USEPA RCRA VOLUNTARY CORRECTIVE ACTION UPDATE TO POST-RI/FS INVESTIGATION REPORT

Project No. 0100.58.25

March 31, 2005

Prepared For

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EPA ID No. OHD 086 438 538

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In Collaboration With

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1.0 INTRODUCTION

In 2004, EMD Chemicals Inc. (EMD) completed a remedial investigation and feasibility study (RI/FS) under an Ohio EPA Administrative Order on Consent (AOC) at its facility located at 2909 Highland Avenue, Norwood, Ohio (f/k/a EM Science) (Site). All requirements of the AOC have been completed by EMD. Corrective Actions at the site will be governed by a Voluntary Corrective Action Agreement (VCAA), executed on September 23, 2004 between the USEPA and EMD. Post RI/FS investigations were performed by EMD to supplement data collected during the previous RI/FS with the majority of work required by Section V (Work to be Performed) of the VCAA. This report is an update to post-RI/FS investigations (UPI) that EMD conducted on- and off-site during 2003 and 2004. The purpose of the UPI document is to:

- Summarize data collected during post-RI/FS investigations; and
- Document completion of specific deliverables referenced in the VCAA during the reporting period.

This UPI Report presents the organization, objectives, functional activities and specific quality assurance (QA) and quality control (QC) activities associated with the VCAA investigations at the Site between September 2003 and December 2004. Summary reports that outline data collected during each quarter are presented to the USEPA in separate quarterly progress reports.

Post RI/FS investigations included the sampling and analysis of surface water, storm sewer water, sewer backfill water, ground water media on and off-site and limited soil sampling off-site. On the behalf EMD, investigations presented in this document were completed by The Payne Firm, Inc. (Payne Firm), in collaboration with CH2M HILL, Inc. (CH2M HILL) between September 2003 and December 2004. The information presented in this report was used during the preparation of the Conceptual Model of Current Conditions (CMCC) report (CH2M HILL, 2005a). The CMCC report presents the Site Conceptual Model (SCM) that incorporates available information into a current, high level understanding of the Site's hydrogeology, distribution, fate, and transport of constituents of concern (COCs) in soil and ground water, surface water and human health risk. With this information, further evaluation of possible corrective measures can be evaluated.

Given the past RI/FS sampling results and UPI supplemental and confirmation sampling, the most frequently detected contaminants of concern were VOCs. As discussed in Section 2.0 below, data collected during the UPI are consistent with the project DQOs and were collected following the project QAPP. The current conditions of the nature and extent of contamination in perched ground water and sewer backfill water were investigated during the UPI. This entire UPI Report is included electronically in Appendix 1F.

1.1 Site Background

As shown on Figure 1, the Site is located northwest of the intersection of Interstate 71 (I-71) and State Route 562 (also referred to as S.R. 562 or "Norwood Lateral"). The EMD Chemicals facility has been used for the manufacturing, storage and distribution of organic and inorganic chemicals. The facility features are presented on Figure 2. The facility has served in this capacity before being purchased by Merck, KGaA (the parent of EMD Chemicals) in 1977 (at that time known as EM Science, Inc., a division of EM Industries, Inc., Hawthorne, New York), dating back to the late 1940s. Remedial investigations and interim actions have been performed at the Site for over 20 years.

Detailed descriptions of the Site were presented in the RI Report (Payne Firm, 1996) and the FS Report (Ohio EPA, 2004). The status of current Site conditions, including work performed to date, SWMU/AOCs, interim measures, environmental setting, and nature and extent of contamination were summarized in the Conceptual Model of Current Conditions (CMCC) document prepared by CH2M HILL (2005a).

1.2 VCAA Reports and Technical Memoranda

During the VCAA, interim documents such as quarterly reports, Technical Memoranda, and other reports were prepared by EMD and submitted to the USEPA to report on the progress of the RCRA Corrective Action (Table 1). A brief summary of these documents is provided below.

1.2.1 VCAA Investigation QAPP

The data collected during corrective action sampling efforts are expected to be quantitatively comparable to the data collected by EMD during a previous Ohio EPA RI/FS. Based on a review of the RI/FS QAPP (Payne Firm, 1993) and other procedures utilized in developing data during the previous RI/FS, the USEPA concurs that existing RI/FS data developed by EMD meets the QAPP requirements set forth in Section V.D.7 of the VCAA (USEPA, 2004).

An updated QAPP (Payne Firm, 2004) was prepared to present the organization, objectives, functional activities and specific QA/QC activities of the UPI investigation, and to ensure the representativeness and accuracy of collected data to support the data quality objectives (DQOs) which were presented in the QAPP. The updated QAPP was prepared in accordance with the USEPA Region 5 RCRA QAPP Policy

(USEPA, 1998), as appropriate for the Site. The entire VCAA QAPP is included electronically in Appendix 1A.

The sampling and analysis procedures and protocols identified in the QAPP are sufficient to identify, characterize, and delineate (to the extent practicable) the nature and extent of all releases at the Site, and to determine the need for, and design of, corrective measures for the Site. The draft QAPP for the UPI was presented and discussed with the USEPA during an initial VCAA investigation kick-off meeting in June 2004. Additional QAPPs specifically needed during construction, operation, and maintenance of corrective measures will be prepared separately.

1.2.2 Technical Memoranda and Other Documentation

Per Section V(B) of the VCAA, EMD was to provide reports to the USEPA that documented current and historic site conditions. To fulfill the requirement, EMD submitted the following documentation:

Zoning Designation and Applicable Ordinance

On December 22, 2004, EMD submitted a copy of the current zoning designation to the USEPA that pertains to the Site (CH2M HILL, 2004a). Zoning for the Site within the Cincinnati municipality is "MG Manufacturing General" and within the Norwood municipality is "M-2 Heavy Manufacturing." The document is presented in Appendix 1C of this UPI Report.

Technical Memorandum – Current Status of SWMUs and AOCs

Eleven solid waste management units (SWMUs) and two areas of concern (AOCs) were identified by USEPA during the Preliminary Assessment/Visual Site Investigation (PA/VSI, USEPA, 1990). As required under the VCAA, the current status of the SWMUs/AOCs were re-assessed and submitted in a Technical Memorandum to the USEPA on December 22, 2004 (CH2M HILL, 2004b); the results and conclusions were presented in Section 2.2 of the CMCC Report (CH2M HILL, 2005a). The Technical Memorandum concluded that all SWMUs and AOCs were sufficiently identified and characterized during the RI/FS, and that there were no newly discovered SWMUs or AOCs that need to be investigated or characterized. The entire Technical Memorandum is provided in Appendix 1D of this UPI Report.

Update to RI/FS Well Search

In support of the off-site risk assessment, the Payne Firm conducted an updated well search for the area located within one mile of the EMD facility (Payne Firm, 2005). The well survey update verified the conclusions of the previous well search performed during the RI/FS (Payne Firm, 1996). Both the updated well search and the well search conducted during the RI/FS concluded that no perched ground water production wells exist in the vicinity of the EMD Site. The respective health departments for Norwood, Cincinnati and Hamilton County defer to the State of Ohio requirements regarding the installation of water wells and the private use of ground water in the vicinity of the Site. Based on well location and construction restrictions promulgated by rule 3701-28 of the Ohio Administrative Code, the future use of contaminated perched ground water for potable or non-potable water use in the vicinity of

the EMD facility would be prohibited. The entire UPI well search document is provided in Appendix 1B of this UPI Report.

2.0 UPI – FIELD ACTIVITIES

This section presents the goals, objectives, tasks and results of the UPI. The project QAPP (Payne Firm, 2004) discussed the procedures and protocols used to document that collected VCAA field and analytical data are of sufficient quality and quantity to meet project DQOs. Appendix A in the CCMC Report (CH2M HILL, 2005a) provided a brief overview of investigations EMD performed to date since 1981.

2.1 UPI Investigation Scope of Work

As a result of the pre-VCAA discussions between EMD and the USEPA, it was determined that additional investigations were needed to fulfill the requirements of the VCAA and to support the design of potential corrective measure(s). The UPI was coordinated by the CH2M HILL/Payne Firm technical team and field tasks were completed by the Payne Firm. The objectives and the data needs of the investigation were identified by the technical team (Table 3; Appendix 1E) and summarized in an initial Payne Firm June 3, 2004 Scope of Work and subsequent Statements of Work (SOWs). The primary objective for the UPI was to determine the current extent of volatile organic compound (VOC) contamination in ground water in the vicinity of the mouth of the west ravine, along the toe of the engineered Norwood Lateral slope, and in ground water at locations downgradient of the facility.

The USEPA's data quality objectives (DQOs) process was used to prepare the detailed scope of work for the UPI (Table 2), and to ensure that the overall goals and objectives of the VCAA are met during the corrective action. The level of DQO analytical support for each group of media and parameters was presented in the UPI QAPP (Payne Firm, 2004). The levels of analytical support were chosen to provide data quality that is consistent with the end use of data as previously discussed. Application of the DQO process also resulted in a detailed UPI scope work, and the tasks necessary to obtain laboratory and environmental field data of appropriate quality.

During the 2003/2004 UPI, seven statements of work (SOWs) were prepared; each SOW is provided electronically in Appendix 1E. Table 3 presents the project SOWs that were prepared during each step of the UPI, the data needs that were addressed by the tasks associated with each project SOW, and documents and other outputs that were prepared to present the results of the tasks. During the 2003/2004 UPI, the scope presented for the project DQOs (Table 2) was modified during the iterative investigation process as information was gathered and assessed and will continue to be modified during the 2005 UPI activities as additional information is collected.

2.2 VCAA Investigation Tasks

As shown on Table 3, the UPI tasks were conducted in iterative steps, and involved the sampling and analysis of soil, ground water, sewer backfill water, storm sewer water and surface water. The initial

steps of field work concentrated on developing a UPI sampling list, collecting data from existing interim measures, and installing additional temporary and permanent monitoring wells into the off-site perched ground water and storm sewer backfill. As discussed in the CMCC Report (CH2M HILL, 2005a), these initial steps allowed for determining the extent of contamination in the perched ground water, storm sewer backfill and surface water needed to support the CA750 process and the evaluation of corrective measures including the performance of the existing ground water collection interim measures, as well as providing additional information for the Site Conceptual Model (SCM). Boring and well construction logs from the UPI are provided electronically in Appendix 2A and new well construction information is included on Table 4.

The following sections present the scope and results of each investigation completed during the 2003/2004 UPI. Conclusions derived from the data and a detailed summary of the current site setting are presented in the CMCC Report (CH2M HILL, 2005a).

2.2.1 CA750 Plume Delineation Scope and Results

Ground water data were needed from perched ground water geological units at off-site well locations to determine the vertical and horizontal extent of COCs in ground water, and to assist in demonstrating that CA750 requirements were achieved. In addition to the installation of downgradient temporary wells, water samples were collected from identified seeps inside the Duck Creek Box Culvert and the 84/96-inch storm sewer to determine if these sewer structures were providing hydraulic containment, intercepting COCs and preventing further downgradient migration.

During the UPI field investigations, analytical samples were collected at depth intervals in accordance with the project DQOs (Table 2) and the Statements of Work (Table 3) for each phase of investigation. The following activities were performed to support off-site plume delineation and the CA750 (Migration of Contaminated Ground Water Under Control Environmental Indicator determination).

- Installation of the following borings/temporary wells to collect ground water samples to further define the vertical and horizontal extent of the downgradient portion of the plume and the fate of the plume near Duck Creek.
    - Boring/well locations VE531-VE535 are presented on Figure 4 and Sheet 1.
    - Results of laboratory VOC analyses performed on ground water samples from temporary wells are presented in Table 5.

- Installation of the following monitor wells to collect ground water samples to further define the vertical and horizontal extent of the southeastern portion of the plume in the vicinity of Duck Creek.
    - Boring/well locations for deep wells MW507B and MW508B; shallow wells MW509A and MW510A; deep wells MW509B and MW510B are presented in Figure 3 and Sheet 1.
    - Results of laboratory VOC analyses performed on ground water samples are presented in Table 6.

- Collection of sewer seep samples (as identified during interior pipe inspection) and surface water samples at the Duck Creek storm water conveyance system and the 96/84-inch storm sewer system to determine if any surface water impacts due to plume interception by these features was occurring.
    - Sampling locations Sewer A, E, F and G (seeps inside 96/84-inch storm sewer), Duck Creek 01 (seep inside Duck Creek Box Culvert) and Duck Creek Inflow/Outflow (Duck Creek surface water) are presented on Figure 3 and Sheet 1.
    - Results of laboratory VOC analyses performed on surface water and storm sewer seep samples are presented in Table 7.

- The analytical data were reviewed and validated; the laboratory reports and a summary of the data validation are provided in Appendix 3A and 3B, respectively.

- Collection of additional slug test data at MW510A and MW510B to determine hydraulic conductivity values in support of the fate and transport modeling documented in the CMCC Report (CH2M HILL, 2005a). Slug test curves are presented in Appendix 2C and in the RI Report (Payne Firm, 1996).

2.2.2 UPI Quarterly Monitoring Scope and Results

Ground water monitoring began in September 2003 following the inception of the VCAA discussions. Quarterly ground water monitoring included the collection of ground water samples from a subset of monitoring wells located on and off of the Site. To confirm that Site conditions had not changed since RI/FS sampling activities, the first two quarterly ground water events focused on analyses of ground water samples for parameters included in the site specific parameter list (SSPL). A discussion of SSPL development is presented in the CMCC (CH2M HILL, 2005a).

- Following confirmation sampling during initial UPI ground water sampling events, it was determined that Site conditions with respect to ground water contamination had not changed since RI/FS investigations concluded that VOCs were the primary COCs.

Before each quarterly sampling event, the following factors were evaluated to determine the sufficiency[1] of data and ground water monitoring wells needed to meet the overall objectives:

1. Confirmation that there are no unacceptable risks above appropriate generic risk-based screening levels for which there are complete pathways between "contamination" and human receptors.
2. Confirmation that VOCs in ground water with respect to the CA750 requirements are not moving beyond the three-dimensional extent of the plumes, especially at well locations that are critical for demonstrating stability of ground water contaminant migration.

[1] "Sufficiency" of data refers to meeting the data quality objectives outlined in Table 2 to define the nature and extent of contamination, support the Human Health and Ground Water Indicator Determinations, Risk Assessment, and the Corrective Measures Evaluation.

3. Potential influence of seasonal variations in ground water elevation in the perched ground water zone beneath the facility and the surrounding area.
4. Evaluation of existing analytical database with the project risk assessors and project hydrogeologists to ensure that sufficient data are available to conduct the risk assessment including contaminant fate and transport modeling, if necessary. Data needs to confirm that the existing ground water interim measures are effectively performing.
5. Confirmation that COCs are not migrating onto the Site from an upgradient source.
6. Determining if Non-Aqueous Phase Liquids (NAPLs) are present in the shallow ground water zone, as either evidenced by concentrations above one percent of the aqueous phase solubility limit for the contaminant; or, visual evidence.

These factors are important to understanding concentrations of contaminants over time, to confirm that contaminant migration pathways identified in the conceptual site model have not changed, to confirm that there is no current unacceptable risk to human health, and to assist in determining if any additional ground water interim actions are necessary for the corrective measures proposal. Graphs of the results from COCs detected in monitoring wells on and off the Site are presented in Appendix 3D. In addition, Sheet 1 presents 1,4-Dioxane results from each sampling location since September 2003.

Results from the quarterly monitoring events to support off-site plume delineation and CA750 requirements are presented herein as follows:

- Locations of monitor wells, storm sewer and surface water locations sampled during the quarterly monitoring events are presented on Figure 3 and Sheet 1.
- The results of laboratory VOC analyses performed on the quarterly ground water, storm sewer and surface water samples are presented on Tables 6 and 7, respectively.
- The results of laboratory SVOC and metals analyses performed on the first two quarterly ground water samples are presented on Tables 8 and 9, respectively.
- The results of laboratory VOC, SVOC and metals analyses performed on aqueous QA/QC samples are presented on Tables 10, 11 and 12, respectively.
- Ground water collection forms from the UPI are presented in Appendix 2B.

The analytical data were reviewed and validated; the laboratory reports and a summary of the data validation are provided in Appendix 3A and 3B, respectively.

2.2.3 Remedial Design for Corrective Measures Tasks Scope and Results

Other work tasks implemented during the 2003/2004 UPI focused on installing additional soil borings, monitoring wells, and piezometers needed off-site to support engineering design and construction plans for the West Ravine collection trench/sump system (collection system), which is expected to be a component of the corrective measures proposal. In particular, geological, geotechnical engineering, and ground water contamination data were needed to determine the depth and design of a future collection

system. The investigation along the Norwood Lateral was one of the first steps in order to complete the engineering design and construction plans for a future collection system and the corrective measures proposal.

The following summarizes the results from activities performed to support remedial design.

Installation of borings/temporary wells VE525-VE530 to investigate subsurface hydrogeology and to collect soil samples for determination of COC concentrations and geotechnical properties along the toe of the engineered slope immediately north of the Norwood Lateral.

- Boring locations are presented on Figure 5 and Sheet 1.
- Results of laboratory VOC analyses performed on soil samples are presented in Table 13.
- Results of geotechnical analyses performed on soil samples are presented in Appendix 3A.

Installation of borings/temporary wells VE536-VE539, VE540, VE541, and VE542 to investigate subsurface hydrogeology and to collect ground water samples in the vicinity of the West Ravine for vertical and horizontal COC extent determination.

- Temporary Boring/well locations are presented on Figure 4 and Sheet 1.
- Results of laboratory VOC analyses performed on ground water samples from temporary wells are presented in Table 15.

To assist in the evaluation of hydrostatic pore water pressure within the Lacustrine Unit (i.e. slope stability), temporary piezometers were installed along the Norwood Lateral at the toe of the engineered slope. Four 1-inch PVC piezometers (WRPZ05, 10, 15 and 20) were installed with 5-ft. screens so that water elevation measurements could be obtained within the vertical extent of the Lacustrine Unit. Also along the Norwood Lateral, four temporary 2-inch PVC monitoring wells (DW01, 02, 03 and 04) were installed in the upper portion of the Lower Clay unit to confirm that VOC contamination does not exist beneath the Lacustrine Unit. Data from the piezometers and wells was obtained during the UPI to support the engineering design.

- Temporary piezometer/well locations are presented on Figure 3 and Sheet 1.
- Results of laboratory VOC analyses performed on ground water samples from temporary wells/piezometers are presented in Table 14.

Collection of surface water samples at the West Ravine outfall to determine COC concentrations.

- Sampling location WR-Outfall is presented on Figure 3 and Sheet 1.
- Results of laboratory VOC analyses performed on the outfall sample are presented in Table 7.

3.0 SUMMARY

The overall objective of the VCAA is for EMD to work voluntarily to investigate, and as necessary, stabilize and remediate releases of hazardous waste or hazardous constituents at or from the facility. To demonstrate that the USEPA's Environmental Indicator Determination for the Migration of Contaminated Ground Water Under Control (CA750) has been met and to support the evaluation and design of corrective measures, supplemental VCAA investigations were completed during 2003/2004 as an update to the post-RI/FS investigations activities (UPI), as documented in this report.

Several tasks were completed during the UPI (Section 2.0 above) to meet the project objectives and to support evaluations made during the VCAA, as well as to support the Human Health Risk Assessment Addendum (CH2M HILL, 2005b) and corrective measures evaluation. These tasks included:

- Operation of existing ground water interim measures;
- Confirmation sampling;
- Installation of additional temporary and permanent monitoring wells into the shallow ground water zone and sewer backfill;
- Quarterly monitoring events;
- Analyses of soil, surface water, storm sewer water, sewer backfill water, perched ground water and geologic properties data; and
- Completion of a water well search update.

