,501	409.34	617.20	4.4E+02	106.17
m-Xylene	7.00E-02	7.80E-06	7.32E-03	25	8,523	412.27	617.05	4.4E+02	106.17
Toluene	8.70E-02	8.60E-06	6.62E-03	25	7,930	383.78	591.79	7.5E+02	92.14
Chlorobenzene	7.30E-02	8.70E-06	3.69E-03	25	8,410	404.87	632.40	3.5E+02	112.56
Furan (for Tetrahydrofuran)	1.04E-01	1.22E-05	5.39E-03	25	6,477	304.60	490.20	5.9E+02	68.08

INTERMEDIATE CALCULATIONS SHEET

Appendix I - 1d
 SG - Screen , Version 3.1
 Volatilization into Indoor Air
 Current/Future Commercial Industrial Worker
 Pfizer, Barceloneta, Puerto Rico

Chemical	Source- building separation, L/T (cm)	Vadose zone soil air-filled porosity, qaV (cm ³ /cm ³)	Vadose zone effective total fluid saturation, Ste (cm ³ /cm ³)	Vadose zone soil intrinsic permeability, ki (cm ²)	Vadose zone soil relative air permeability, krq (cm ²)	Vadose zone soil effective vapor permeability, kv (cm ²)	Floor- wall seam perimeter, Xcrack (cm)	Soil gas conc. (mg/m ³)	Bldg. ventilation rate, Qbuilding (cm ³ /s)	Area of enclosed space below grade, AB (cm ²)
VOCs										
Acetone	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	6.71E+03	2.76E+06	5.63E+04	2.79E+06
Chloroform	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	6.71E+03	3.85E+05	5.63E+04	2.79E+06
Benzene	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	6.71E+03	1.49E+08	5.63E+04	2.79E+06
Methylene chloride	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	6.71E+03	4.98E+06	5.63E+04	2.79E+06
o-Xylene	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	6.71E+03	2.33E+07	5.63E+04	2.79E+06
Ethylbenzene	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	6.71E+03	1.44E+07	5.63E+04	2.79E+06
m-Xylene	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	6.71E+03	5.58E+07	5.63E+04	2.79E+06
Toluene	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	6.71E+03	1.16E+08	5.63E+04	2.79E+06
Chlorobenzene	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	6.71E+03	7.09E+04	5.63E+04	2.79E+06
Furan (for Tetrahydrofuran)	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	6.71E+03	5.89E+07	5.63E+04	2.79E+06

INTERMEDIATE CALCULATIONS SHEET

Appendix I - 1d
 SG - Screen , Version 3.1
 Volatilization into Indoor Air
 Current/Future Commercial Industrial Work
 Pfizer, Barceloneta, Puerto Rico

Chemical	Crack-to-total area ratio, $\frac{A_c}{A_t}$ (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, DH_v, TS (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D_{effV} (cm ² /s)	Diffusion path length, L_d (cm)	Convection path length, L_p (cm)	Source vapor conc., C_{source} (mg/m ³)
VOCs										
Acetone	1.44E-04	15	7,372	3.87E-05	1.58E-03	1.80E-04	2.00E-02	489.75	15	2.76E+06
Chloroform	1.44E-04	15	7,397	3.66E-03	1.50E-01	1.80E-04	1.68E-02	489.75	15	3.85E+05
Benzene	1.44E-04	15	7,967	5.54E-03	2.26E-01	1.80E-04	1.42E-02	489.75	15	1.49E+08
Methylene chloride	1.44E-04	15	6,873	2.18E-03	8.93E-02	1.80E-04	1.63E-02	489.75	15	4.98E+06
o-Xylene	1.44E-04	15	10,233	5.18E-03	2.12E-01	1.80E-04	1.41E-02	489.75	15	2.33E+07
Ethylbenzene	1.44E-04	15	9,982	7.86E-03	3.21E-01	1.80E-04	1.21E-02	489.75	15	1.44E+07
m-Xylene	1.44E-04	15	10,078	7.32E-03	2.99E-01	1.80E-04	1.13E-02	489.75	15	5.55E+07
Toluene	1.44E-04	15	8,990	6.62E-03	2.71E-01	1.80E-04	1.41E-02	489.75	15	1.16E+08
Chlorobenzene	1.44E-04	15	9,651	3.69E-03	1.51E-01	1.80E-04	1.18E-02	489.75	15	7.09E+04
Furan (for Tetrahydrofuran)	1.44E-04	15	6,553	5.39E-03	2.20E-01	1.80E-04	1.68E-02	489.75	15	5.89E+07

INTERMEDIATE CALCULATIONS SHEET

Appendix I - 1d
 SG - Screen , Version 3.1
 Volatilization into Indoor Air
 Current/Future Commercial Industrial Work
 Pfizer, Barceloneta, Puerto Rico

Chemical	Crack radius, rcrack (cm)	Average vapor flow rate into bldg., Qsoil (cm3/s)	Crack effective diffusion coefficient, Dcrack (cm2/s)	Area of crack, Acrack (cm2)	Exponent of equivalent foundation Peclet number, exp(Pef) (unitless)	Infinite source indoor attenuation coefficient, a (unitless)	Infinite source bldg. conc., Cbldg (mg/m3)	OSHA PEL (mg/m3)
VOCs								
Acetone	0.06	8.33E+01	2.00E-02	4.00E+02	1.35E+45	8.55E-04	2.36E+03	2.4E+03
Chloroform	0.06	8.33E+01	1.68E-02	4.00E+02	6.54E+53	7.91E-04	3.05E+02	2.4E+02
Benzene	0.06	8.33E+01	1.42E-02	4.00E+02	3.99E+63	7.29E-04	1.09E+05	3.2E+00
Methylene chloride	0.06	8.33E+01	1.63E-02	4.00E+02	2.60E+55	7.80E-04	3.88E+03	8.7E+01
o-Xylene	0.06	8.33E+01	1.41E-02	4.00E+02	2.15E+64	7.25E-04	1.69E+04	4.4E+02
Ethylbenzene	0.06	8.33E+01	1.21E-02	4.00E+02	4.21E+74	6.70E-04	9.66E+03	4.4E+02
m-Xylene	0.06	8.33E+01	1.13E-02	4.00E+02	9.01E+79	6.45E-04	3.58E+04	4.4E+02
Toluene	0.06	8.33E+01	1.41E-02	4.00E+02	2.15E+64	7.25E-04	8.42E+04	7.5E+02
Chlorobenzene	0.06	1.53E+02	1.18E-02	4.00E+02	5.79E+140	8.28E-04	5.87E+01	3.5E+02
Furan (for Tetrahydrofuran)	0.06	8.33E+01	1.68E-02	4.00E+02	6.54E+53	7.91E-04	4.66E+04	5.9E+02

RESULTS SHEET

Appendix I - 2a
SG - Screen , Version 3.1
Volatilization into Indoor Air
Future Resident
Pfizer, Barceloneta, Puerto Rico

Chemical	Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
Acetone	NA	1.4E+00
Chloroform	5E-03	NA
Benzene	6E-01	6.1E+03
Methylene chloride	1E-03	2.2E+00
o-Xylene	NA	2.8E+02
Ethylbenzene	NA	1.6E+01
m-Xylene	NA	5.7E+02
Toluene	NA	2.8E+01
Chlorobenzene	NA	1.3E+00
Furan (as Tetrahydrofuran)	NA	2.3E+04

6E-01	3.0E+04

=Cancer Risk > 1E-04,
HQ>1

DATA ENTRY SHEET

Appendix I - 2b
SG - Screen , Version 3.1
Volatilization into Indoor Air
Future Resident
Pfizer, Barcelonaeta, Puerto Rico

Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g (ppmv)	Chemical	Depth below grade to bottom of enclosed space floor, L_f (15 or 200 cm)	Soil gas sampling depth below grade, L_s (cm)	Average soil temperature, T_s (°C)	Vadose zone SCS soil type (used to estimate soil vapor permeability)	Vadose zone SCS soil type Parameters Look-up Soil Parameters	Vadose zone soil dry bulk density, ρ_s (g/cm ³)	Vadose zone soil total porosity, n^v (unitless)	Vadose zone soil water-filled porosity, q_v (cm ³ /cm ³)	Average vapor flow rate into bldg, Q_{vbl} (L/m)	Averaging time for cardiogens, AT_c (yrs)	Averaging time for noncardiogens, AT_{nc} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)
67641	1.16E+03	Acetone	15	504.75	25	S	S	1.66	0.375	0.054	5	70	30	30	350
67663	7.89E+01	Chloroform	15	504.75	25	S	S	1.66	0.375	0.054	5	70	30	30	350
71432	4.67E+04	Benzene	15	504.75	25	S	S	1.66	0.375	0.054	5	70	30	30	350
75092	1.43E+03	Methylene chloride	15	504.75	25	S	S	1.66	0.375	0.054	5	70	30	30	350
95476	5.37E+03	o-Xylene	15	504.75	25	S	S	1.66	0.375	0.054	5	70	30	30	350
100414	3.32E+03	Ethylbenzene	15	504.75	25	S	S	1.66	0.375	0.054	5	70	30	30	350
108383	1.28E+04	m-Xylene	15	504.75	25	S	S	1.66	0.375	0.054	5	70	30	30	350
108883	3.08E+04	Toluene	15	504.75	25	S	S	1.66	0.375	0.054	5	70	30	30	350
108907	1.54E+01	Chlorobenzene	15	504.75	25	S	S	1.66	0.375	0.054	5	70	30	30	350
110009	2.12E+04	Furan (as Tetrahydrofuran)	15	504.75	25	S	S	1.66	0.375	0.054	5	70	30	30	350

CHEMICAL PROPERTIES SHEET

Appendix I - 2c
SG - Screen , Version 3.1
Volatilization into Indoor Air
Future Resident
Pfizer, Barceloneta, Puerto Rico

Chemical	Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H ($\text{atm}\cdot\text{m}^3/\text{mol}$)	Henry's law constant reference temperature, T_R ($^{\circ}\text{C}$)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B ($^{\circ}\text{K}$)	Critical temperature, T_C ($^{\circ}\text{K}$)	Unit risk factor, URF ($\text{mg}/\text{m}^3\cdot\text{y}^{-1}$)	Reference conc., RfC (mg/m^3)	Molecular weight, MW (g/mol)
VOCs										
Acetone	1.24E-01	1.14E-05	3.87E-05	25	6,955	329.20	508.10	0.0E+00	3.2E+00	58.08
Chloroform	1.04E-01	1.00E-05	3.66E-03	25	6,988	334.32	536.40	2.3E-05	0.0E+00	119.38
Benzene	8.80E-02	9.80E-06	5.54E-03	25	7,342	353.24	562.16	7.8E-06	3.0E-02	78.11
Methylene chloride	1.01E-01	1.17E-05	2.18E-03	25	6,706	313.00	510.00	4.7E-07	3.0E+00	84.93
o-Xylene	8.70E-02	1.00E-05	5.18E-03	25	8,661	417.60	630.30	0.0E+00	1.0E-01	106.17
Ethylbenzene	7.50E-02	7.80E-06	7.86E-03	25	8,501	409.34	617.20	0.0E+00	1.0E+00	106.17
m-Xylene	7.00E-02	7.80E-06	7.32E-03	25	8,523	412.27	617.05	0.0E+00	1.0E-01	106.17
Toluene	8.70E-02	8.60E-06	6.62E-03	25	7,930	383.78	591.79	0.0E+00	5.0E+00	92.14
Chlorobenzene	7.30E-02	8.70E-06	3.69E-03	25	8,410	404.87	632.40	0.0E+00	6.0E-02	112.56
Furan (as Tetrahydrofuran)	1.04E-01	1.22E-05	5.39E-03	25	6,477	304.60	490.20	0.0E+00	3.5E-03	68.08

INTERMEDIATE CALCULATIONS SHEET

Appendix I - 2d
 SG - Screen , Version 3.1
 Volatilization into Indoor Air
 Future Resident
 Pfizer, Barceloneta, Puerto Rico