Other interim documents were prepared during the UPI that reported activities completed during the UPI, including: quarterly progress reports, task-specific Statements of Work, a QAPP and technical memoranda.

Based on the results of the UPI conducted at the Site through December 2004, EMD has identified the nature and extent of releases of hazardous waste and hazardous constituents at or from the facility which potentially pose an unacceptable risk to human health and the environment. The results of these investigations are documented in this UPI Report and the conclusions are documented in the Conceptual Model of Current Conditions Report prepared by CH2M HILL (2005a) and the Human Health Risk Assessment Addendum (CH2M Hill, 2005b).

4.0 REFERENCES

CH2M HILL, 2004a. EMD Chemicals Inc. Norwood Facility Zoning Designation and Applicable Ordinance.

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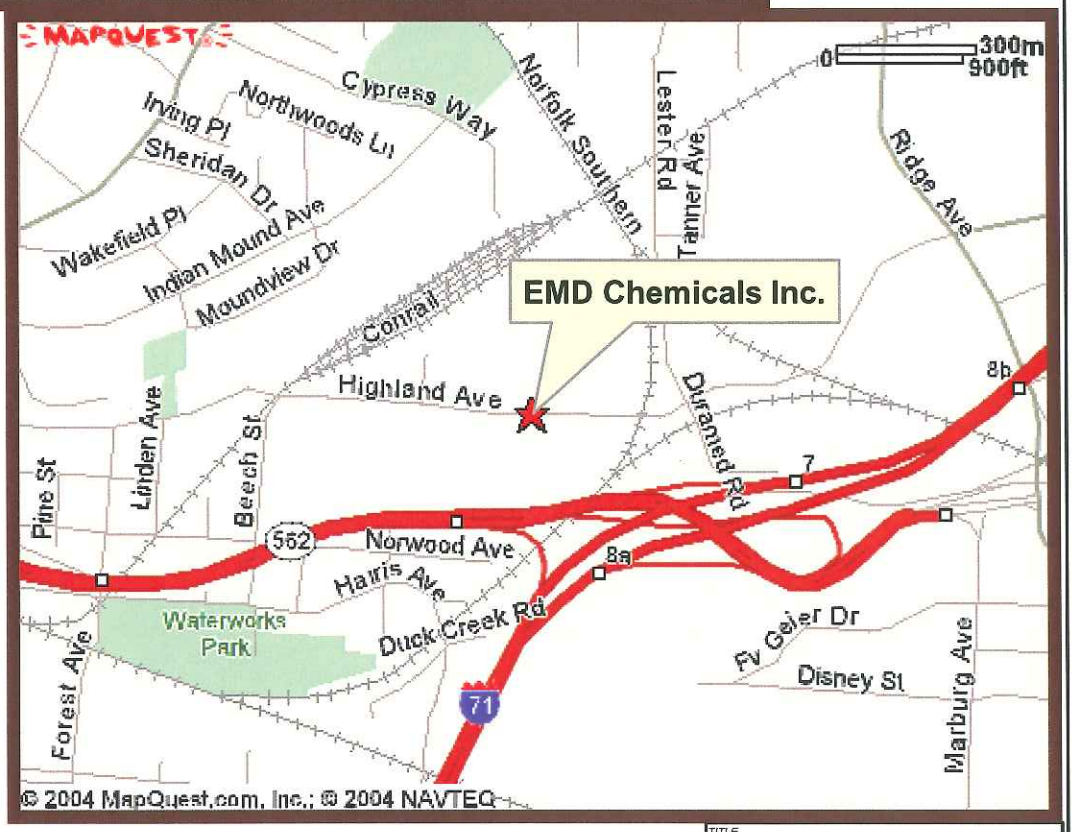

TITLE	*SITE LOCATION*
DATE *3/31/05*	FIGURE *1*
DRAWN BY *ALH*	APPROVED BY *KDK*
CLIENT *EMD CHEMICALS INC.*	
PROJECT NO. *100.58.26*	

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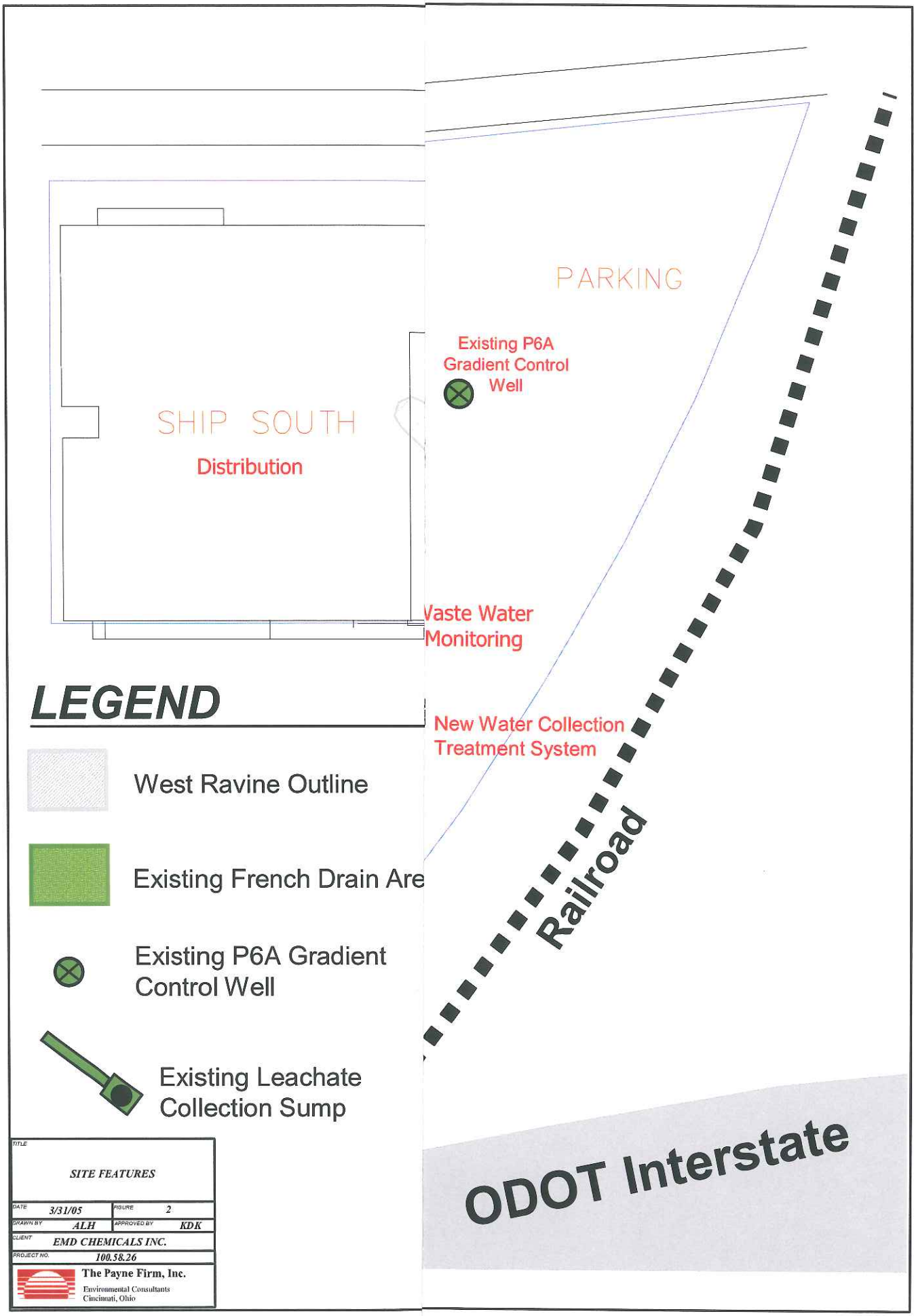
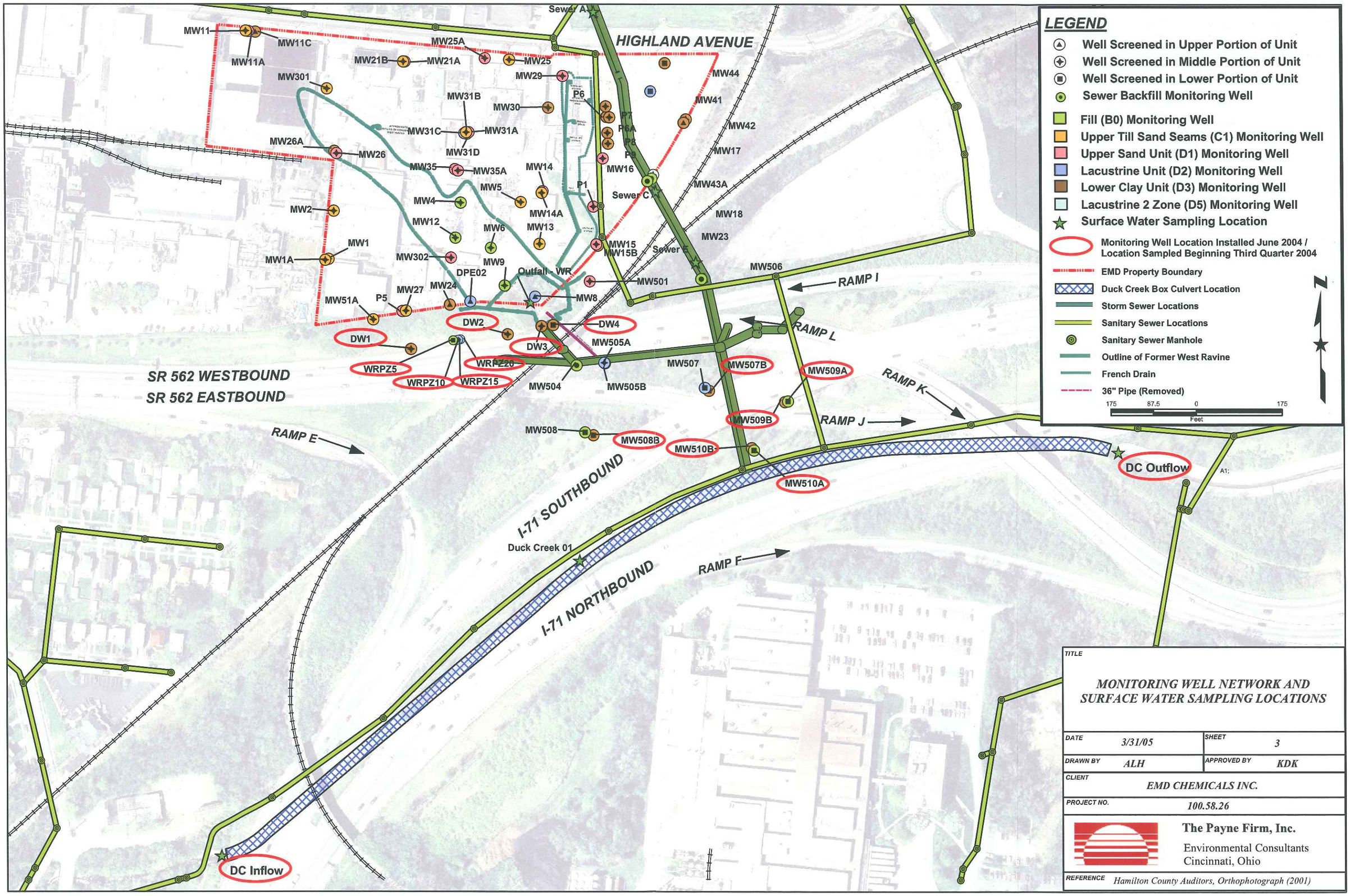
Cincinnati, Ohio


PARKING
Existing P6A
Gradient Control
Well
SHIP SOUTH
Distribution
Waste Water
Monitoring
New Water Collection
Treatment System
Railroad
ODOT Interstate
LEGEND
West Ravine Outline
Existing French Drain Are
Existing P6A Gradient
Control Well
Existing Leachate
Collection Sump
TITLE
SITE FEATURES
DATE 3/31/05
FIGURE 2
DRAWN BY ALH
APPROVED BY KDK
CLIENT EMD CHEMICALS INC.
PROJECT NO. 100.58.26
The Payne Firm, Inc.
Environmental Consultants
Cincinnati, Ohio



TITLE

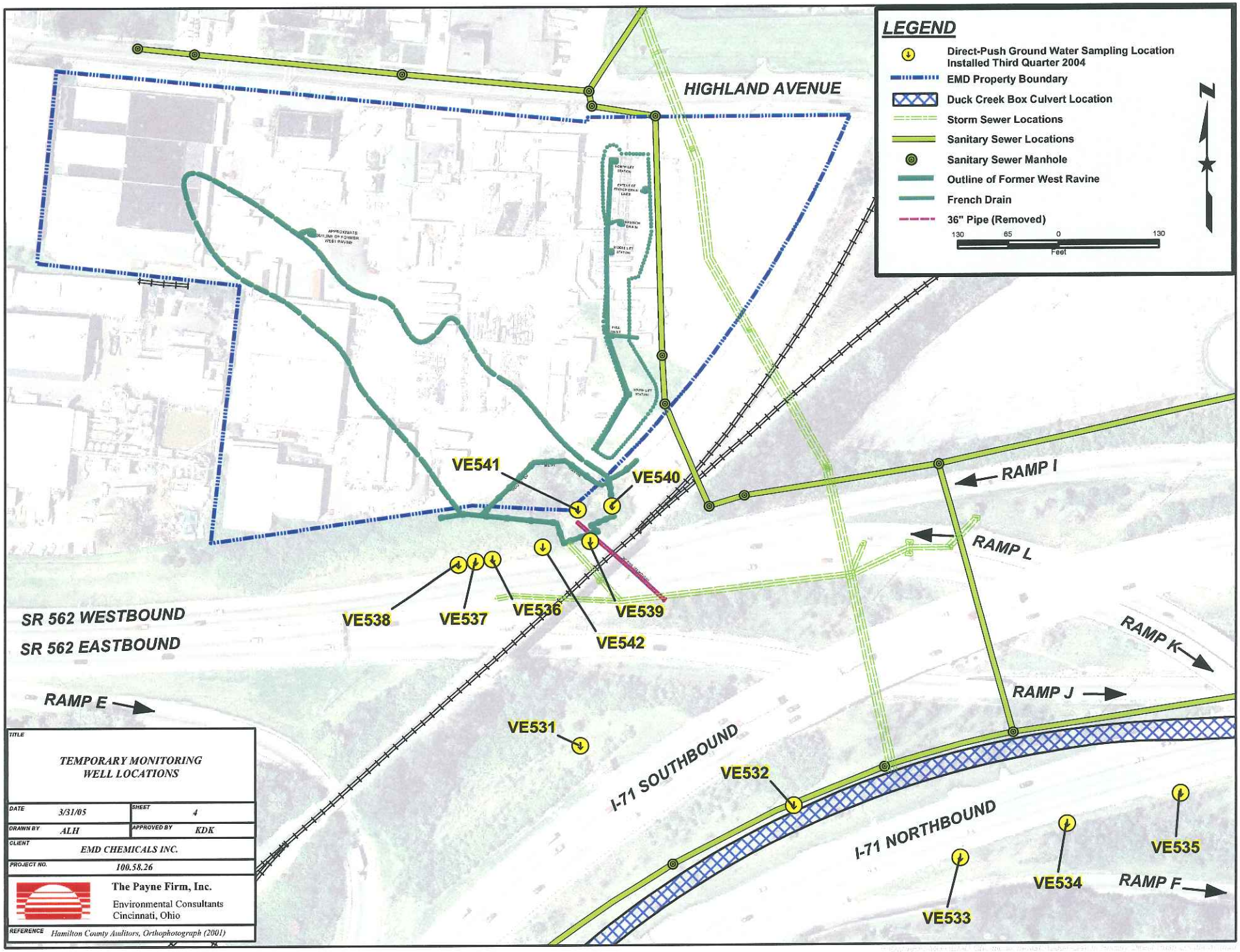
MONITORING WELL NETWORK AND SURFACE WATER SAMPLING LOCATIONS

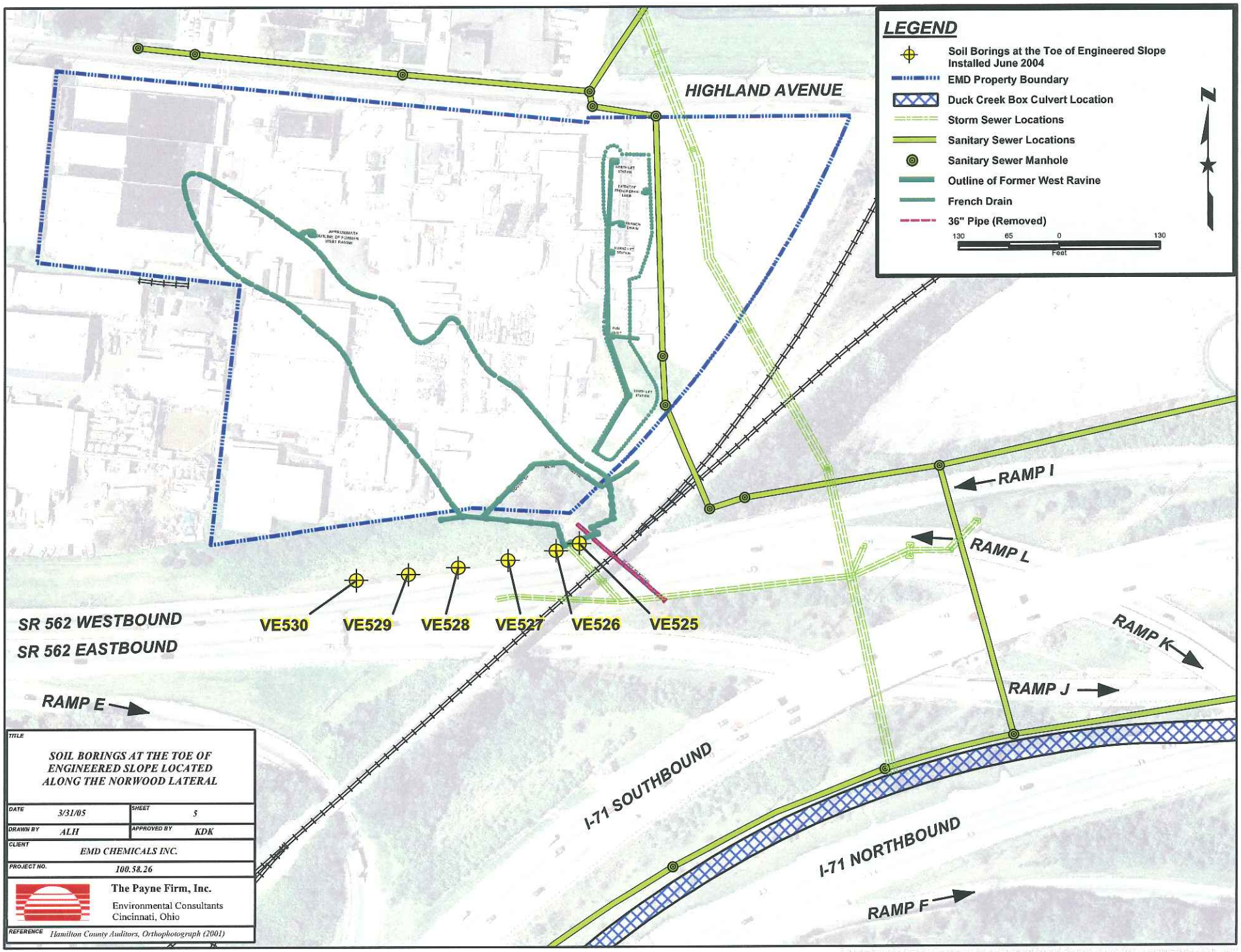
DATE	3/31/05	SHEET	3
DRAWN BY	ALH	APPROVED BY	KDK
CLIENT	EMD CHEMICALS INC.		
PROJECT NO.	100.58.26		