Chemical	Source- building separation, L_T (cm)	Vadose zone soil air-filled porosity, q_a^v (cm ³ /cm ³)	Vadose zone effective total fluid saturation, S_{le} (cm ³ /cm ³)	Vadose zone soil intrinsic permeability, k_i (cm ²)	Vadose zone soil relative permeability, k_{rg} (cm ²)	Vadose zone soil effective vapor permeability, k_v (cm ²)	Floor- wall seam perimeter, X_{crack} (cm)	Soil gas conc. (mg/m ³)	Bldg. ventilation rate, $Q_{building}$ (cm ³ /s)	Area of enclosed space below grade, A_B (cm ²)
VOCs										
Acetone	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	4,000	2.76E+06	1.69E+04	1.00E+06
Chloroform	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	4,000	3.85E+05	1.69E+04	1.00E+06
Benzene	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	4,000	1.49E+08	1.69E+04	1.00E+06
Methylene chloride	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	4,000	4.98E+06	1.69E+04	1.00E+06
o-Xylene	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	4,000	2.33E+07	1.69E+04	1.00E+06
Ethylbenzene	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	4,000	1.44E+07	1.69E+04	1.00E+06
m-Xylene	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	4,000	5.55E+07	1.69E+04	1.00E+06
Toluene	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	4,000	1.16E+08	1.69E+04	1.00E+06
Chlorobenzene	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	4,000	7.09E+04	1.69E+04	1.00E+06
Furan (as Tetrahydrofuran)	489.75	0.321	0.003	1.02E-07	0.998	1.02E-07	4,000	5.89E+07	1.69E+04	1.00E+06

INTERMEDIATE CALCULATIONS SHEET

Appendix I - 2d
SG - Screen , Version 3.1
Volatilization into Indoor Air
Future Resident
Pfizer, Barceloneta, Puerto Rico

Chemical	Crack-to-total area ratio, h	Crack depth below grade, Z_{crack}	Enthalpy of vaporization at ave. soil temperature, $DH_{v,TS}$	Henry's law constant at ave. soil temperature, H'_{TS}	Henry's law constant at ave. soil temperature, H'_{TS}	Vapor viscosity at ave. soil temperature, μ_{TS}	Vadose zone effective diffusion coefficient, D^{eff}_v	Diffusion path length, L_d	Convection path length, L_p	Source vapor conc., C_{source}
	(unitless)	(cm)	(cal/mol)	(atm-m ³ /mol)	(unitless)	(g/cm-s)	(cm ² /s)	(cm)	(cm)	(mg/m ³)
VOCs										
Acetone	4.00E-04	15	7,372	3.87E-05	1.58E-03	1.80E-04	2.00E-02	489.75	15	2.76E+06
Chloroform	4.00E-04	15	7,397	3.66E-03	1.50E-01	1.80E-04	1.68E-02	489.75	15	3.85E+05
Benzene	4.00E-04	15	7,967	5.54E-03	2.26E-01	1.80E-04	1.42E-02	489.75	15	1.49E+08
Methylene chloride	4.00E-04	15	6,873	2.18E-03	8.93E-02	1.80E-04	1.63E-02	489.75	15	4.98E+06
o-Xylene	4.00E-04	15	10,233	5.18E-03	2.12E-01	1.80E-04	1.41E-02	489.75	15	2.33E+07
Ethylbenzene	4.00E-04	15	9,982	7.86E-03	3.21E-01	1.80E-04	1.21E-02	489.75	15	1.44E+07
m-Xylene	4.00E-04	15	10,078	7.32E-03	2.99E-01	1.80E-04	1.13E-02	489.75	15	5.55E+07
Toluene	4.00E-04	15	8,990	6.62E-03	2.71E-01	1.80E-04	1.41E-02	489.75	15	1.16E+08
Chlorobenzene	4.00E-04	15	9,651	3.69E-03	1.51E-01	1.80E-04	1.18E-02	489.75	15	7.09E+04
Furan (as Tetrahydrofuran)	4.00E-04	15	6,553	5.39E-03	2.20E-01	1.80E-04	1.68E-02	489.75	15	5.99E+07

Appendix I - 2d
SG - Screen , Version 3.1
Volatilization into Indoor Air
Future Resident
Pfizer, Barceloneta, Puerto Rico

Chemical	Crack radius, r_{crack} (cm)
VOCs	
Acetone	0.10
Chloroform	0.10
Benzene	0.10
Methylene chloride	0.10
o-Xylene	0.10
Ethylbenzene	0.10
m-Xylene	0.10
Toluene	0.10
Chlorobenzene	0.10
Furan (as Tetrahydrofuran)	0.10