The Payne Firm, Inc.
Environmental Consultants
Cincinnati, Ohio

REFERENCE *Hamilton County Auditors, Orthophotograph (2001)*

F:\Data\PFI-MC\EMD Chemicals Inc\GIS\2004-Q3\MW Network and SW Sampling Locations.mxd


LEGEND
Direct-Push Ground Water Sampling Location Installed Third Quarter 2004
EMD Property Boundary
Duck Creek Box Culvert Location
Storm Sewer Locations
Sanitary Sewer Locations
Sanitary Sewer Manhole
Outline of Former West Ravine
French Drain
36" Pipe (Removed)
130 65 0 130
Feet
N
HIGHLAND AVENUE
VE541
VE540
VE538
VE537
VE536
VE539
VE542
VE531
VE532
VE533
VE534
VE535
RAMP I
RAMP L
RAMP K
RAMP J
RAMP E
RAMP F
SR 562 WESTBOUND
SR 562 EASTBOUND
I-71 SOUTHBOUND
I-71 NORTHBOUND
TITLE
TEMPORARY MONITORING WELL LOCATIONS
DATE 3/31/05
SHEET 4
DRAWN BY ALH
APPROVED BY KDK
CLIENT EMD CHEMICALS INC.
PROJECT NO. 100.58.26
The Payne Firm, Inc.
Environmental Consultants
Cincinnati, Ohio
REFERENCE Hamilton County Auditors, Orthophotograph (2001)



TITLE

SOIL BORINGS AT THE TOE OF ENGINEERED SLOPE LOCATED ALONG THE NORWOOD LATERAL

DATE	3/31/05	SHEET	5
DRAWN BY	ALH	APPROVED BY	KDK
CLIENT	EMD CHEMICALS INC.		
PROJECT NO.	100.58.26		

The Payne Firm, Inc.
Environmental Consultants
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REFERENCE *Hamilton County Auditors, Orthophotograph (2001)*

SHEETS

TABLES

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility

Cincinnati, Ohio

Project No. 0100.58.25

TABLE 1: RCRA VCAA Interim Documents

Date of Document	RCRA VCAA Interim Documents
June 1, 2004	Draft Quality Assurance Project Plan for the EMD Chemiclas Inc. Facility RCRA Voluntary Corrective Action
December 22, 2004	Technical Memorandum Addressing Conditions at the SWMUs and AOCs Specified in the PA/VSI Report - EMD Chemicals Inc. Norwood Facility
December 22, 2004	EMD Chemicals Inc. Norwood Facility Zoning Designation and Applicable Ordinance
January 12, 2005	Voluntary Corrective Action Agreement Quarterly Progress Report No. 001; EMD Chemicals Inc., Norwood Ohio Facility
March 31, 2005	Update to RI/FS Well Search, EMD Chemicals Inc., Norwood, Ohio Facility.
March 31, 2005	USEPA RCRA Voluntary Corrective Action Update To Post-RI/FS Investigation Report, EMD Chemicals Inc., Norwood, Ohio Facility.
March 31, 2005	Human Health Risk Assessment Addendum, EMD Chemicals Inc., Norwood, Ohio Facility.
March 31, 2005	Conceptual Model of Current Conditions, EMD Chemicals Inc., Norwood, Ohio Facility.

Note: Field Task Statements of Work are presented on Table 3 of the 2005 UPI Report.

EMD Chemicals Inc.
Norwood, Ohio
Project No. 0100.58.25

The Payne Firm, Inc.
Environmental Consultants

TABLE 2: Data Quality Objectives

FACILITY INVESTIGATION	DECISION TO SAMPLE	INPUTS CONSIDERED	CONTROL UNCERTAINTY
1. **Nature and Extent of Contamination**: Define the nature and extent of vertical contamination such that informed decisions can be made with respect to completing the migration of contaminated ground water under control, environmental indicator report (ground water EI), and evaluating corrective measures.	• Sample and analyze soil, ground water and surface water, as appropriate. • Obtain additional nature and extent of contamination data to support the ground water EI and the design of corrective measures. • Determine the horizontal and vertical extent of contamination.	• Previous investigations at the Facility indicate that VOCs, SVOCs, and metals are the constituents of concern. • Mobility and seasonality were considered requiring single (soil) and multiple (ground water and surface water) sampling events. • Biased sampling towards locations known to have contamination.	• Biased data set to confirm nature and extent of contamination. • Sample list consists of Appendix IX VOCs, SVOCs, and site-specific metals. • Analysis uses SW-846 standard methods at lowest detection limits achievable. • Laboratory analyses will be reported with a "CLP-Like" data package. • Analyses at ASL IV. • Uncertainty limited by close spatial and temporal coordination between soil and ground water observations, and adherence to QAPP.

TABLE 2: **Data Quality Objectives** (cont.)

FACILITY INVESTIGATION	DECISION TO SAMPLE	INPUTS CONSIDERED	CONTROL UNCERTAINTY
2. **Define Physical and Hydrogeological System:** Continue to define the site geologic/hydrogeologic model and identify the potential routes of contaminant migration.	• Perform additional stratigraphic and geotechnical engineering sampling, as needed. • Perform surface water sampling to confirm ground water infiltration pathways to sewer systems. • Conduct fate and transport modeling as necessary to support decisions. • Semi-annual sampling of ground water monitoring wells.	• Establishing the overall boundary conditions for the geologic/hydrogeologic model. • Use existing boring log and hydraulic data to confirm geological information.	• Uncertainty controlled by use of standard geological property testing methods and ASL V for non-standard methods. • Biased geotechnical samples to determine geological conditions in geological units ensure model consistency. • Ground water wells correlated to initial stratigraphic borings increase certainty in the model and will increase confidence in contaminant migration routes.
3. **Human Health/Ecological Risks:** Characterize human health risks and environmental impacts necessary to complete the ground water EI report.	• Confirm potential exposure pathways and receptors. • Sample soil, surface water, and ground water media, as appropriate, for VOCs, SVOCs, and metals.	• Detected concentrations of contaminants in on-property soil and ground water media. • Contaminants in storm sewers.	• Multiple ground water sampling locations and events provide less uncertainty in the evaluation of mobility and fate of contaminants. • Sufficient characteristics of soil source area and ground water contamination provides assurances for the level of significance of human health risks. • ASL IV analyses performed using SW-846 methods for VOCs, SVOCs, and metals. Data reported using "CLP-Like" data packages.

TABLE 2: **Data Quality Objectives** (cont.)

FACILITY INVESTIGATION	DECISION TO SAMPLE	INPUTS CONSIDERED	CONTROL UNCERTAINTY
4. **Ground Water Environmental Indicator Determination**	• Sample and analyze ground water and surface water, as appropriate. • Obtain sufficient data to support ground water plume stabilization and to assess current human exposures to contamination.	• Mobility and seasonality were considered requiring multiple (ground water) sampling events. • Detected concentrations of contaminants in on-property soil and ground water media. • Detected concentrations of contaminants in storm sewers.	• At a minimum, conduct semi-annual sampling events. • Collect QA/QC samples consistent with the QAPP. • ASL IV Analyses performed using SW-846 methods for VOCs, SVOCs, and metals. • Data reported use "CLP-Like" data packages.
5. **Contaminant Fate and Transport:** If necessary, determine estimates on the rate of migration of contaminants in environmental media to support the ground water EI report corrective measures evaluation.	• Define relationship between contaminant concentrations and the physical hydrogeological system. • Using existing information, and data to be collected from the proposed sampling program. • Obtain, through hydrogeologic sampling, significant transport routes and site physical parameters, such as permeability and hydraulic conductivity.	• Physical parameters related to air, surface water, and ground water transport including gradient and hydraulic conductivity. • Results of ground water transport modeling.	• Uncertainty in estimated future potential for contamination migration could be large; therefore, conservative estimates will be used for transport factors. • Comparisons with actual observations will reduce inherent uncertainties to the maximum extent practical.
6. **Evaluation of Corrective Measures:** Use on- and off-property data to develop and evaluate an applicable range of corrective measures.	• Sample relevant media to assess toxicity, mobility, and volume. • Sample for geotechnical engineering to characterize all geologic units. • Conduct ground water transport and fate transport modeling, as necessary.	• Existing information and knowledge. • Collection of additional data prior to design will assist in corrective action decision-making. • Geological property analyses augment evaluation of key physical parameters. • Existing information derived from ongoing interim measures.	• Uncertainty reduced through development of site geologic/hydrogeologic model, nature and extent of contamination definition, and determination of key physical parameters (addressed in Parts 1 through 4 above).

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 3: Summary of VCAA Statement of Work Tasks

SOW No.	RFI Tasks and Specific Statements of Work	Date	Data Objectives and Data Needs	Data Outputs
Initial SOW	Initial Scope of Work, Off-Property Investigation, EMD Chemicals Inc.	June 3, 2004	• Sample for geotechnical engineering to characterize all geologic units. • Obtain additional nature and extent of contamination data to support the ground water EI and the design of corrective measures. • Sample soil, surface water, and ground water media, as appropriate, for VOCs, SVOCs, and metals. • Quarterly sampling of ground water monitoring wells.	• Quarterly Progress Report provided a Level IV Analytical Data package for monitoring wells sampled for VOCs, SVOCs and Metals. • 10 additional perched groundwater monitoring wells were installed. • 4 additional perched groundwater piezometers were installed. • 6 additional soil borings were installed for VOC and geotechnical analyses.
1	Direct-Push Ground Water Sampling off the EMD Chemicals Inc. Facility	August 4, 2004	• Install direct-push borings to obtain additional nature and extent of contamination data to support the ground water EI and the design of corrective measures.	• Quarterly Progress Report provided a Level IV Analytical Data package for 5 Direct-Push water samples from the perched groundwater and sewer backfill analyzed for VOCs.
1A	Direct-Push Ground Water Sampling off the EMD Chemicals Inc. Facility	September 21, 2004	• Install direct-push borings to obtain additional nature and extent of contamination data to support the ground water EI and the design of corrective measures.	• Quarterly Progress Report provided a Level IV Analytical Data package for 6 Direct-Push water samples from the perched groundwater analyzed for VOCs.
1B	Direct-Push Ground Water Sampling off the EMD Chemicals Inc. Facility	February 22, 2005	• Install direct-push borings to obtain additional nature and extent of contamination data to support the ground water EI and the design of corrective measures.	• Quarterly Progress Report provided a Level IV Analytical Data package for 2 Direct-Push water samples from the perched groundwater analyzed for VOCs.
2	Third Quarter 2004 Ground Water monitoring Event	April 12, 2004	• Perform surface water sampling to confirm ground water infiltration pathways to sewer systems. • Quarterly sampling of ground water monitoring wells. • Sample and analyze ground water and surface water, as appropriate. • Obtain sufficient data to support ground water plume stabilization and to assess current human exposures to contamination.	• Quarterly Progress Report provided a Level IV Analytical Data package for 3 surface water and 37 monitoring wellssampled for VOCs.
3	Ground Water Monitoring Event to Support Tranch Design	August 30, 2004	• Sampling of select ground water monitoring wells to support remedial design and fate/transport modeling.	• Quarterly Progress Report provided a Level IV Analytical Data package for 8 monitoring wells sampled for VOCs.
4	Fourth Quarter 2004 Ground Water monitoring Event	December 17, 2004	• Perform surface water sampling to confirm ground water infiltration pathways to sewer systems. • Quarterly sampling of ground water monitoring wells. • Sample and analyze ground water and surface water, as appropriate. • Obtain sufficient data to support ground water plume stabilization and to assess current human exposures to contamination.	• Quarterly Progress Report provided a Level IV Analytical Data package for 3 surface water and 33 monitoring wells sampled for VOCs. • Addional slug test data from 2 off-site wells to support fate and transport modeling

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood, Ohio
Project No. 100.58.25

TABLE 4: Well Construction Information

B0=Fill; C0=Upper Till Unit; C1=Upper Till Sand Seams; D1=Upper Sand Unit; D2=Lacustrine Unit; D3=Lower Clay Unit; D4=Lower Sand Zone; D5=Lacustrine 2 Zone; E1=Lacustrine 3 Zone
PVC=Poly Vinyl Chloride; SS=Stainless Steel; Iron=Iron Pipe; NL=Not Listed; *=Well Abandoned
fb toc=feet below top of casing; famsl=feet above mean sea level

Monitoring well installed for RCRA VCAA purposes - State Plane coordinates (NAD83/NAVD88) surveyed by G.J. Berding Surveying, Inc., 2004.

Well ID	Installation Date	Easting	Northing	Top of Casing Elevation (famsl)	Top of Screen (famsl)	Bottom of Screen (famsl)	Screen Length (feet)	Total Well Depth (fb toc)	Top of Sand Pack Elevation (famsl)	Sand Pack Length (feet)	Top of Bentonite Elevation (famsl)	Casing Diameter (inches)	Casing Material	Geologic Unit Screened	Well ID
DW001	06/21/04	1419787.08	430079.00	582.50	562.04	552.04	10.00	30.46	564.04	12.00	565.04	2.00	PVC	D3-Middle	DW001
DW002	06/22/04	1419985.28	430108.94	578.44	560.61	550.61	10.00	27.83	562.61	12.00	563.61	2.00	PVC	D3-Middle	DW002
DW003	06/23/04	1420054.60	430125.89	577.10	557.77	547.77	10.00	29.33	558.77	11.00	560.77	2.00	PVC	D3-Middle	DW003
DW004	06/24/04	1420078.14	430128.17	576.79	544.35	534.35	10.00	42.44	546.35	12.00	548.35	2.00	PVC	D3-Lower	DW004
MW001	12/19/81	1419619.70	430261.93	609.11	592.30	588.30	4.00	20.81	594.30	6.00	NL	2.00	SS	C1	MW001
MW001A	09/15/83	1419612.50	430260.27	609.76	583.30	580.30	3.00	29.46	586.30	6.00	586.80	0.75	Iron	C1	MW001A
MW002	12/20/81	1419630.60	430359.55	610.97	593.50	589.50	4.00	21.47	595.50	6.00	NL	2.00	SS	C1	MW002
MW004	12/16/81	1419890.20	430376.76	609.85	602.10	598.10	4.00	11.75	604.10	6.00	NL	2.00	SS	B0	MW004
MW005	12/11/81	1420012.50	430377.52	608.21	589.80	584.90	4.90	23.31	591.90	7.00	NL	2.00	SS	C1	MW005
MW006	12/16/81	1419951.30	430284.88	608.39	596.20	592.20	4.00	16.19	598.20	6.00	NL	2.00	SS	B0	MW006
MW008	12/30/81	1420041.60	430185.88	585.20	572.30	568.30	4.00	16.90	574.30	6.00	NL	2.00	SS	D2-Upper	MW008
MW009	12/17/81	1419979.40	430208.28	604.63	577.50	573.50	4.00	31.13	579.50	6.00	NL	2.00	SS	B0	MW009
MW011	12/10/81	1419451.70	430726.56	617.18	601.60	596.60	5.00	20.58	602.10	5.50	NL	2.00	SS	C1	MW011
MW011A	09/14/83	1419456.70	430726.09	618.64	581.50	578.50	3.00	40.14	585.80	7.30	587.80	0.75	Iron	D1	MW011A
MW011C	11/12/87	1419470.90	430724.79	616.17	567.70	564.70	3.00	51.47	569.50	4.80	571.40	2.00	SS	D3-Upper	MW011C
MW012	12/29/81	1419879.40	430305.53	609.03	589.10	584.10	5.00	24.93	592.70	8.60	NL	2.00	SS	B0	MW012
MW013	06/07/83	1420051.30	430292.75	610.41	591.70	587.70	4.00	22.71	593.70	6.00	595.70	2.00	SS	C1	MW013
MW014	06/06/83	1420057.80	430400.11	610.39	584.20	579.20	5.00	31.19	585.20	6.00	587.20	2.00	SS	D1	MW014
MW014A	09/15/83	1420055.70	430396.89	611.16	598.20	595.20	3.00	15.96	599.20	4.00	600.70	0.75	Iron	C1	MW014A
MW015	09/16/83	1420167.00	430291.67	602.62	579.00	574.00	5.00	28.62	587.00	13.00	589.00	2.00	SS	D1	MW015
MW015B	11/18/87	1420170.00	430289.57	603.91	555.20	550.20	5.00	53.71	556.60	6.40	557.60	2.00	SS	D3-Upper	MW015B
MW016	01/09/84	1420181.30	430466.79	596.59	564.60	559.60	5.00	36.99	567.20	7.60	569.20	2.00	SS	B0-Lower	MW016
MW017	01/13/84	1420347.40	430539.56	599.06	559.50	554.50	5.00	44.56	564.50	10.00	566.50	2.00	SS	D3-Upper	MW017
MW018	01/12/84	1420280.60	430425.75	601.63	561.30	556.30	5.00	45.33	565.40	9.10	567.40	2.00	SS	Sewer Backfill	MW018
MW019A*	07/19/85	1420082.79	430133.44	575.53	568.90	563.90	5.00	11.63	570.90	7.00	572.90	2.00	SS	D2-Upper	MW019A*
MW019B*	07/20/85	1420084.76	430130.00	576.06	553.90	548.90	5.00	27.16	555.90	7.00	559.40	2.00	SS	D2-Lower	MW019B*
MW019C*	07/21/85	1420086.59	430126.87	576.28	523.80	518.80	5.00	57.48	526.30	7.50	531.30	2.00	SS	E1	MW019C*
MW020A*	07/20/85	1420432.15	430200.49	571.18	565.20	559.70	5.50	11.48	567.20	7.50	569.20	2.00	SS	B0-Lower	MW020A*
MW020B*	07/21/85	1420429.61	430202.63	570.56	553.60	548.60	5.00	21.96	555.60	7.00	557.60	2.00	SS	D2-Lower	MW020B*

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood, Ohio
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MW021A	02/10/86	1419776.50	430664.08	612.33	580.70	578.70	2.00	33.63	582.20	3.50	NL	2.00	SS	D1	MW021A
MW021B	02/11/86	1419774.00	430664.23	613.58	593.70	591.70	2.00	21.88	596.20	4.50	NL	2.00	SS	D1	MW021B
MW023	04/30/87	1420271.50	430421.40	597.65	567.95	557.95	10.00	39.70	569.95	12.00	571.45	2.00	SS	Sewer Backfill	MW023
MW024	11/16/87	1419867.10	430169.33	609.70	556.20	551.20	5.00	58.50	557.90	6.70	559.10	2.00	SS	D3-Upper	MW024
MW025	04/12/88	1419991.30	430667.55	606.95	591.10	586.10	5.00	20.85	595.90	9.80	597.80	2.00	SS	C1	MW025
MW025A	04/11/88	1419940.50	430670.88	607.98	571.00	566.00	5.00	41.98	572.60	6.60	574.80	2.00	SS	D1	MW025A
MW026	04/13/88	1419637.10	430477.13	611.78	579.80	569.80	10.00	41.98	583.10	13.30	583.10	2.00	SS	D1	MW026
MW026A	03/13/89	1419632.60	430481.55	611.77	561.30	551.30	10.00	60.47	564.30	13.00	567.30	2.00	SS	D3-Middle	MW026A
MW027	04/14/88	1419776.90	430157.16	610.18	593.90	588.90	5.00	21.28	597.40	8.50	597.40	2.00	SS	C1	MW027
MW029	01/25/89	1420099.80	430635.41	602.99	574.70	569.70	5.00	33.29	577.40	7.70	581.70	2.00	SS	D1	MW029
MW030	02/07/89	1420070.00	430570.20	608.48	538.48	535.98	2.50	72.50	540.18	4.20	542.48	2.00	SS	D3-Middle	MW030
MW031A	03/08/89	1419906.70	430519.78	610.45	580.30	575.20	5.10	35.25	581.70	6.50	584.10	2.00	SS	D1	MW031A
MW031B	03/09/89	1419902.20	430520.02	610.43	590.50	585.40	5.10	25.03	592.20	6.80	594.60	2.00	SS	C1	MW031B
MW031C	03/20/94	1419898.50	430517.80	609.95	563.65	558.65	5.00	51.30	565.95	7.30	568.85	2.00	SS	D2-Lower	MW031C
MW031D	03/19/94	1419903.10	430516.72	609.91	553.01	548.01	5.00	61.90	556.01	8.00	557.81	2.00	SS	D3-Upper	MW031D
MW035	03/07/89	1419879.20	430445.33	608.96	579.10	576.50	2.60	32.46	580.67	4.17	583.10	2.00	SS	D1	MW035
MW035A	07/10/97	1419884.60	430441.64	609.00	582.12	577.12	5.00	34.00	582.62	6.50	586.62	4.00	PVC	D1	MW035A
MW041	03/13/89	1420279.20	430603.59	595.04	559.90	539.70	20.20	55.34	561.70	22.00	564.20	2.00	SS	D2-Lower	MW041
MW042	05/17/89	1420352.00	430546.60	596.70	547.20	537.20	10.00	59.50	548.20	11.00	550.20	2.00	SS	D3-Middle	MW042
MW043A	05/10/89	1420284.50	430433.63	598.26	550.00	545.00	5.00	53.26	551.50	6.50	553.50	2.00	SS	D2-Lower	MW043A
MW044	05/15/89	1420308.50	430661.26	594.73	548.70	538.70	10.00	56.03	551.20	12.50	552.10	2.00	SS	D1	MW044
MW051A	09/12/89	1419710.70	430138.92	609.31	592.10	587.10	5.00	22.21	593.30	6.20	595.20	2.00	SS	C1	MW051A
MW301	03/13/94	1419617.80	430609.13	612.43	593.93	588.93	5.00	23.50	595.93	7.00	598.43	2.00	SS	C1	MW301
MW302	07/11/97	1419869.90	430265.26	606.91	581.41	575.71	5.70	32.20	583.91	7.70	585.91	4.00	PVC	D1	MW302
MW501	03/15/94	1420152.90	430216.49	603.56	596.03	593.53	2.50	10.03	598.03	4.50	600.03	2.00	SS	C0-Middle	MW501
MW502A*	03/21/94	1419854.70	430087.53	579.81	574.52	569.52	5.00	10.29	576.02	6.50	578.02	2.00	SS	D2-Upper	MW502A*
MW502B*	03/23/94	1419853.70	430088.53	579.81	556.95	551.95	5.00	27.86	558.95	7.00	560.46	2.00	SS	D2-Lower	MW502B*
MW503*	03/21/94	1419983.00	430105.90	578.67	573.40	568.40	5.00	10.27	574.90	6.50	576.90	2.00	SS	D2-Upper	MW503*
MW504	03/22/94	1420124.90	430046.35	576.10	572.58	567.58	5.00	8.52	573.58	6.00	575.08	2.00	SS	Sewer Backfill	MW504

The Payne Firm, Inc.

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Norwood, Ohio
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TABLE 4: Well Construction Information

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PVC=Poly Vinyl Chloride; SS=Stainless Steel; Iron=Iron Pipe; NL=Not Listed; *=Well Abandoned
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Monitoring well installed for RCRA VCAA purposes - State Plane coordinates (NAD83/NAVD88) surveyed by G.J. Berding Surveying, Inc., 2004.

Well ID	Installation Date	Easting	Northing	Top of Casing Elevation (famsl)	Top of Screen (famsl)	Bottom of Screen (famsl)	Screen Length (feet)	Total Well Depth (fb toc)	Top of Sand Pack Elevation (famsl)	Sand Pack Length (feet)	Top of Bentonite Elevation (famsl)	Casing Diameter (inches)	Casing Material	Geologic Unit Screened	Well ID
MW505A	03/22/94	1420182.20	430051.41	571.78	563.18	558.18	5.00	13.60	564.88	6.70	566.68	2.00	SS	D2-Middle	MW505A
MW505B	03/22/94	1420183.50	430050.20	571.70	555.32	550.32	5.00	21.38	557.32	7.00	559.02	2.00	SS	D2-Lower	MW505B
MW506	03/23/94	1420382.30	430221.60	566.76	557.71	552.71	5.00	14.05	560.31	7.60	565.21	2.00	SS	Sewer Backfill	MW506
MW507	06/14/95	1420388.10	430000.81	568.67	554.37	549.37	5.00	19.30	556.37	7.00	558.70	2.00	SS	D2-Lower	MW507
MW507B	06/28/04	1420395.58	429994.67	569.36	548.27	542.27	6.00	27.08	549.27	7.00	551.27	2.00	PVC	D3-Lower	MW507B
MW508	06/16/95	1420141.80	429909.99	590.51	559.01	554.01	5.00	36.50	561.31	7.30	563.18	2.00	SS	B0-Lower	MW508
MW508B	06/25/04	1420159.30	429904.31	590.35	550.35	540.35	10.00	50.00	551.35	11.00	553.88	2.00	PVC	D3-Lower	MW508B
MW509A	07/01/04	1420557.33	429973.21	566.09	557.49	547.49	10.00	18.60	559.49	12.00	563.99	2.00	PVC	B0-Lower	MW509A
MW509B	06/29/04	1420550.88	429971.94	566.07	546.68	539.68	7.00	26.39	547.68	8.00	549.68	2.00	PVC	D3-Lower	MW509B
MW510A	06/30/04	1420487.41	429873.49	569.66	564.01	554.01	10.00	15.65	566.01	12.00	568.01	2.00	PVC	B0-Lower	MW510A
MW510B	06/30/04	1420482.86	429877.57	570.01	550.89	540.89	10.00	29.12	551.89	11.00	553.89	2.00	PVC	D3-Lower	MW510B
P001	01/28/86	1420161.30	430368.72	599.77	574.10	569.10	5.00	30.67	576.60	7.50	NL	2.00	SS	D1	P001
P005	02/05/86	1419770.40	430155.51	610.81	585.30	580.30	5.00	30.51	588.80	8.50	NL	2.00	SS	D1	P005
P006	12/02/93	1420188.70	430551.39	595.52	551.52	541.52	10.00	54.00	553.52	12.00	555.52	2.00	SS	D3-Middle	P006
P006A	06/15/89	1420194.80	430550.52	592.40	559.20	539.20	20.00	53.20	562.10	22.90	565.20	4.00	PVC	D3-Middle	P006A
P007	04/05/88	1420187.30	430572.84	594.95	561.10	546.10	15.00	48.85	562.80	16.70	568.40	2.00	PVC	D3-Middle	P007
P008	04/07/88	1420190.70	430518.84	595.80	551.50	546.50	5.00	49.30	554.60	8.10	569.30	2.00	PVC	D3-Middle	P008
P009	04/15/88	1420192.10	430496.79	596.64	549.60	544.60	5.00	52.04	551.40	6.80	554.40	2.00	PVC	D3-Middle	P009
WRPZ05	06/28/04	1419873.72	430096.79	579.85	577.35	574.85	2.50	5.00	578.35	3.50	578.85	1.00	PVC	B0-Lower	WRPZ05
WRPZ10	06/28/04	1419879.15	430096.96	579.67	574.67	569.67	5.00	10.00	576.67	7.00	578.67	1.00	PVC	D2-Middle	WRPZ10
WRPZ15	06/28/04	1419884.16	430098.11	579.45	569.45	564.45	5.00	15.00	571.45	7.00	578.45	1.00	PVC	D2-Middle	WRPZ15
WRPZ20	06/28/04	1419888.47	430098.89	579.39	564.39	559.39	5.00	20.00	566.14	6.75	578.14	1.00	PVC	D2-Lower	WRPZ20
VE531/25-30*	08/09/04	1420070.24	429863.80	587.99	562.99	557.99	5.00	30.00	564.99	7.00	587.99	1.00	PVC	B0-Lower	VE531/25-30*
VE532/21-26*	08/09/04	1420345.82	429785.75	570.39	549.39	544.39	5.00	26.00	551.39	7.00	570.39	1.00	PVC	B0-Lower	VE532/21-26*
VE533/04-09*	08/10/04	1420560.84	429716.31	570.85	566.85	561.85	5.00	9.00	568.85	7.00	570.85	1.00	PVC	B0-Lower	VE533/04-09*
VE534/04-09*	08/10/04	1420698.72	429760.53	569.60	565.60	560.60	5.00	9.00	567.60	7.00	569.60	1.00	PVC	B0-Lower	VE534/04-09*
VE534/09-14*	08/10/04	1420698.72	429760.53	569.60	560.60	555.60	5.00	14.00	562.60	7.00	569.60	1.00	PVC	D3-Upper	VE534/09-14*
VE534/26-31*	08/10/04	1420698.72	429760.53	569.60	543.60	538.60	5.00	31.00	545.60	7.00	569.60	1.00	PVC	D5	VE534/26-31*
VE535/12-17*	08/10/04	1420345.63	429798.68	567.58	555.58	550.58	5.00	17.00	557.58	7.00	567.58	1.00	PVC	B0-Lower	VE535/12-17*

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood, Ohio
Project No. 100.58.25

TABLE 4: Well Construction Information

B0=Fill; C0=Upper Till Unit; C1=Upper Till Sand Seams; D1=Upper Sand Unit; D2=Lacustrine Unit; D3=Lower Clay Unit; D4=Lower Sand Zone; D5=Lacustrine 2 Zone; E1=Lacustrine 3 Zone
PVC=Poly Vinyl Chloride; SS=Stainless Steel; Iron=Iron Pipe; NL=Not Listed; *=Well Abandoned
fb toc=feet below top of casing; famsl=feet above mean sea level

Monitoring well installed for RCRA VCAA purposes - State Plane coordinates (NAD83/NAVD88) surveyed by G.J. Berding Surveying, Inc., 2004.

Well ID	Installation Date	Easting	Northing	Top of Casing Elevation (famsl)	Top of Screen (famsl)	Bottom of Screen (famsl)	Screen Length (feet)	Total Well Depth (fb toc)	Top of Sand Pack Elevation (famsl)	Sand Pack Length (feet)	Top of Bentonite Elevation (famsl)	Casing Diameter (inches)	Casing Material	Geologic Unit Screened	Well ID
VE536/06-11*	09/22/04	1419957.12	430105.71	579.17	573.17	568.17	5.00	11.00	575.17	7.00	579.17	1.00	PVC	D2-Upper	VE536/06-11*
VE536/12-17*	09/22/04	1419957.12	430105.71	579.17	567.17	562.17	5.00	17.00	569.17	7.00	579.17	1.00	PVC	D2-Lower	VE536/12-17*
VE537/05.5-10.5*	09/22/04	1419935.09	430102.16	578.81	573.31	568.31	5.00	10.50	575.31	7.00	578.81	1.00	PVC	D2-Upper	VE537/05.5-10.5*
VE537/12.5-17.5*	09/22/04	1419935.09	430102.16	578.81	566.31	561.31	5.00	17.50	568.31	7.00	578.81	1.00	PVC	D2-Lower	VE537/12.5-17.5*
VE538/06.5-11.5*	09/22/04	1419913.68	430098.17	579.50	573.00	568.00	5.00	11.50	575.00	7.00	579.50	1.00	PVC	D2-Upper	VE538/06.5-11.5*
VE538/13-18*	09/22/04	1419913.68	430098.17	579.50	566.50	561.50	5.00	18.00	568.50	7.00	579.50	1.00	PVC	D2-Lower	VE538/13-18*
VE539/12.5-17.5*	09/23/04	1420082.50	430127.55	576.81	564.31	559.31	5.00	17.50	566.31	7.00	576.81	1.00	PVC	D2-Lower	VE539/12.5-17.5*
VE540/21-26*	09/27/04	1420111.25	430173.89	593.47	572.47	567.47	5.00	26.00	574.47	7.00	593.47	1.00	PVC	D2-Upper	VE540/21-26*
VE540/35.5-40.5*	09/27/04	1420111.25	430173.89	593.47	557.97	552.97	5.00	40.50	559.97	7.00	593.47	1.00	PVC	D2-Lower	VE540/35.5-40.5*
VE541/15.5-20.5*	09/27/04	1420067.82	430169.25	589.92	574.42	569.42	5.00	20.50	576.42	7.00	589.92	1.00	PVC	D2-Upper	VE541/15.5-20.5*
VE541/26.5-31.5*	09/27/04	1420067.82	430169.25	589.92	563.42	558.42	5.00	31.50	565.42	7.00	589.92	1.00	PVC	D2-Lower	VE541/26.5-31.5*

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 5: Plume Delineation Ground Water VOC Results from Temporary Geoprobe Monitoring Wells (August 2004)

ANALYTE	VE531 / 25-30 2004-08-16 GW A4H170149001 µg/L	VE532 / 21-26 2004-08-13 GW A4H140136007 µg/L	VE532 / 21-26 2004-08-13 QDUPGW A4H140136006 µg/L	VE533 / 04-09 2004-08-13 GW A4H140136001 µg/L	VE534 / 04-09 2004-08-13 GW A4H140136009 µg/L	VE534 / 09-14 2004-08-13 GW A4H140136002 µg/L	VE535 / 12-17 2004-08-13 GW A4H140136003 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	1.3 J	0.85 J	0.89 J	< 2	< 2	< 2	0.68 J
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	490	340	250	< 50	< 50	< 50	< 50
2-BUTANONE	2.9 J	< 10	< 10	< 10	0.71 J	2 J	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	0.38 J	< 10
ACETONE	13	< 10	< 10	2.1 J B	2.3 J B	12 B	1.5 J B
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	0.34 J	0.32 J	0.22 J	< 1	0.56 J	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 1	< 1	< 1	0.39 J	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	0.26 J	< 1	< 1	< 1	< 1	0.56 J	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	1.3	0.85 J	0.89 J	< 1	< 1	< 1	0.68 J
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	0.49 J	0.28 J	0.28 J	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	3.9 B	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	0.6 J B	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	1.2	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	0.74 J	0.82 J	0.35 J	< 1	0.35 J	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	0.87 J	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	0.22 J	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	1.6 J B	0.56 J	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility

Cincinnati, Ohio

Project No. 0500.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	DPE02 2004-09-15 GW A4I160150001 µg/L	DPE02 2004-09-15 GWRERAN A4I160150001 µg/L	DW001 2004-07-09 GW A4G100202014 µg/L	DW001 2004-08-16 GW A4H170141010 µg/L	DW001 2004-09-28 GW A4I290236004 µg/L	DW001 2004-10-28 GW A4J290129008 µg/L	DW001 2004-12-21 GW A4L230113019 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	0.35 J	< 20	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 40	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 40	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	26000 E	25000	< 50	< 50	< 50	< 50	< 50
2-BUTANONE	0.49 J	29 J	< 10	< 10	0.44 J	< 10	< 10
2-HEXANONE	< 10	< 200	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 40	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 200	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	< 200	11	2.3 J	0.93 J	< 10	< 10
ACETONITRILE	< 20	< 400	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 400	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 400	< 20	< 20	< 20	< 20	< 20
BENZENE	2.9	5.5 J	< 1	0.61 J B	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 20	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 20	1.5	0.33 J	0.79 J	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	0.84 J	< 20	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 20	0.24 J	< 1	< 1	< 1	< 1
CHLOROMETHANE	0.2 J B	3.4 J B	< 1	0.28 J	< 1	< 1	< 1
CHLOROPRENE	< 2	< 40	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 40	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	0.26 J	< 20	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 1000	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 40	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 40	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 80	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 20	< 1	1.3 B	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
TOLUENE	0.65 J	< 20	0.29 J	0.47 J	< 1	< 1	0.25 J
TRANS-1,2-DICHLOROETHENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 40	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	0.67 J	< 40	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0300.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	DW002 2004-07-09 GW A4G100202015 µg/L	DW002 2004-08-16 GW A4H170141011 µg/L	DW002 2004-09-28 GW A4J290236003 µg/L	DW002 2004-10-28 GW A4J290129005 µg/L	DW002 2004-12-21 GW A4L230113020 µg/L	DW003 2004-07-09 GW A4G100202016 µg/L	DW003 2004-08-16 GW A4H170141012 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	0.21 J	0.24 J	< 1	< 1	0.57 J	0.4 J
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-BUTANONE	< 10	1.1 J	< 10	< 10	< 10	1.1 J	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	6.5 J	5 J	< 10	< 10	< 10	12	2.3 J
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	0.24 J	< 1	< 1	< 1	0.4 J B
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	0.71 J	< 1	0.73 J	< 1	< 1	1.1	0.33 J
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	0.5 J	< 1
CHLOROMETHANE	< 1	< 1	0.25 J	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	0.48 J	0.35 J B
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	0.63 J B
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	0.21 J	< 1	0.3 J	< 1	0.24 J	< 1	0.19 J
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	2.3	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
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GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 8100.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	DW003 2004-09-28 GW A4I290236002 µg/L	DW003 2004-10-28 GW A4J290129006 µg/L	DW003 2004-12-21 GW A4L230113021 µg/L	DW004 2004-07-09 GW A4G100202017 µg/L	DW004 2004-08-16 GW A4H170141013 µg/L	DW004 2004-09-28 GW A4I290236001 µg/L	DW004 2004-10-28 GW A4J290129007 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	0.4 J	0.51 J	0.33 J	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-BUTANONE	< 10	< 10	< 10	0.92 J	< 10	0.42 J	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	0.4 J B	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	0.52 J	< 1	< 1	1.3	1.1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	0.23 J	< 1	< 1	< 1
CHLOROMETHANE	0.29 J	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	0.72 J	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	0.78 J B	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	< 1	< 1	< 1	0.21 J	0.2 J	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