Chemical	Average vapor flow rate into bldg., Q_{soil} (cm ³ /s)	Crack effective diffusion coefficient, D_{crack}^{eff} (cm ² /s)	Area of crack, A_{crack} (cm ²)	Exponent of equivalent foundation Peclet number, exp(Pe ⁴) (unitless)	Infinite source indoor attenuation coefficient, a (unitless)	Infinite source bldg. conc., $C_{building}$ (mg/m ³)	Unit risk factor, URF (mg/m ³) ⁻¹	Reference conc., RfC (mg/m ³)
VOCs								
Acetone	8.33E+01	2.00E-02	4.00E+02	1.35E+45	1.62E-03	4.48E+03	NA	3.2E+00
Chloroform	8.33E+01	1.68E-02	4.00E+02	6.54E+53	1.43E-03	5.53E+02	2.3E-05	NA
Benzene	8.33E+01	1.42E-02	4.00E+02	3.99E+63	1.27E-03	1.89E+05	7.8E-06	3.0E-02
Methylene chloride	8.33E+01	1.63E-02	4.00E+02	2.60E+55	1.41E-03	7.00E+03	4.7E-07	3.0E+00
o-Xylene	8.33E+01	1.41E-02	4.00E+02	2.15E+64	1.26E-03	2.94E+04	NA	1.0E-01
Ethylbenzene	8.33E+01	1.21E-02	4.00E+02	4.21E+74	1.13E-03	1.62E+04	NA	1.0E+00
m-Xylene	8.33E+01	1.13E-02	4.00E+02	9.01E+79	1.07E-03	5.93E+04	NA	1.0E-01
Toluene	8.33E+01	1.41E-02	4.00E+02	2.15E+64	1.26E-03	1.46E+05	NA	5.0E+00
Chlorobenzene	8.33E+01	1.18E-02	4.00E+02	4.67E+76	1.10E-03	7.82E+01	NA	6.0E-02
Furan (as Tetrahydrofuran)	8.33E+01	1.68E-02	4.00E+02	6.54E+53	1.43E-03	8.45E+04	NA	3.5E-03

Appendix F
Input Parameters for DA_{event}

Appendix J-1
 Future Construction Worker
 DAevent Model - Contact With Surface/Subsurface Soil
 Pfizer, Barceloneta, Puerto Rico

Constituent		Absorbed Dose Per Event adult (mg/cm2-event)	Dermal Absorption Fraction	Chemical Concentration in Surface/Subsurface Soil (mg/kg)
71432	Benzene	1.7E-08	0.01	5.6E+00
110009	Tetrahydrofuran	3.4E-08	0.01	1.1E+01
1330207	Xylenes	3.0E-07	0.01	1.0E+02

$$DA_{event} = C_{soil} * CF * AF * ABSd$$

Chemical Specific (CS)

Soil Concentration (Csoil) =

Conversion Factor (CF) =

Adherence Factor RME (AFAdult) =

Dermal Absorption Fraction (ABSd) =

Site specific mg/kg
 1.00E-06 kg/mg
 0.3 mg/cm2 [1]
 CS unitless

[1] USEPA 2004b

Appendix J-2a
Current/Future Commercial/Industrial Worker
DAevent Model - Contact With Surface/Subsurface Soil
Pfizer, Barceloneta, Puerto Rico

Constituent		Absorbed Dose Per Event adult (mg/cm2-event)	Dermal Absorption Fraction	Chemical Concentration in Surface/Subsurface Soil (mg/kg)
71432 Benzene 110009 Tetrahydrofuran 1330207 Xylenes	VOCS			
		1.1E-09	0.01	5.6E+00
		2.3E-09	0.01	1.1E+01
		2.0E-08	0.01	1.0E+02

$$DA_{event} = C_{soil} * CF * AF * ABSd$$

Chemical Specific (CS)

Soil Concentration (Csoil) =

Conversion Factor (CF) =

Adherence Factor RME (AFAdult) =

Dermal Absorption Fraction (ABSd) =

Site specific mg/kg
1.00E-06 kg/mg
0.02 mg/cm2 [1]
CS unitless

[1] USEPA 2004b

Appendix J-2b
Current/Future Commercial/Industrial Worker
DAevent Model - Contact With Ground Water
Pfizer, Barceloneta, Puerto Rico