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GW = Ground Water
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RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 9100.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	DW004 2004-12-21 GW A4L230113022 µg/L	MW001 2004-12-21 GW A4L230115004 µg/L	MW002 2004-12-21 GW A4L230115005 µg/L	MW004 2004-09-01 GW A4I020164004 µg/L	MW004 2004-09-01 GWRERAN A4I020164004 µg/L	MW006 2004-09-01 GW A4I020164002 µg/L	MW008 2003-09-03 GW A3I040194001 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 100	3.3 J	1.1	< 11
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 200	< 20	< 2	< 22
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
1,2-DICHLOROETHANE	< 1	< 1	0.28 J	< 100	< 10	0.22 J	< 11
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 200	< 20	6.3	320
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
1,4-DIOXANE	< 50	< 50	< 50	2200 J	2200	< 50	< 2200
2-BUTANONE	< 10	< 10	< 10	< 1000	< 100	< 10	< 110
2-HEXANONE	< 10	< 10	< 10	< 1000	< 100	< 10	< 110
3-CHLOROPROPENE	< 2	< 2	< 2	< 200	< 20	< 2	< 22
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 1000	< 100	< 10	< 110
ACETONE	< 10	< 10	< 10	< 1000	< 100	< 10	< 110
ACETONITRILE	< 20	< 20	< 20	< 2000	< 200	< 20	< 220
ACROLEIN	< 20	< 20	< 20	< 2000	< 200	< 20	< 220
ACRYLONITRILE	< 20	< 20	< 20	< 2000	< 200	< 20	< 220
BENZENE	< 1	< 1	< 1	2100	1300 E	< 1	< 11
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
BROMOFORM	< 1	< 1	< 1	< 100	< 10	< 1	< 11
BROMOMETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
CARBON DISULFIDE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
CHLOROBENZENE	< 1	< 1	< 1	< 100	2.1 J	< 1	< 11
CHLOROETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
CHLOROFORM	< 1	< 1	< 1	< 100	< 10	3.2	< 11
CHLOROMETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
CHLOROPRENE	< 2	< 2	< 2	< 200	< 20	< 2	< 22
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 100	< 10	6	
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
DIBROMOMETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 200	< 20	< 2	< 22
ETHYL METHACRYLATE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
ETHYLBENZENE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
IODOMETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
ISOBUTANOL	< 50	< 50	< 50	< 5000	< 500	< 50	< 560
METHACRYLONITRILE	< 2	< 2	< 2	< 200	< 20	< 2	< 22
METHYL METHACRYLATE	< 2	< 2	< 2	< 200	< 20	< 2	< 22
METHYLENE CHLORIDE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
PROPIONITRILE	< 4	< 4	< 4	< 400	< 40	< 4	< 44
STYRENE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
TETRACHLOROETHENE	< 1	< 1	< 1	< 100	< 10	3.9	< 11
TOLUENE	< 1	< 1	< 1	< 100	2.9 J	< 1	< 11
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 100	< 10	0.26 J	
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
TRICHLOROETHENE	< 1	< 1	< 1	< 100	< 10	5.5	< 11
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 100	< 10	< 1	< 11
VINYL ACETATE	< 2	< 2	< 2	< 200	< 20	< 2	< 22
VINYL CHLORIDE	< 1	< 1	< 1	< 100	< 10	1.6	160
XYLENES (TOTAL)	< 2	< 2	< 2	< 200	32	< 2	< 22

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RERAN = Laboratory Reanalyzed Sample
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The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 03B0.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW008 2004-03-31 GW A4D010333002 µg/L	MW008 2004-08-16 GW A4H170141001 µg/L	MW008 2004-12-22 GW A4L230115006 µg/L	MW011A 2004-03-30 GW A4C310291004 µg/L	MW011A 2004-08-16 GW A4H170141003 µg/L	MW011C 2003-09-04 GW A3I050168001 µg/L	MW011C 2004-03-26 GW A4C270142004 µg/L
1,1,1,2-TETRACHLOROETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 20	< 33	< 33	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	360	400	380	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 2000	< 830	< 830	< 200	< 50	< 200	< 200
2-BUTANONE	< 100	< 170	< 170	< 10	1.7 J	< 10	< 10
2-HEXANONE	< 100	< 170	< 170	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 20	< 33	< 33	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 100	< 170	< 170	< 10	< 10	< 10	< 10
ACETONE	< 100	< 170	< 170	< 10	5.9 J	< 10	< 10
ACETONITRILE	< 200	< 330	< 330	< 20	< 20	< 20	< 20
ACROLEIN	< 200	< 330	< 330	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 200	< 330	< 330	< 20	< 20	< 20	< 20
BENZENE	< 10	16 J B	7.8 J	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
BROMOFORM	< 10	< 17	< 17	< 1	< 1	< 1	< 1
BROMOMETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 10	3.9 J	4 J	< 1	< 1	< 1	< 1
CHLOROETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
CHLOROFORM	< 10	< 17	< 17	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
CHLOROPRENE	< 20	< 33	< 33	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	360	400	380	< 1	< 1		< 1
CIS-1,3-DICHLOROPROPENE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 20	< 33	< 33	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
IODOMETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
ISOBUTANOL	< 500	< 830	< 830	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 20	< 33	< 33	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 20	< 33	< 33	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 10	29 B	< 17	< 1	< 1	< 1	< 1
PROPIONITRILE	< 40	< 67	< 67	< 4	< 4	< 4	< 4
STYRENE	< 10	5.2 J B	< 17	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
TOLUENE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 10	< 17	< 17	< 1	< 1		< 1
TRANS-1,3-DICHLOROPROPENE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 10	< 17	< 17	< 1	< 1	< 1	< 1
VINYL ACETATE	< 20	< 33	< 33	< 2	< 2	< 2	< 2
VINYL CHLORIDE	170	180	160	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 20	< 33	< 33	< 2	1.5 J	< 2	< 2

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The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100_58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW011C 2004-08-16 GW A4H170141002 µg/L	MW012 2004-09-01 GW A4I020164003 µg/L	MW012 2004-09-01 GWRERAN A4I020164003 µg/L	MW012 2004-09-01 QDUPGW A4I020164010 µg/L	MW012 2004-09-01 QDUPGWRERAN A4I020164010 µg/L	MW015 2003-09-02 GW A3I030288003 µg/L	MW015 2004-03-26 GW A4C270142005 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
1,1,1-TRICHLOROETHANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
1,1,2,2-TETRACHLOROETHANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
1,1,2-TRICHLOROETHANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
1,1-DICHLOROETHANE	< 1	4.6 J	4.1	3.6 J	3.7	67	72
1,1-DICHLOROETHENE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
1,2,3-TRICHLOROPROPANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 20	< 2	< 20	< 2	< 20	< 10
1,2-DIBROMOETHANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
1,2-DICHLOROETHANE	< 1	< 10	< 1	< 10	< 1	140	6.7
1,2-DICHLOROETHENE (TOTAL)	< 2	5.2 J	4.8	4.9 J	5.8	250	170
1,2-DICHLOROPROPANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
1,4-DIOXANE	< 50	2300	3800 E	3700	2000 E	< 2000	< 1000
2-BUTANONE	< 10	< 100	< 10	< 100	< 10	< 100	< 50
2-HEXANONE	< 10	< 100	< 10	< 100	< 10	< 100	< 50
3-CHLOROPROPENE	< 2	< 20	< 2	< 20	< 2	< 20	< 10
4-METHYL-2-PENTANONE	< 10	< 100	< 10	< 100	< 10	< 100	< 50
ACETONE	< 10	< 100	< 10	< 100	< 10	< 100	< 50
ACETONITRILE	< 20	< 200	< 20	< 200	< 20	< 200	< 100
ACROLEIN	< 20	< 200	< 20	< 200	< 20	< 200	< 100
ACRYLONITRILE	< 20	< 200	< 20	< 200	< 20	< 200	< 100
BENZENE	0.46 J B	63	59 E	46	57 E	19	15
BROMODICHLOROMETHANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
BROMOFORM	< 1	< 10	< 1	< 10	< 1	< 10	< 5
BROMOMETHANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
CARBON DISULFIDE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
CARBON TETRACHLORIDE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
CHLOROBENZENE	< 1	14	14	12	13	< 10	< 5
CHLOROETHANE	< 1	< 10	2.7	2.5 J	1.8	< 10	< 5
CHLOROFORM	< 1	< 10	< 1	< 10	< 1	< 10	< 5
CHLOROMETHANE	0.32 J	< 10	< 1	< 10	< 1	< 10	< 5
CHLOROPRENE	< 2	< 20	< 2	< 20	< 2	< 20	< 10
CIS-1,2-DICHLOROETHENE	< 1	5.2 J	4.8	4.9 J	5.6		170
CIS-1,3-DICHLOROPROPENE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
DIBROMOCHLOROMETHANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
DIBROMOMETHANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
DICHLOROFLUOROMETHANE	< 2	< 20	< 2	< 20	< 2	< 20	< 10
ETHYL METHACRYLATE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
ETHYLBENZENE	< 1	< 10	< 1	< 10	0.19 J	< 10	< 5
IODOMETHANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
ISOBUTANOL	< 50	< 500	< 50	< 500	< 50	< 500	< 250
METHACRYLONITRILE	< 2	< 20	< 2	< 20	< 2	< 20	< 10
METHYL METHACRYLATE	< 2	< 20	< 2	< 20	< 2	< 20	< 10
METHYLENE CHLORIDE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
PROPIONITRILE	< 4	< 40	< 4	< 40	< 4	< 40	< 20
STYRENE	0.34 J B	< 10	0.46 J	< 10	< 1	< 10	< 5
TETRACHLOROETHENE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
TOLUENE	< 1	< 10	0.8 J	< 10	0.75 J	< 10	< 5
TRANS-1,2-DICHLOROETHENE	< 1	< 10	< 1	< 10	0.26 J		< 5
TRANS-1,3-DICHLOROPROPENE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
TRICHLOROETHENE	< 1	< 10	< 1	< 10	< 1	47	34
TRICHLOROFLUOROMETHANE	< 1	< 10	< 1	< 10	< 1	< 10	< 5
VINYL ACETATE	< 2	< 20	< 2	< 20	< 2	< 20	< 10
VINYL CHLORIDE	< 1	4.6 J	3.4	3.9 J	3.2	44	51
XYLENES (TOTAL)	< 2	< 20	0.54 J	< 20	0.5 J	< 20	< 10

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GW = Ground Water
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µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 9100.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 – December 2004)

ANALYTE	MW015 2004-08-16 GW A4H170141004 µg/L	MW015B 2003-09-03 GW A3I040194006 µg/L	MW015B 2004-03-29 GW A4C300268006 µg/L	MW015B 2004-08-17 GW A4H180231001 µg/L	MW017 2003-09-04 GW A3I050168004 µg/L	MW017 2004-03-23 GW A4C240239002 µg/L	MW017 2004-08-16 GW A4H170141005 µg/L
1,1,1,2-TETRACHLOROETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	71	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 20	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	16	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	320	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 500	< 200	< 200	< 50	< 200	< 200	< 50
2-BUTANONE	< 100	< 10	< 10	< 10	< 10	< 10	< 10
2-HEXANONE	< 100	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 20	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 100	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 100	< 10	< 10	< 10	< 10	< 10	1.3 J
ACETONITRILE	< 200	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 200	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 200	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	14 B	< 1	< 1	< 1	< 1	< 1	0.48 J B
BROMODICHLOROMETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 10	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 10	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 20	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	320		< 1	< 1		< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 20	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 500	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 20	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 20	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	17 B	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 40	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	3.1 J B	< 1	< 1	< 1	< 1	< 1	0.27 J B
TETRACHLOROETHENE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 10	< 1	< 1	0.2 J	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	5 J		< 1	< 1		< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	21	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 10	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 20	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	48	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 20	< 2	< 2	< 2	< 2	< 2	< 2

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The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW017 2004-12-20 GW A4L230113011 µg/L	MW018 2003-09-03 GW A3I040194007 µg/L	MW018 2004-03-30 GW A4C310291006 µg/L	MW018 2004-08-17 GW A4H180231002 µg/L	MW023 2003-09-09 GW A3I100121001 µg/L	MW023 2004-03-31 GW A4D010333003 µg/L	MW023 2004-08-17 GW A4H180231003 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	0.29 J	9.2	10	5.7
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 50	< 200	< 200	< 50	370	540	450
2-BUTANONE	0.43 J	< 10	< 10	< 10	< 10	< 10	0.47 J
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	0.86 J	< 10	< 10	< 10	< 10	< 10	< 10
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	9	9	7.1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	8.8	5.3	15
CHLOROFORM	< 1	14	7.2	9.5	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1		< 1	< 1		< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	< 1	< 1	< 1	< 1	< 1	0.37 J
TRANS-1,2-DICHLOROETHENE	< 1		< 1	< 1		< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	0.36 J	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	1.3	1.1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

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EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.75

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW023 2004-12-21 GW A4L230113015 µg/L	MW024 2003-09-03 GW A3I040194002 µg/L	MW024 2003-09-03 QDUPGW A3I040194011 µg/L	MW024 2004-03-29 GW A4C300268002 µg/L	MW024 2004-08-17 GW A4H180231006 µg/L	MW026 2003-09-03 GW A3I040194005 µg/L	MW026 2004-03-26 GW A4C270142007 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	2.8	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	0.25 J	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	390	< 200	< 200	< 200	< 50	< 200	< 200
2-BUTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	1.6	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	12	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1			< 1	< 1		< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 1			< 1	< 1		< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	0.36 J	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

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Cincinnati, Ohio

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TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW026 2004-09-13 GW A4I140148001 µg/L	MW026 2004-09-13 GWRERAN A4I140148001 µg/L	MW026 2004-12-21 GW A4L230115003 µg/L	MW026A 2003-09-03 GW A3I040194004 µg/L	MW026A 2004-03-26 GW A4C270142006 µg/L	MW026A 2004-08-17 GW A4H180231004 µg/L	MW026A 2004-12-20 GW A4L230113010 µg/L
1,1,1,2-TETRACHLOROETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
1,1,1-TRICHLOROETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
1,1,2-TRICHLOROETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
1,1-DICHLOROETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
1,1-DICHLOROETHENE	< 5.6	0.37 J	< 6.7	< 4	< 3.3	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 11	< 2	< 13	< 8	< 6.7	< 2	< 2
1,2-DIBROMOETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
1,2-DICHLOROETHANE	< 5.6	0.72 J	< 6.7	< 4	< 3.3	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	33	45 E	51	35	36	< 2	< 2
1,2-DICHLOROPROPANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
1,4-DIOXANE	< 280	49 J	88 J	< 800	< 670	< 50	< 50
2-BUTANONE	3.3 J	2.9 J	< 67	< 40	< 33	2.9 J	< 10
2-HEXANONE	< 56	< 10	< 67	< 40	< 33	< 10	< 10
3-CHLOROPROPENE	< 11	< 2	< 13	< 8	< 6.7	< 2	< 2
4-METHYL-2-PENTANONE	< 56	< 10	< 67	< 40	< 33	0.49 J	< 10
ACETONE	7.3 J	< 10	< 67	< 40	< 33	1.4 J	< 10
ACETONITRILE	< 110	< 20	< 130	< 80	< 67	< 20	< 20
ACROLEIN	< 110	< 20	< 130	< 80	< 67	< 20	< 20
ACRYLONITRILE	< 110	< 20	< 130	< 80	< 67	< 20	< 20
BENZENE	1.2 J	0.48 J	< 6.7	< 4	< 3.3	< 1	< 1
BROMODICHLOROMETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
BROMOFORM	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
BROMOMETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
CARBON DISULFIDE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
CARBON TETRACHLORIDE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
CHLOROBENZENE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
CHLOROETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
CHLOROFORM	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
CHLOROMETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
CHLOROPRENE	< 11	< 2	< 13	< 8	< 6.7	< 2	< 2
CIS-1,2-DICHLOROETHENE	31	42 E	47		34	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
DIBROMOCHLOROMETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
DIBROMOMETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
DICHLOROFLUOROMETHANE	< 11	< 2	< 13	< 8	< 6.7	< 2	< 2
ETHYL METHACRYLATE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
ETHYLBENZENE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
IODOMETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
ISOBUTANOL	< 280	< 50	< 330	< 200	< 170	< 50	< 50
METHACRYLONITRILE	< 11	< 2	< 13	< 8	< 6.7	< 2	< 2
METHYL METHACRYLATE	< 11	< 2	< 13	< 8	< 6.7	< 2	< 2
METHYLENE CHLORIDE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
PROPIONITRILE	< 22	< 4	< 27	< 16	< 13	< 4	< 4
STYRENE	< 5.6	< 1	< 6.7	< 4	< 3.3	0.47 J	< 1
TETRACHLOROETHENE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
TOLUENE	< 5.6	< 1	< 6.7	< 4	< 3.3	0.41 J	< 1
TRANS-1,2-DICHLOROETHENE	2.1 J	3	3.6 J		< 3.3	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
TRICHLOROETHENE	100	140 E	160	110	100	< 1	< 1
TRICHLOROFLUOROMETHANE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
VINYL ACETATE	< 11	< 2	< 13	< 8	< 6.7	< 2	< 2
VINYL CHLORIDE	< 5.6	< 1	< 6.7	< 4	< 3.3	< 1	< 1
XYLENES (TOTAL)	< 11	< 2	< 13	< 8	< 6.7	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0309.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW027 2003-09-03 GW A3I040194003 µg/L	MW027 2004-03-26 GW A4C270142008 µg/L	MW027 2004-08-17 GW A4H180231005 µg/L	MW027 2004-12-21 GW A4L230113012 µg/L	MW030 2003-09-04 GW A3I050168002 µg/L	MW030 2004-03-29 GW A4C300268005 µg/L	MW030 2004-08-18 GW A4H190207004 µg/L
1,1,1,2-TETRACHLOROETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 1000	< 1000	< 2000	< 1000	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
1,2-DICHLOROETHANE	510	830	1000	980	< 1	< 1	0.28 J
1,2-DICHLOROETHENE (TOTAL)	4900	3800	4300	4400	< 2	< 2	0.86 J
1,2-DICHLOROPROPANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
1,4-DIOXANE	< 100000	< 100000	< 50000	< 25000	< 200	< 200	50
2-BUTANONE	< 5000	< 5000	< 10000	< 5000	< 10	< 10	< 10
2-HEXANONE	< 5000	< 5000	< 10000	< 5000	< 10	< 10	< 10
3-CHLOROPROPENE	< 1000	< 1000	< 2000	< 1000	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 5000	< 5000	< 10000	< 5000	< 10	< 10	< 10
ACETONE	< 5000	< 5000	< 10000	< 5000	< 10	< 10	< 10
ACETONITRILE	< 10000	< 10000	< 20000	< 10000	< 20	< 20	< 20
ACROLEIN	< 10000	< 10000	< 20000	< 10000	< 20	< 20	< 20
ACRYLONITRILE	< 10000	< 10000	< 20000	< 10000	< 20	< 20	< 20
BENZENE	< 500	< 500	430 J	420 J	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
BROMOFORM	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
BROMOMETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
CARBON DISULFIDE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
CHLOROBENZENE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
CHLOROETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
CHLOROFORM	< 500	< 500	260 J	< 500	< 1	< 1	< 1
CHLOROMETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
CHLOROPRENE	< 1000	< 1000	< 2000	< 1000	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE		3800	4300	4400		1	0.86 J
CIS-1,3-DICHLOROPROPENE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
DIBROMOMETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 1000	< 1000	< 2000	< 1000	< 2	< 2	< 2
ETHYL METHACRYLATE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
ETHYLBENZENE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
IODOMETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
ISOBUTANOL	< 25000	< 25000	< 50000	< 25000	< 50	< 50	< 50
METHACRYLONITRILE	< 1000	< 1000	< 2000	< 1000	< 2	< 2	< 2
METHYL METHACRYLATE	< 1000	< 1000	< 2000	< 1000	< 2	< 2	< 2
METHYLENE CHLORIDE	< 500	< 500	500 J B	< 500	< 1	< 1	< 1
PROPIONITRILE	< 2000	< 2000	< 4000	< 2000	< 4	< 4	< 4
STYRENE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
TETRACHLOROETHENE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
TOLUENE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE		< 500	< 1000	< 500		< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
TRICHLOROETHENE	14000	11000	13000	13000	4.1	5.7	4
TRICHLOROFLUOROMETHANE	< 500	< 500	< 1000	< 500	< 1	< 1	< 1
VINYL ACETATE	< 1000	< 1000	< 2000	< 1000	< 2	< 2	< 2
VINYL CHLORIDE	880	< 500	890 J	660	< 1	< 1	< 1
XYLENES (TOTAL)	< 1000	< 1000	< 2000	< 1000	< 2	< 2	< 2