Constituent	Absorbed Dose Per Event adult (mg/cm ² -event)	Kp Dermal Permeability Coefficient (cm/hr)	B Dermal Permeability Ratio	τ event Lag Time Per Event (hr/event)	t* Time to Steady State (hr)	FA Fraction Absorbed	Cw Chemical Concentration in Water (mg/cm ³)
VOCs							
Chlorobenzene	1.80E-05	2.80E-02	0.1	0.46	1.09	1	4.50E-04
Chloroform	8.71E-08	6.80E-03	0	0.5	1.19	1	8.58E-06

Absorbed Dose Per Event for Organics (DAevent)

$$DAevent=2FA * Kp * Cw * (SQRT(6 * \tau event * tevent)/\pi))$$

$$DAevent=FA * Kp * Cw * (\tau event/(1 + B) + 2 * \tau event * ((1 + 3B + 3 * (B^2))/(1 + B)^2))$$

$$IF \tau event \leq t^*$$

$$IF \tau event > t^*$$

Chemical Specific (CS)

Dermal Permeability Coefficient (Kp)

Dermal Permeability Ratio (B)

Event Duration (τ event)

Time to Steady-State (t*)

Event Duration (τ event):

CS cm/hr

CS

CS hr/event

CS hr

0.58 hours/event

RAGS Vol I: Part E Exhibit B3 or Equation 3.8

RAGS Vol I: Part E Equation A.1

RAGS Vol I: Part E, Exhibit B3 or Equation A.5,
(35 minute shower or bath) [1]

[1] USEPA 2004b

Appendix J-3a
Future Resident
DAevent Model - Contact With Surface/Subsurface Soil
Pfizer, Barceloneta, Puerto Rico

Constituent		Absorbed Dose Per Event adult (mg/cm2-event)	Absorbed Dose Per Event child (mg/cm2-event)	Dermal Absorption Fraction	Chemical Concentration in Surface/Subsurface Soil (mg/kg)
71432 110009 1330207	VOCs				
	Benzene	3.9E-09	1.1E-08	0.01	5.6E+00
	Tetrahydrofuran	8.0E-09	2.3E-08	0.01	1.1E+01
	Xylenes	7.1E-08	2.0E-07	0.01	1.0E+02

$$DA_{event} = C_{soil} * CF * AF * ABSd$$

Chemical Specific (CS)

$$Soil\ Concentration\ (C_{soil}) =$$

$$Conversion\ Factor\ (CF) =$$

$$Adherence\ Factor\ RME\ (AF_{Adult}) =$$

$$Adherence\ Factor\ RME\ (AF_{Child}) =$$

$$Dermal\ Absorption\ Fraction\ (ABSd) =$$

Site specific mg/kg

1.00E-06 kg/mg

0.07 mg/cm2 [1]

0.2 mg/cm2 [1]

CS unitless

[1] USEPA 2004

Appendix J-3b
Future Resident
DAevent Model - Contact With Ground Water
Pfizer, Barceloneta, Puerto Rico

Constituent	Absorbed Dose Per Event adult (mg/cm2-event)	Kp Dermal Permeability Coefficient (cm/hr)	B Dermal Permeability Ratio	τ event Lag Time Per Event (hr/event)	t* Time to Steady State (hr)	FA Fraction Absorbed	Cw Chemical Concentration in Water (mg/cm3)
VOCs							
Chlorobenzene	1.80E-05	2.80E-02	0.1	0.46	1.09	1	4.50E-04
Chloroform	8.71E-08	6.80E-03	0	0.5	1.19	1	8.58E-06

Absorbed Dose Per Event for Organics (DAevent)

$$DAevent = 2FA * Kp * Cw * (SQRT(6 * \tau event * t event) / \pi)$$

$$DAevent = FA * Kp * Cw * (\tau event / ((1 + 3B + 3 * (B^2)) / (1 + B)^2))$$

IF $\tau event \leq t^*$
IF $\tau event > t^*$

Chemical Specific (CS)

Dermal Permeability Coefficient (Kp)

Dermal Permeability Ratio (B)

Event Duration (tevent)

Time to Steady-State (t*)

Event Duration (tevent):

CS cm/hr

CS

CS hr/event

CS hr

0.58 hours/event

RAGS Vol I: Part E Exhibit B3 or Equation 3.8

RAGS Vol I: Part E Equation A.1

RAGS Vol I: Part E, Exhibit B3 or Equation A.5
(35 minute shower or bath) [1]

[1] USEPA 2004b