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RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0300.58.Z5

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW030 2004-12-21 GW A4L230113016 µg/L	MW031A 2003-09-05 GW A3I060169003 µg/L	MW031A 2004-03-29 GW A4C300268004 µg/L	MW031A 2004-08-18 GW A4H190207006 µg/L	MW031A 2004-08-18 QDUPGW A4H190207011 µg/L	MW031C 2003-09-05 GW A3I060169002 µg/L	MW031C 2004-03-29 GW A4C300268007 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
1,1,1-TRICHLOROETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
1,1,2,2-TETRACHLOROETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
1,1,2-TRICHLOROETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
1,1-DICHLOROETHANE	< 1	< 33	< 29	7.3 J	5.6 J	7.6	< 40
1,1-DICHLOROETHENE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
1,2,3-TRICHLOROPROPANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 67	< 57	< 50	< 50	< 8	< 80
1,2-DIBROMOETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
1,2-DICHLOROETHANE	< 1	57	69	93	78	62	45
1,2-DICHLOROETHENE (TOTAL)	0.35 J	780	790	850	690	8.6	< 80
1,2-DICHLOROPROPANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
1,4-DIOXANE	< 50	13000	7300	8100	9400	12000 E	12000
2-BUTANONE	< 10	< 330	< 290	< 250	< 250	< 40	< 400
2-HEXANONE	< 10	< 330	< 290	< 250	< 250	< 40	< 400
3-CHLOROPROPENE	< 2	< 67	< 57	< 50	< 50	< 8	< 80
4-METHYL-2-PENTANONE	< 10	< 330	< 290	< 250	< 250	< 40	< 400
ACETONE	0.75 J B	< 330	< 290	< 250	< 250	43	< 400
ACETONITRILE	< 20	< 670	< 570	< 500	< 500	< 80	< 800
ACROLEIN	< 20	< 670	< 570	< 500	< 500	< 80	< 800
ACRYLONITRILE	< 20	< 670	< 570	< 500	< 500	< 80	< 800
BENZENE	< 1	48	43	35	29	12	< 40
BROMODICHLOROMETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
BROMOFORM	< 1	< 33	< 29	< 25	< 25	< 4	< 40
BROMOMETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
CARBON DISULFIDE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
CARBON TETRACHLORIDE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
CHLOROBENZENE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
CHLOROETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
CHLOROFORM	< 1	< 33	< 29	< 25	< 25	< 4	< 40
CHLOROMETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
CHLOROPRENE	< 2	< 67	< 57	< 50	< 50	< 8	< 80
CIS-1,2-DICHLOROETHENE	0.35 J		770	820	670		< 40
CIS-1,3-DICHLOROPROPENE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
DIBROMOCHLOROMETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
DIBROMOMETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
DICHLOROFLUOROMETHANE	< 2	< 67	< 57	< 50	< 50	< 8	< 80
ETHYL METHACRYLATE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
ETHYLBENZENE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
IODOMETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
ISOBUTANOL	< 50	< 1700	1600	< 1200	< 1200	< 200	< 2000
METHACRYLONITRILE	< 2	< 67	< 57	< 50	< 50	< 8	< 80
METHYL METHACRYLATE	< 2	< 67	< 57	< 50	< 50	< 8	< 80
METHYLENE CHLORIDE	< 1	< 33	< 29	< 25	< 25	94	99
PROPIONITRILE	< 4	< 130	< 110	< 100	< 100	< 16	< 160
STYRENE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
TETRACHLOROETHENE	< 1	< 33	< 29	7.3 J	6.8 J	< 4	< 40
TOLUENE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
TRANS-1,2-DICHLOROETHENE	< 1		< 29	26	22 J		< 40
TRANS-1,3-DICHLOROPROPENE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
TRICHLOROETHENE	1.3	340	330	460	350	< 4	< 40
TRICHLOROFLUOROMETHANE	< 1	< 33	< 29	< 25	< 25	< 4	< 40
VINYL ACETATE	< 2	< 67	< 57	< 50	< 50	< 8	< 80
VINYL CHLORIDE	< 1	270	240	240	180	4.7	< 40
XYLENES (TOTAL)	< 2	< 67	< 57	< 50	< 50	< 8	< 80

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The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW031C 2004-08-18 GW A4H190207008 µg/L	MW031D 2003-09-05 GW A3I060169004 µg/L	MW031D 2003-09-05 QDUPGW A3I060169010 µg/L	MW031D 2004-03-29 GW A4C300268003 µg/L	MW031D 2004-08-18 GW A4H190207007 µg/L	MW031D 2004-12-22 GW A4L230115007 µg/L	MW031D 2004-12-22 QDUPGW A4L230115011 µg/L
1,1,1,2-TETRACHLOROETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
1,1,1-TRICHLOROETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
1,1,2,2-TETRACHLOROETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
1,1,2-TRICHLOROETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
1,1-DICHLOROETHANE	18 J	< 3.3	< 3.3	< 1	0.42 J	1.9 J	2.2 J
1,1-DICHLOROETHENE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
1,2,3-TRICHLOROPROPANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 57	< 6.7	< 6.7	< 2	< 4	< 13	< 13
1,2-DIBROMOETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
1,2-DICHLOROETHANE	720	98	78	15	63	19	21
1,2-DICHLOROETHENE (TOTAL)	16 J	9.1	9.9	7.2	35	180	180
1,2-DICHLOROPROPANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
1,4-DIOXANE	14000	770	710	200	530	4300	4600
2-BUTANONE	< 290	< 33	< 33	< 10	< 20	< 67	< 67
2-HEXANONE	< 290	< 33	< 33	< 10	< 20	< 67	< 67
3-CHLOROPROPENE	< 57	< 6.7	< 6.7	< 2	< 4	< 13	< 13
4-METHYL-2-PENTANONE	< 290	< 33	< 33	< 10	< 20	< 67	< 67
ACETONE	< 290	< 33	< 33	< 10	< 20	< 67	< 67
ACETONITRILE	< 570	< 67	< 67	< 20	< 40	< 130	< 130
ACROLEIN	< 570	< 67	< 67	< 20	< 40	< 130	< 130
ACRYLONITRILE	< 570	< 67	< 67	< 20	< 40	< 130	< 130
BENZENE	18 J	3.5	3.8	< 1	3.7	9.4	9.1
BROMODICHLOROMETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
BROMOFORM	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
BROMOMETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
CARBON DISULFIDE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
CARBON TETRACHLORIDE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
CHLOROBENZENE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
CHLOROETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
CHLOROFORM	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
CHLOROMETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
CHLOROPRENE	< 57	< 6.7	< 6.7	< 2	< 4	< 13	< 13
CIS-1,2-DICHLOROETHENE	16 J			6.4	32	170	170
CIS-1,3-DICHLOROPROPENE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
DIBROMOCHLOROMETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
DIBROMOMETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
DICHLOROFLUOROMETHANE	< 57	< 6.7	< 6.7	< 2	< 4	< 13	< 13
ETHYL METHACRYLATE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
ETHYLBENZENE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
IODOMETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
ISOBUTANOL	< 1400	< 170	< 170	< 50	< 100	< 330	< 330
METHACRYLONITRILE	< 57	< 6.7	< 6.7	< 2	< 4	< 13	< 13
METHYL METHACRYLATE	< 57	< 6.7	< 6.7	< 2	< 4	< 13	< 13
METHYLENE CHLORIDE	87	< 3.3	< 3.3	< 1	2.6 B	< 6.7	2.8 J B
PROPIONITRILE	< 110	< 13	< 13	< 4	< 8	< 27	< 27
STYRENE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
TETRACHLOROETHENE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
TOLUENE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
TRANS-1,2-DICHLOROETHENE	< 29			< 1	3.1	6 J	5.5 J
TRANS-1,3-DICHLOROPROPENE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
TRANS-1,4-DICHLORO-2-BUTENE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
TRICHLOROETHENE	< 29	< 3.3	< 3.3	< 1	3.8	32	31
TRICHLOROFLUOROMETHANE	< 29	< 3.3	< 3.3	< 1	< 2	< 6.7	< 6.7
VINYL ACETATE	< 57	< 6.7	< 6.7	< 2	< 4	< 13	< 13
VINYL CHLORIDE	20 J	3.9	3.9	< 1	5.5	41	43
XYLENES (TOTAL)	< 57	< 6.7	< 6.7	< 2	< 4	< 13	< 13

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Project No. 0100.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW035 2004-09-01 GW A4I020164005 µg/L	MW035 2004-09-01 GWRERAN A4I020164005 µg/L	MW041 2004-12-21 GW A4L230113018 µg/L	MW042 2003-09-04 GW A3I050168003 µg/L	MW042 2004-03-23 GW A4C240239003 µg/L	MW042 2004-08-18 GW A4H190207001 µg/L	MW042 2004-12-20 GW A4L230113008 µg/L
1,1,1,2-TETRACHLOROETHANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	15	12	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	18	14	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	2.9 J	2.4	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 8	0.67 J	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 16	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	11	8.9	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	3 J	2.6	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 400	48 J	< 50	< 200	< 200	< 50	< 50
2-BUTANONE	< 80	< 10	< 10	< 10	< 10	< 10	< 10
2-HEXANONE	< 80	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 16	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 80	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 80	< 10	< 10	< 10	< 10	< 10	< 10
ACETONITRILE	< 160	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 160	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 160	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 8	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 8	1.3	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	89	75 E	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	240	180 E	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 16	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	3 J	2.3	< 1		< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 16	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 400	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 16	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 16	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 32	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	55	49 E	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 8	0.85 J	< 1	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 8	0.34 J	< 1		< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	36	31	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 16	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 8	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 16	< 2	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
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RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0108.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW043A 2003-09-02 GW A3I030288002 µg/L	MW043A 2004-03-30 GW A4C310291005 µg/L	MW043A 2004-08-18 GW A4H190207003 µg/L	MW043A 2004-12-20 GW A4L230113009 µg/L	MW044 2004-03-29 GW A4C300268001 µg/L	MW044 2004-03-29 QDUPGW A4C300268009 µg/L	MW044 2004-08-18 GW A4H190207002 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 200	< 200	< 50	< 50	< 200	< 200	< 50
2-BUTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE		< 1	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE		< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

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The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW044 2004-12-21 GW A4L230113013 µg/L	MW051A 2004-12-21 GW A4L230113014 µg/L	MW302 2004-09-01 GW A4I020164001 µg/L	MW302 2004-09-01 GWRERAN A4I020164001 µg/L	MW504 2003-09-05 GW A3I060169009 µg/L	MW504 2003-11-20 GW A3K210285001 µg/L	MW504 2004-03-24 GW A4C250250002 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	250 J	270	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 500	91	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	970	890	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 500	45 J	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 1000	< 100	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	2.1	17000	16000 E	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	0.45 J	17000	20000 E	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
1,4-DIOXANE	< 50	12 J	7000 J	26000	< 200	< 200	< 200
2-BUTANONE	< 10	< 10	< 5000	< 500	< 10	< 10	< 10
2-HEXANONE	< 10	< 10	< 5000	< 500	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 1000	< 100	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 5000	< 500	< 10	< 10	< 10
ACETONE	< 10	< 10	390 J B	95 J B	< 10	< 10	< 10
ACETONITRILE	< 20	< 20	< 10000	< 1000	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 10000	< 1000	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 10000	< 1000	< 20	< 20	< 20
BENZENE	< 1	< 1	1900	2000	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 500	< 50	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	280 J	280	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	16000	16000 E	4.4	4.2	3.2
CHLOROMETHANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 1000	< 100	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	0.45 J	17000	19000 E			< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 1000	< 100	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 500	36 J	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 25000	< 2500	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 1000	< 100	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 1000	< 100	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	8300	8200 E	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 2000	< 200	< 4	< 4	< 4
STYRENE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	240 J	290	< 1	< 1	< 1
TOLUENE	< 1	< 1	1300	1400	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	140 J	140			< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	3200	3500 E	1.7	1.6	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 500	< 50	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 1000	< 100	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	7400	7700 E	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 1000	170	< 2	< 2	< 2

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Norwood Facility

Cincinnati, Ohio

Project No. 0100.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW504 2004-07-08 GW A4G100202008 µg/L	MW504 2004-08-16 GW A4H170141014 µg/L	MW505A 2003-09-05 GW A3I060169007 µg/L	MW505A 2003-11-20 GW A3K210285002 µg/L	MW505A 2004-03-24 GW A4C250250003 µg/L	MW505A 2004-07-08 GW A4G100202006 µg/L	MW505A 2004-08-16 GW A4H170141009 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
1,1,1-TRICHLOROETHANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
1,1,2-TRICHLOROETHANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
1,1-DICHLOROETHANE	< 1	< 1	< 5	< 11	< 8	5 J	6.9 J
1,1-DICHLOROETHENE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 10	< 22	< 16	< 20	< 25
1,2-DIBROMOETHANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
1,2-DICHLOROETHANE	< 1	< 1	8.2	160	62	110	140
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	130	340	290	310	350
1,2-DICHLOROPROPANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
1,4-DIOXANE	83	< 50	3400	5800	6300	5000	5600
2-BUTANONE	1.2 J	< 10	< 50	< 110	< 80	< 100	< 120
2-HEXANONE	< 10	< 10	< 50	< 110	< 80	< 100	< 120
3-CHLOROPROPENE	< 2	< 2	< 10	< 22	< 16	< 20	< 25
4-METHYL-2-PENTANONE	< 10	< 10	< 50	< 110	< 80	< 100	< 120
ACETONE	5.2 J	< 10	< 50	< 110	< 80	< 100	< 120
ACETONITRILE	< 20	< 20	< 100	< 220	< 160	< 200	< 250
ACROLEIN	< 20	< 20	< 100	< 220	< 160	< 200	< 250
ACRYLONITRILE	< 20	< 20	< 100	< 220	< 160	< 200	< 250
BENZENE	< 1	0.49 J B	< 5	< 11	< 8	< 10	11 J B
BROMODICHLOROMETHANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
BROMOFORM	< 1	< 1	< 5	< 11	< 8	< 10	< 12
BROMOMETHANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
CARBON DISULFIDE	1.9	< 1	< 5	< 11	< 8	5.9 J	< 12
CARBON TETRACHLORIDE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
CHLOROBENZENE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
CHLOROETHANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
CHLOROFORM	3.1	2.6	< 5	< 11	< 8	< 10	< 12
CHLOROMETHANE	0.4 J	< 1	< 5	< 11	< 8	< 10	< 12
CHLOROPRENE	< 2	< 2	< 10	< 22	< 16	< 20	< 25
CIS-1,2-DICHLOROETHENE	< 1	< 1			260	270	300
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
DIBROMOCHLOROMETHANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
DIBROMOMETHANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
DICHLOROFLUOROMETHANE	< 2	< 2	< 10	< 22	< 16	< 20	< 25
ETHYL METHACRYLATE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
ETHYLBENZENE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
IODOMETHANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
ISOBUTANOL	< 50	< 50	< 250	< 560	< 400	< 500	< 620
METHACRYLONITRILE	< 2	< 2	< 10	< 22	< 16	< 20	< 25
METHYL METHACRYLATE	< 2	< 2	< 10	< 22	< 16	< 20	< 25
METHYLENE CHLORIDE	< 1	< 1	< 5	< 11	< 8	4.1 J Bu	25 B
PROPIONITRILE	< 4	< 4	< 20	< 44	< 32	< 40	< 50
STYRENE	< 1	0.19 J B	< 5	< 11	< 8	< 10	3.3 J B
TETRACHLOROETHENE	0.73 J	0.83 J	< 5	< 11	< 8	< 10	< 12
TOLUENE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
TRANS-1,2-DICHLOROETHENE	< 1	< 1			34	39	52
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
TRICHLOROETHENE	1.6	1.6	< 5	< 11	< 8	3.2 J	< 12
TRICHLOROFLUOROMETHANE	< 1	< 1	< 5	< 11	< 8	< 10	< 12
VINYL ACETATE	< 2	< 2	< 10	< 22	< 16	< 20	< 25
VINYL CHLORIDE	< 1	< 1	83	150	110	77	110
XYLENES (TOTAL)	< 2	< 2	< 10	< 22	< 16	< 20	< 25

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RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW505A 2004-08-16 QDUPGW A4H170141007 µg/L	MW505B 2003-09-05 GW A3I060169008 µg/L	MW505B 2003-11-20 GW A3K210285003 µg/L	MW505B 2004-03-24 GW A4C250250004 µg/L	MW505B 2004-07-08 GW A4G100202007 µg/L	MW505B 2004-08-16 GW A4H170141015 µg/L	MW506 2003-09-04 GW A3I050168005 µg/L
1,1,1,2-TETRACHLOROETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
1,1,1-TRICHLOROETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
1,1,2,2-TETRACHLOROETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
1,1,2-TRICHLOROETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
1,1-DICHLOROETHANE	7 J	< 4	< 10	< 10	< 8.3	< 8.3	< 1
1,1-DICHLOROETHENE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
1,2,3-TRICHLOROPROPANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 25	< 8	< 20	< 20	< 17	< 17	< 2
1,2-DIBROMOETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
1,2-DICHLOROETHANE	130	5.4	< 10	< 10	< 8.3	< 8.3	< 1
1,2-DICHLOROETHENE (TOTAL)	340	45	41	26	23	23	< 2
1,2-DICHLOROPROPANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
1,4-DIOXANE	6100	9000 E	10000	11000	12000	11000	< 200
2-BUTANONE	< 120	< 40	< 100	< 100	< 83	< 83	< 10
2-HEXANONE	< 120	< 40	< 100	< 100	< 83	< 83	< 10
3-CHLOROPROPENE	< 25	< 8	< 20	< 20	< 17	< 17	< 2
4-METHYL-2-PENTANONE	< 120	< 40	< 100	< 100	< 83	< 83	< 10
ACETONE	< 120	< 40	< 100	< 100	< 83	< 83	< 10
ACETONITRILE	< 250	< 80	< 200	< 200	< 170	< 170	< 20
ACROLEIN	< 250	< 80	< 200	< 200	< 170	< 170	< 20
ACRYLONITRILE	< 250	< 80	< 200	< 200	< 170	< 170	< 20
BENZENE	11 J B	< 4	< 10	< 10	< 8.3	2.7 J B	< 1
BROMODICHLOROMETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
BROMOFORM	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
BROMOMETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
CARBON DISULFIDE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
CARBON TETRACHLORIDE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
CHLOROBENZENE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
CHLOROETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
CHLOROFORM	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
CHLOROMETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
CHLOROPRENE	< 25	< 8	< 20	< 20	< 17	< 17	< 2
CIS-1,2-DICHLOROETHENE	300			21	18	18	
CIS-1,3-DICHLOROPROPENE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
DIBROMOCHLOROMETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
DIBROMOMETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
DICHLOROFLUOROMETHANE	< 25	< 8	< 20	< 20	< 17	< 17	< 2
ETHYL METHACRYLATE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
ETHYLBENZENE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
IODOMETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
ISOBUTANOL	< 620	< 200	< 500	< 500	< 420	< 420	< 50
METHACRYLONITRILE	< 25	< 8	< 20	< 20	< 17	< 17	< 2
METHYL METHACRYLATE	< 25	< 8	< 20	< 20	< 17	< 17	< 2
METHYLENE CHLORIDE	30 B	< 4	< 10	< 10	3.1 J Bu	< 8.3	< 1
PROPIONITRILE	< 50	< 16	< 40	< 40	< 33	< 33	< 4
STYRENE	3.5 J B	< 4	< 10	< 10	< 8.3	< 8.3	< 1
TETRACHLOROETHENE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
TOLUENE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
TRANS-1,2-DICHLOROETHENE	47			< 10	4.8 J	5.1 J	
TRANS-1,3-DICHLOROPROPENE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
TRICHLOROETHENE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
TRICHLOROFLUOROMETHANE	< 12	< 4	< 10	< 10	< 8.3	< 8.3	< 1
VINYL ACETATE	< 25	< 8	< 20	< 20	< 17	< 17	< 2
VINYL CHLORIDE	97	35	33	< 10	2.2 J	< 8.3	< 1
XYLENES (TOTAL)	< 25	< 8	< 20	< 20	< 17	< 17	< 2

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The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW506 2004-03-25 GW A4C270142003 µg/L	MW506 2004-07-09 GW A4G100202013 µg/L	MW506 2004-08-17 GW A4H180231007 µg/L	MW506 2004-12-20 GW A4L230113007 µg/L	MW507 2003-09-05 GW A3I060169006 µg/L	MW507 2003-11-20 GW A3K210285004 µg/L	MW507 2004-03-24 GW A4C250250005 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 200	< 50	< 50	< 50	< 200	< 200	410
2-BUTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	1.3 J	< 10	< 10	< 10	< 10	< 10
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	0.46 J	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1			1.1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	< 1	0.65 J	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1			< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

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TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW507 2004-07-08 GW A4G100202002 µg/L	MW507 2004-07-08 QDUPGW A4G100202001 µg/L	MW507 2004-08-17 GW A4H180231008 µg/L	MW507B 2004-07-08 GW A4G100202003 µg/L	MW507B 2004-08-17 GW A4H180231009 µg/L	MW508 2003-09-05 GW A3I060169005 µg/L	MW508 2003-11-20 GW A3K210285005 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	0.22 J	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	1.2 J	1.1 J	1.3 J	< 2	< 2	< 2	3.3
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	120	94	84	< 50	< 50	860	630
2-BUTANONE	< 10	< 10	< 10	1.3 J Bu	< 10	< 10	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	1.3 J	1.2 J	< 10	5.1 J Bu	< 10	< 10	< 10
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	0.24 J	0.23 J	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	0.5 J	< 1	< 1	0.35 J	0.48 J	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	1.1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	1.2	1.1	1.3	< 1	< 1		
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	0.45 J	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	< 1	0.19 J	0.51 J	0.37 J	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1		
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	0.78 J	< 2	< 2	< 2

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ANALYTE	MW508 2004-03-24 GW A4C250250006 µg/L	MW508 2004-07-09 GW A4G100202011 µg/L	MW508 2004-08-17 GW A4H180231012 µg/L	MW508 2004-12-20 GW A4L230113001 µg/L	MW508 2004-12-20 QDUPGW A4L230115012 µg/L	MW508B 2004-06-28 GW A4F290191001 µg/L	MW508B 2004-07-09 GW A4G100202012 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	2.8	3	1.3 J	1.4 J	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	1200	1100	1100	1200	1000	< 200	250
2-BUTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	1.4 J	< 10	< 10	< 10	< 10	2.6 J
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	< 1	0.26 J
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	1.2	2.6	2.8	1.3	1.4	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	1.8	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	0.29 J
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	< 1	0.29 J	< 1	< 1	< 1	0.35 J
TRANS-1,2-DICHLOROETHENE	< 1	0.21 J	0.22 J	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	0.83 J
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0109.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW508B 2004-08-17 GW A4H180231013 µg/L	MW508B 2004-12-20 GW A4L230113002 µg/L	MW509A 2004-07-08 GW A4G100202005 µg/L	MW509A 2004-08-17 GW A4H180231010 µg/L	MW509A 2004-12-20 GW A4L230113003 µg/L	MW509B 2004-07-08 GW A4G100202004 µg/L	MW509B 2004-08-17 GW A4H180231011 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	0.27 J	0.3 J	0.36 J	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	380	520	54	82	130	88	130
2-BUTANONE	< 10	< 10	< 10	0.46 J	< 10	0.63 J	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	< 10	1.8 J	1.2 J	< 10	< 10	< 10
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	0.25 J	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	0.48 J	< 1	< 1	0.96 J	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	0.2 J	< 1	< 1	0.39 J	< 1
CHLOROMETHANE	< 1	0.22 J	0.16 J	< 1	< 1	0.22 J	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	0.29 J	< 1	< 1	0.41 J	0.2 J	0.24 J	0.33 J
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	2.2	0.73 J	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

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µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0309.58.75

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	MW509B 2004-12-20 GW A4L230113004 µg/L	MW510A 2004-07-09 GW A4G100202009 µg/L	MW510A 2004-08-17 GW A4H180231014 µg/L	MW510A 2004-12-20 GW A4L230113005 µg/L	MW510B 2004-07-09 GW A4G100202010 µg/L	MW510B 2004-08-17 GW A4H180231015 µg/L	MW510B 2004-12-20 GW A4L230113006 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	0.49 J	0.43 J	0.54 J	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 4	< 5	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	13	10	9.3	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
1,4-DIOXANE	290	1700	1900	2500	140	460	150
2-BUTANONE	< 10	< 10	< 20	1.1 J	< 10	< 10	< 10
2-HEXANONE	< 10	< 10	< 20	< 25	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 4	< 5	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 20	< 25	< 10	< 10	< 10
ACETONE	< 10	< 10	< 20	< 25	1.6 J	< 10	< 10
ACETONITRILE	< 20	< 20	< 40	< 50	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 40	< 50	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 40	< 50	< 20	< 20	< 20
BENZENE	< 1	0.6 J	0.79 J	< 2.5	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	2	< 2.5	0.45 J	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
CHLOROBENZENE	< 1	1	0.94 J	0.96 J	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
CHLOROFORM	< 1	0.56 J	< 2	< 2.5	0.37 J	< 1	< 1
CHLOROMETHANE	0.57 J	0.27 J	< 2	< 2.5	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 4	< 5	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	12	9.4	8.6	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 2	< 2.5	0.21 J	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 4	< 5	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	1.6 J	< 2.5	< 1	0.77 J	< 1
IODOMETHANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 100	< 120	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 4	< 5	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 4	< 5	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 8	< 10	< 4	< 4	< 4
STYRENE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
TOLUENE	< 1	0.48 J	0.89 J	< 2.5	< 1	0.2 J	< 1
TRANS-1,2-DICHLOROETHENE	< 1	1	0.7 J	0.72 J	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 2	< 2.5	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 4	< 5	< 2	< 2	< 2
VINYL CHLORIDE	< 1	15	5.1	0.71 J	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	4.8	< 5	< 2	1.5 J	< 2

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RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100-58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	P001 2003-09-02 GW A3I030288004 µg/L	P001 2004-03-30 GW A4C310291007 µg/L	P001 2004-08-18 GW A4H190207005 µg/L	P006 2003-09-02 GW A3I030288001 µg/L	P006 2004-04-01 GW A4D020251002 µg/L	P006 2004-04-01 QDUPGW A4D020251004 µg/L	P006 2004-08-18 GW A4H190207009 µg/L
1,1,1,2-TETRACHLOROETHANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	7.8	6.8	12	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	24	22	33	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	9.5	14	13	4.8	7.8	15	10
1,1-DICHLOROETHENE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 13	< 13	< 13	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	28	60	28	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	59	87	69	< 2	2.8	3.6	1.3 J
1,2-DICHLOROPROPANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 1300	< 1300	< 330	< 200	< 200	< 200	90
2-BUTANONE	< 67	< 67	< 67	< 10	< 10	< 10	< 10
2-HEXANONE	< 67	< 67	< 67	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 13	< 13	< 13	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 67	< 67	< 67	< 10	< 10	< 10	< 10
ACETONE	< 67	< 67	< 67	< 10	< 10	< 10	< 10
ACETONITRILE	< 130	< 130	< 130	< 20	< 20	< 20	< 20
ACROLEIN	< 130	< 130	< 130	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 130	< 130	< 130	< 20	< 20	< 20	< 20
BENZENE	< 6.7	< 6.7	< 6.7	< 1	10	16	2.8
BROMODICHLOROMETHANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
BROMOFORM	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
BROMOMETHANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
CHLOROETHANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
CHLOROFORM	< 6.7	< 6.7	1.2 J	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
CHLOROPRENE	< 13	< 13	< 13	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE		75	57		2.3	2.9	1.3
CIS-1,3-DICHLOROPROPENE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 13	< 13	< 13	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
IODOMETHANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
ISOBUTANOL	< 330	< 330	< 330	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 13	< 13	< 13	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 13	< 13	< 13	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
PROPIONITRILE	< 27	< 27	< 27	< 4	< 4	< 4	< 4
STYRENE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	16	20	22	< 1	< 1	< 1	< 1
TOLUENE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE		12	12		< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
TRICHLOROETHENE	160	210	200	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 6.7	< 6.7	< 6.7	< 1	< 1	< 1	< 1
VINYL ACETATE	< 13	< 13	< 13	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 6.7	< 6.7	4.3 J	1.1	1.9	2.6	1.6
XYLENES (TOTAL)	< 13	< 13	< 13	< 2	< 2	< 2	0.78 J

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The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 9100.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	P006 2004-11-11 GW A4K120249001 µg/L	P006 2004-12-21 GW A4L230113017 µg/L	WRPZ05 2004-09-01 GW A4I020164006 µg/L	WRPZ05 2004-09-28 GW A4I290236005 µg/L	WRPZ05 2004-10-28 GW A4J290129001 µg/L	WRPZ05 2004-12-21 GW A4L230113023 µg/L	WRPZ10 2004-09-28 GW A4I290236006 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	4.1	3.8	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	2.2	2.2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 50	< 50	13 J	52	130	78	< 50
2-BUTANONE	0.76 J	< 10	3.3 J	< 10	< 10	< 10	0.41 J
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	1.2 J	< 10	30 B	< 10	< 10	< 10	1.3 J
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	3 J
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	0.37 J	1.4	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	0.18 J	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	0.17 J
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	2.2	2.2	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	0.52 J	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	< 1	< 1	< 1	< 1	0.2 J	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	2.4	2.2	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	0.49 J	< 2	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 9100.58.25

TABLE 6: Quarterly Ground Water VOC Results (September 2003 - December 2004)

ANALYTE	WRPZ10 2004-10-28 GW A4J290129003 µg/L	WRPZ10 2004-12-21 GW A4L230113024 µg/L	WRPZ15 2004-09-28 GW A4J290236007 µg/L	WRPZ15 2004-10-28 GW A4J290129004 µg/L	WRPZ15 2004-12-21 GW A4L230115001 µg/L	WRPZ20 2004-09-01 GW A4J020164007 µg/L	WRPZ20 2004-09-28 GW A4J290236008 µg/L	WRPZ20 2004-10-28 GW A4J290129002 µg/L	WRPZ20 2004-12-21 GW A4L230115002 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 50	15 J	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-BUTANONE	< 10	< 10	< 10	< 10	< 10	0.67 J	< 10	0.93 J	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	< 10	1.5 J	< 10	< 10	2.4 J B	< 10	3.3 J B	0.78 J B
ACETONITRILE	< 20	< 20	2.5 J	< 20	< 20	< 20	2.8 J	7.8 J	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	0.22 J	< 1	< 1	< 1	0.16 J	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	0.51 J	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	< 1	< 1	< 1	< 1	0.23 J	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
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VOCs = Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 7: Storm Sewer and Surface Water VOC Results (June 2004 - December 2004)

ANALYTE	DC INFLOW 2004-08-17 SW A4H180231018 µg/L	DC INFLOW 2004-12-20 SW A4L230115009 µg/L	DC OUTFLOW 2004-08-17 SW A4H180231019 µg/L	DC OUTFLOW 2004-12-20 SW A4L230115010 µg/L	WR OUTFALL 2004-08-16 SW A4H170141006 µg/L	WR OUTFALL 2004-09-01 SW A4I020164008 µg/L	WR OUTFALL 2004-09-01 SWRERAN A4I020164008 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 25	< 29	1.5 J
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	19 J	30	25
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 25	< 29	3.2
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 25	8.6 J	8.2
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 50	< 57	< 5.7
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	670	760	760 E
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
1,4-DIOXANE	< 50	< 50	< 50	< 50	2000	1500	1900
2-BUTANONE	4.2 J	< 10	< 10	< 10	< 250	< 290	< 29
2-HEXANONE	< 10	< 10	< 10	< 10	< 250	< 290	< 29
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 50	< 57	< 5.7
4-METHYL-2-PENTANONE	1.2 J	< 10	< 10	< 10	< 250	< 290	7 J
ACETONE	29	< 10	2.4 J	0.83 J	400	410	410 E
ACETONITRILE	< 20	< 20	140	< 20	< 500	< 570	54 J
ACROLEIN	< 20	< 20	< 20	< 20	< 500	< 570	< 57
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 500	< 570	< 57
BENZENE	< 1	< 1	< 1	< 1	170 B	170	170 E
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
BROMOFORM	< 1	< 1	1.6	< 1	< 25	< 29	2.3 J
BROMOMETHANE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
CARBON DISULFIDE	< 1	< 1	< 1	< 1	< 25	< 29	1.3 J
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 25	< 29	2.2 J
CHLOROBENZENE	< 1	< 1	< 1	< 1	37	45	48
CHLOROETHANE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
CHLOROFORM	< 1	< 1	< 1	< 1	22 J	54	51
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
CHLOROPRENE	< 2	< 2	< 2	< 2	< 50	< 57	< 5.7
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	0.22 J	670	760	750 E
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
DIBROMOCHLOROMETHANE	< 1	< 1	0.31 J	< 1	< 25	< 29	< 2.9
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 50	< 57	< 5.7
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
ETHYLBENZENE	< 1	< 1	< 1	< 1	140	160	190 E
IODOMETHANE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
ISOBUTANOL	< 50	< 50	< 50	< 50	< 1200	< 1400	< 140
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 50	< 57	< 5.7
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 50	< 57	< 5.7
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	69 B	< 29	3.8
PROPIONITRILE	< 4	< 4	< 4	< 4	< 100	< 110	< 11
STYRENE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	19 J	39	37
TOLUENE	< 1	< 1	< 1	0.36 J	580	700	400 E
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 25	4.9 J	5.5
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
TRICHLOROETHENE	< 1	< 1	< 1	< 1	30	48	49
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 25	< 29	< 2.9
VINYL ACETATE	< 2	< 2	< 2	< 2	< 50	< 57	< 5.7
VINYL CHLORIDE	< 1	< 1	< 1	< 1	18 J	21 J	23
XYLENES (TOTAL)	1.5 J	< 2	1.5 J	< 2	680	900	890 E

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RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 7: Storm Sewer and Surface Water VOC Results (June 2004 - December 2004)

ANALYTE	WR OUTFALL 2004-12-22 SW A4L230115008 µg/L	DC 01 2004-06-16 SEWER A4F180339001 µg/L	SEWER A 2004-06-17 SEWER A4F180339003 µg/L	SEWER C 2005-01-21 SEWER A5A220147001 µg/L	SEWER E 2004-06-17 SEWER A4F180339002 µg/L	SEWER F 2004-06-17 SEWER A4F180339004 µg/L	SEWER G 2004-06-17 SEWER A4F180339005 µg/L
1,1,1,2-TETRACHLOROETHANE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 17	< 1	< 1	2.7	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	13 J	< 1	< 1	20	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 17	< 1	< 1	0.77 J	< 1	< 1	< 1
1,1-DICHLOROETHANE	5.6 J	< 1	< 1	9.9	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 33	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	21	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	390	< 2	0.96 J	51 E	< 2	< 2	1 J
1,2-DICHLOROPROPANE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	1200	< 50	< 50	220	< 50	< 50	< 50
2-BUTANONE	< 170	< 10	< 10	< 10	< 10	< 10	< 10
2-HEXANONE	< 170	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 33	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 170	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	170 B	< 10	< 10	< 10	< 10	< 10	< 10
ACETONITRILE	< 330	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 330	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 330	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	76	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 17	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	19	< 1	< 1	< 1	< 1	0.37 J	0.27 J
CHLOROETHANE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	9.6 J	< 1	< 1	30	< 1	< 1	< 1
CHLOROMETHANE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 33	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	390	< 1	0.96 J	47 E	< 1	0.28 J	1
CIS-1,3-DICHLOROPROPENE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 33	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	38	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 17	< 1	< 1	< 1	0.24 J	< 1	< 1
ISOBUTANOL	< 830	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 33	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 33	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 67	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	9.2 J	< 1	< 1	21	< 1	< 1	< 1
TOLUENE	250	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	3.1 J	< 1	< 1	3.5	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	14 J	< 1	< 1	160 E	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 17	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 33	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	12 J	< 1	0.43 J	< 1	< 1	0.45 J	0.72 J
XYLENES (TOTAL)	290	< 2	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds
SW = Surface Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.75

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW008 2003-09-03 GW A3I040194001 µg/L	MW008 2004-03-31 GW A4D010333002 µg/L	MW011C 2003-09-04 GW A3I050168001 µg/L	MW011C 2004-03-26 GW A4C270142004 µg/L	MW011C 2004-03-26 GWRERAN A4C270142004 µg/L	MW015 2003-09-02 GW A3I030288003 µg/L	MW015 2004-03-26 GW A4C270142005 µg/L
1,2,4,5-TETRACHLOROBENZENE	< 10	< 10		< 10	< 10		< 10
1,2,4-TRICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3,5-TRINITROBENZENE	< 50	< 50		< 50	< 50		< 50
1,3-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3-DINITROBENZENE	< 10	< 10		< 10	< 10		< 10
1,4-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,4-NAPHTHOQUINONE	< 50	< 50		< 50	< 50		< 50
1-NAPHTHYLAMINE	< 10	< 10		< 10	< 10		< 10
2,2'-OXYBIS(1-CHLOROPROPANE)	< 10		< 10			< 10	
2,3,4,6-TETRACHLOROPHENOL	< 50	< 50		< 50	< 50		< 50
2,4,5-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4,6-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DIMETHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DINITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2,4-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,6-DICHLOROPHENOL	< 10	< 10		< 10	< 10		< 10
2,6-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-ACETYLAMINOFLUORENE	< 100	< 100		< 100	< 100		< 100
2-CHLORONAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-CHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLNAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-NAPHTHYLAMINE	< 10	< 10		< 10	< 10		< 10
2-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-NITROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-PICOLINE	< 20	< 20		< 20	< 20		< 20
2-SEC-BUTYL-4,6-DINITROPHENOL		< 20		< 20	< 20		< 20
3,3'-DICHLOROBENZIDINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
3,3'-DIMETHYLBENZIDINE	< 50	< 50		< 50	< 50		< 50
3-METHYLCHOLANTHRENE	< 20	< 20		< 20	< 20		< 20
3-METHYLPHENOL	< 10	< 10		< 10	< 10		< 10
3-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4,6-DINITRO-2-METHYLPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-AMINOBIPHENYL	< 50	< 50		< 50	< 50		< 50
4-BROMOPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLORO-3-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROANILINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROQUINOLINE-1-OXIDE	< 100	< 100		< 100	< 100		< 100
5-NITRO-O-TOLUIDINE	< 20	< 20		< 20	< 20		< 20
7,12-DIMETHYLBENZ(A)ANTHRACENE	< 20	< 20		< 20	< 20		< 20
A,A-DIMETHYLPHENETHYLAMINE		< 50		< 50	< 50		< 50
ACENAPHTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACENAPHTHYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETOPHENONE	< 10	< 10		< 10	< 10		< 10
ALPHA,ALPHA-DIMETHYLPHENETHYLAMINE	< 50						
ANILINE	< 10	< 10		< 10	< 10		< 10
ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ARAMITE	< 10	< 10		< 10	< 10		< 10
BENZO(A)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(A)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(B)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(GHI)PERYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(K)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZYL ALCOHOL	< 10	< 10		< 10	< 10		< 10
BIS(2-CHLORO-1-METHYLETHYL) ETHER		< 10		< 10	< 10		< 10
BIS(2-CHLOROETHOXY)METHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-CHLOROETHYL) ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-ETHYLHEXYL) PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BUTYL BENZYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CARBAZOLE	< 10	< 10	< 10	< 10	< 10	< 10	< 10

Blank Cell=Not Analyzed
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SVOCs = Semi Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility

Cincinnati, Ohio

Project No. 0380.58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW008 2003-09-03 GW A3I040194001 µg/L	MW008 2004-03-31 GW A4D010333002 µg/L	MW011C 2003-09-04 GW A3I050168001 µg/L	MW011C 2004-03-26 GW A4C270142004 µg/L	MW011C 2004-03-26 GWRERAN A4C270142004 µg/L	MW015 2003-09-02 GW A3I030288003 µg/L	MW015 2004-03-26 GW A4C270142005 µg/L
CHLOROBENZILATE		< 10		< 10	< 10		< 10
CHRYSENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIALLATE	< 20	< 20		< 20	< 20		< 20
DIBENZ(A,H)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIBENZOFURAN	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIMETHOATE	< 20	< 20		< 20	< 20		< 20
DIMETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-BUTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-OCTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIPHENYLAMINE	< 10	< 10		< 10	< 10		< 10
DISULFOTON		< 50		< 50	< 50		< 50
ETHYL METHANESULFONATE	< 10	< 10		< 10	< 10		< 10
FAMPHUR		< 10		< 10	< 10		< 10
FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
FLUORENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBUTADIENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROCYCLOPENTADIENE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
HEXACHLOROETHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROPROPENE	< 100	< 100		< 100	< 100		< 100
INDENO(1,2,3-CD)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOPHORONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOSAFROLE	< 20	< 20		< 20	< 20		< 20
METHAPYRILENE	< 50	< 50		< 50	< 50		< 50
METHYL METHANESULFONATE	< 10	< 10		< 10	< 10		< 10
METHYL PARATHION		< 10		< 10	< 10		< 10
NAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NITROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIETHYLAMINE	< 10	< 10		< 10	< 10		< 10
N-NITROSODIMETHYLAMINE	< 10	< 10		< 10	< 10		< 10
N-NITROSODI-N-BUTYLAMINE	< 10	< 10		< 10	< 10		< 10
N-NITROSODI-N-PROPYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIPHENYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSOMETHYLETHYLAMINE	< 10	< 10		< 10	< 10		< 10
N-NITROSOMORPHOLINE	< 10	< 10		< 10	< 10		< 10
N-NITROSOPIPERIDINE	< 10	< 10		< 10	< 10		< 10
N-NITROSOPYRROLIDINE	< 10	< 10		< 10	< 10		< 10
O,O,O-TRIETHYL PHOSPHOROTHIOATE		< 50		< 50	< 50		< 50
O,O-DIETHYL-O-(2-PYRAZINYL) PHOSPHOROTHIOATE		< 50		< 50	< 50		< 50
O-TOLUIDINE	< 20	< 20		< 20	< 20		< 20
PARATHION		< 10		< 10	< 10		< 10
P-CHLOROBENZILATE	< 10						
P-DIMETHYLAMINOAZOBENZENE	< 20	< 20		< 20	< 20		< 20
PENTACHLOROBENZENE	< 10	< 10		< 10	< 10		< 10
PENTACHLOROETHANE	< 50	< 50		< 50	< 50		<.50
PENTACHLORONITROBENZENE	< 50	< 50		< 50	< 50		< 50
PENTACHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENACETIN	< 20	< 20		< 20	< 20		< 20
PHENANTHRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHORATE		< 50		< 50	< 50		< 50
P-PHENYLENE DIAMINE	< 100	< 100		< 100	< 100		< 100
PRONAMIDE	< 20	< 20		< 20	< 20		< 20
PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PYRIDINE	< 20	< 20		< 20	< 20		< 20
SAFROLE	< 20	< 20		< 20	< 20		< 20
TETRAETHYLDITHIOPYROPHOSPHATE		< 50		< 50	< 50		< 50

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
SVOCs = Semi Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility

Cincinnati, Ohio

Project No. 0100.58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW015B 2003-09-03 GW A3I040194006 µg/L	MW015B 2004-03-29 GW A4C300268006 µg/L	MW017 2003-09-04 GW A3I050168004 µg/L	MW017 2004-03-23 GW A4C240239002 µg/L	MW018 2003-09-03 GW A3I040194007 µg/L	MW018 2004-03-30 GW A4C310291006 µg/L	MW023 2003-09-09 GW A3I100121001 µg/L
1,2,4,5-TETRACHLOROBENZENE		< 10		< 10		< 10	< 10
1,2,4-TRICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3,5-TRINITROBENZENE		< 50		< 50		< 50	< 50
1,3-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3-DINITROBENZENE		< 10		< 10		< 10	< 10
1,4-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,4-NAPHTHOQUINONE		< 50		< 50		< 50	< 50
1-NAPHTHYLAMINE		< 10		< 10		< 10	< 10
2,2'-OXYBIS(1-CHLOROPROPANE)	< 10		< 10		< 10		< 10
2,3,4,6-TETRACHLOROPHENOL		< 50		< 50		< 50	< 50
2,4,5-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4,6-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DIMETHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DINITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2,4-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,6-DICHLOROPHENOL		< 10		< 10		< 10	< 10
2,6-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-ACETYLAMINOFLUORENE		< 100		< 100		< 100	< 100
2-CHLORONAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-CHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLNAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-NAPHTHYLAMINE		< 10		< 10		< 10	< 10
2-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-NITROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-PICOLINE		< 20		< 20		< 20	< 20
2-SEC-BUTYL-4,6-DINITROPHENOL		< 20		< 20		< 20	
3,3'-DICHLOROBENZIDINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
3,3'-DIMETHYLBENZIDINE		< 50		< 50		< 50	< 50
3-METHYLCHOLANTHRENE		< 20		< 20		< 20	< 20
3-METHYLPHENOL		< 10		< 10		< 10	< 10
3-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4,6-DINITRO-2-METHYLPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-AMINOBIPHENYL		< 50		< 50		< 50	< 50
4-BROMOPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLORO-3-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROANILINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROQUINOLINE-1-OXIDE		< 100		< 100		< 100	< 100
5-NITRO-O-TOLUIDINE		< 20		< 20		< 20	< 20
7,12-DIMETHYLBENZ(A)ANTHRACENE		< 20		< 20		< 20	< 20
A,A-DIMETHYLPHENETHYLAMINE		< 50		< 50		< 50	
ACENAPHTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACENAPHTHYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETOPHENONE		< 10		< 10		< 10	< 10
ALPHA,ALPHA-DIMETHYLPHENETHYLAMINE							< 50
ANILINE		< 10		< 10		< 10	< 10
ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ARAMITE		< 10		< 10		< 10	< 10
BENZO(A)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(A)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(B)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(GHI)PERYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(K)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZYL ALCOHOL		< 10		< 10		< 10	< 10
BIS(2-CHLORO-1-METHYLETHYL) ETHER		< 10		< 10		< 10	
BIS(2-CHLOROETHOXY)METHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-CHLOROETHYL) ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-ETHYLHEXYL) PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BUTYL BENZYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CARBAZOLE	< 10	< 10	< 10	< 10	< 10	< 10	< 10

Blank Cell=Not Analyzed
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GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW015B 2003-09-03 GW A3I040194006 µg/L	MW015B 2004-03-29 GW A4C300268006 µg/L	MW017 2003-09-04 GW A3I050168004 µg/L	MW017 2004-03-23 GW A4C240239002 µg/L	MW018 2003-09-03 GW A3I040194007 µg/L	MW018 2004-03-30 GW A4C310291006 µg/L	MW023 2003-09-09 GW A3I100121001 µg/L
CHLOROBENZILATE		< 10		< 10		< 10	
CHRYSENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIALLATE		< 20		< 20		< 20	< 20
DIBENZ(A,H)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIBENZOFURAN	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIMETHOATE		< 20		< 20		< 20	< 20
DIMETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-BUTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-OCTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIPHENYLAMINE		< 10		< 10		< 10	< 10
DISULFOTON		< 50		< 50		< 50	
ETHYL METHANESULFONATE		< 10		< 10		< 10	< 10
FAMPHUR		< 10		< 10		< 10	
FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
FLUORENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBUTADIENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROCYCLOPENTADIENE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
HEXACHLOROETHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROPROPENE		< 100		< 100		< 100	< 100
INDENO(1,2,3-CD)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOPHORONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOSAFROLE		< 20		< 20		< 20	< 20
METHAPYRILENE		< 50		< 50		< 50	< 50
METHYL METHANESULFONATE		< 10		< 10		< 10	< 10
METHYL PARATHION		< 10		< 10		< 10	
NAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NITROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIETHYLAMINE		< 10		< 10		< 10	< 10
N-NITROSODIMETHYLAMINE		< 10		< 10		< 10	< 10
N-NITROSODI-N-BUTYLAMINE		< 10		< 10		< 10	< 10
N-NITROSODI-N-PROPYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIPHENYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSOMETHYLETHYLAMINE		< 10		< 10		< 10	< 10
N-NITROSOMORPHOLINE		< 10		< 10		< 10	< 10
N-NITROSOPIPERIDINE		< 10		< 10		< 10	< 10
N-NITROSOPYRROLIDINE		< 10		< 10		< 10	< 10
O,O,O-TRIETHYL PHOSPHOROTHIOATE		< 50		< 50		< 50	
O,O-DIETHYL-O-(2-PYRAZINYL) PHOSPHOROTHIOATE		< 50		< 50		< 50	
O-TOLUIDINE		< 20		< 20		< 20	< 20
PARATHION		< 10		< 10		< 10	
P-CHLOROBENZILATE							< 10
P-DIMETHYLAMINOAZOBENZENE		< 20		< 20		< 20	< 20
PENTACHLOROBENZENE		< 10		< 10		< 10	< 10
PENTACHLOROETHANE		< 50		< 50		< 50	< 50
PENTACHLORONITROBENZENE		< 50		< 50		< 50	< 50
PENTACHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENACETIN		< 20		< 20		< 20	< 20
PHENANTHRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHORATE		< 50		< 50		< 50	
P-PHENYLENE DIAMINE		< 100		< 100		< 100	< 100
PRONAMIDE		< 20		< 20		< 20	< 20
PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PYRIDINE		< 20		< 20		< 20	< 20
SAFROLE		< 20		< 20		< 20	< 20
TETRAETHYLDITHIOPYROPHOSPHATE		< 50		< 50		< 50	

Blank Cell=Not Analyzed
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The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW023 2004-03-31 GW A4D010333003 µg/L	MW024 2003-09-03 GW A3I040194002 µg/L	MW024 2003-09-03 QDUPGW A3I040194011 µg/L	MW024 2004-03-29 GW A4C300268002 µg/L	MW026 2003-09-03 GW A3I040194005 µg/L	MW026 2004-03-26 GW A4C270142007 µg/L	MW026 2004-03-26 GWRERAN A4C270142007 µg/L
1,2,4,5-TETRACHLOROBENZENE	< 10			< 10		< 10	< 10
1,2,4-TRICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3,5-TRINITROBENZENE	< 50			< 50		< 50	< 50
1,3-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3-DINITROBENZENE	< 10			< 10		< 10	< 10
1,4-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,4-NAPHTHOQUINONE	< 50			< 50		< 50	< 50
1-NAPHTHYLAMINE	< 10			< 10		< 10	< 10
2,2'-OXYBIS(1-CHLOROPROPANE)		< 10	< 10		< 10		
2,3,4,6-TETRACHLOROPHENOL	< 50			< 50		< 50	< 50
2,4,5-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4,6-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DIMETHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DINITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2,4-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,6-DICHLOROPHENOL	< 10			< 10		< 10	< 10
2,6-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-ACETYLAMINOFLUORENE	< 100			< 100		< 100	< 100
2-CHLORONAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-CHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLNAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-NAPHTHYLAMINE	< 10			< 10		< 10	< 10
2-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-NITROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-PICOLINE	< 20			< 20		< 20	< 20
2-SEC-BUTYL-4,6-DINITROPHENOL	< 20			< 20		< 20	< 20
3,3'-DICHLOROBENZIDINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
3,3'-DIMETHYLBENZIDINE	< 50			< 50		< 50	< 50
3-METHYLCHOLANTHRENE	< 20			< 20		< 20	< 20
3-METHYLPHENOL	< 10			< 10		< 10	< 10
3-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4,6-DINITRO-2-METHYLPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-AMINOBIPHENYL	< 50			< 50		< 50	< 50
4-BROMOPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLORO-3-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROANILINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROQUINOLINE-1-OXIDE	< 100			< 100		< 100	< 100
5-NITRO-O-TOLUIDINE	< 20			< 20		< 20	< 20
7,12-DIMETHYLBENZ(A)ANTHRACENE	< 20			< 20		< 20	< 20
A,A-DIMETHYLPHENETHYLAMINE	< 50			< 50		< 50	< 50
ACENAPHTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACENAPHTHYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETOPHENONE	< 10			< 10		< 10	< 10
ALPHA,ALPHA-DIMETHYLPHENETHYLAMINE							
ANILINE	< 10			< 10		< 10	< 10
ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ARAMITE	< 10			< 10		< 10	< 10
BENZO(A)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(A)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(B)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(GHI)PERYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(K)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZYL ALCOHOL	< 10			< 10		< 10	< 10
BIS(2-CHLORO-1-METHYLETHYL) ETHER	< 10			< 10		< 10	< 10
BIS(2-CHLOROETHOXY)METHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-CHLOROETHYL) ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-ETHYLHEXYL) PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BUTYL BENZYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CARBAZOLE	< 10	< 10	< 10	< 10	< 10	< 10	< 10

Blank Cell=Not Analyzed
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SVOCs = Semi Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW023 2004-03-31 GW A4D010333003 µg/L	MW024 2003-09-03 GW A3I040194002 µg/L	MW024 2003-09-03 QDUPGW A3I040194011 µg/L	MW024 2004-03-29 GW A4C300268002 µg/L	MW026 2003-09-03 GW A3I040194005 µg/L	MW026 2004-03-26 GW A4C270142007 µg/L	MW026 2004-03-26 GWRERAN A4C270142007 µg/L
CHLOROBENZILATE	< 10			< 10		< 10	< 10
CHRYSENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIALLATE	< 20			< 20		< 20	< 20
DIBENZ(A,H)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIBENZOFURAN	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIMETHOATE	< 20			< 20		< 20	< 20
DIMETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-BUTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-OCTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIPHENYLAMINE	< 10			< 10		< 10	< 10
DISULFOTON	< 50			< 50		< 50	< 50
ETHYL METHANESULFONATE	< 10			< 10		< 10	< 10
FAMPHUR	< 10			< 10		< 10	< 10
FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
FLUORENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBUTADIENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROCYCLOPENTADIENE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
HEXACHLOROETHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROPROPENE	< 100			< 100		< 100	< 100
INDENO(1,2,3-CD)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOPHORONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOSAFROLE	< 20			< 20		< 20	< 20
METHAPYRILENE	< 50			< 50		< 50	< 50
METHYL METHANESULFONATE	< 10			< 10		< 10	< 10
METHYL PARATHION	< 10			< 10		< 10	< 10
NAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NITROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIETHYLAMINE	< 10			< 10		< 10	< 10
N-NITROSODIMETHYLAMINE	< 10			< 10		< 10	< 10
N-NITROSODI-N-BUTYLAMINE	< 10			< 10		< 10	< 10
N-NITROSODI-N-PROPYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIPHENYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSOMETHYLETHYLAMINE	< 10			< 10		< 10	< 10
N-NITROSOMORPHOLINE	< 10			< 10		< 10	< 10
N-NITROSOPIPERIDINE	< 10			< 10		< 10	< 10
N-NITROSOPYRROLIDINE	< 10			< 10		< 10	< 10
O,O,O-TRIETHYL PHOSPHOROTHIOATE	< 50			< 50		< 50	< 50
O,O-DIETHYL-O-(2-PYRAZINYL) PHOSPHOROTHIOATE	< 50			< 50		< 50	< 50
O-TOLUIDINE	< 20			< 20		< 20	< 20
PARATHION	< 10			< 10		< 10	< 10
P-CHLOROBENZILATE							
P-DIMETHYLAMINOAZOBENZENE	< 20			< 20		< 20	< 20
PENTACHLOROBENZENE	< 10			< 10		< 10	< 10
PENTACHLOROETHANE	< 50			< 50		< 50	< 50
PENTACHLORONITROBENZENE	< 50			< 50		< 50	< 50
PENTACHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENACETIN	< 20			< 20		< 20	< 20
PHENANTHRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHORATE	< 50			< 50		< 50	< 50
P-PHENYLENE DIAMINE	< 100			< 100		< 100	< 100
PRONAMIDE	< 20			< 20		< 20	< 20
PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PYRIDINE	< 20			< 20		< 20	< 20
SAFROLE	< 20			< 20		< 20	< 20
TETRAETHYLDITHIOPYROPHOSPHATE	< 50			< 50		< 50	< 50

Blank Cell=Not Analyzed
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GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW026A 2003-09-03 GW A3I040194004 µg/L	MW026A 2004-03-26 GW A4C270142006 µg/L	MW026A 2004-03-26 GWRERAN A4C270142006 µg/L	MW027 2003-09-03 GW A3I040194003 µg/L	MW027 2004-03-26 GW A4C270142008 µg/L	MW027 2004-03-26 GWRERAN A4C270142008 µg/L	MW030 2003-09-04 GW A3I050168002 µg/L
1,2,4,5-TETRACHLOROBENZENE		< 10	< 10		< 10	< 10	
1,2,4-TRICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3,5-TRINITROBENZENE		< 50	< 50		< 50	< 50	
1,3-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3-DINITROBENZENE		< 10	< 10		< 10	< 10	
1,4-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,4-NAPHTHOQUINONE		< 50	< 50		< 50	< 50	
1-NAPHTHYLAMINE		< 10	< 10		< 10	< 10	
2,2'-OXYBIS(1-CHLOROPROPANE)	< 10			< 10			< 10
2,3,4,6-TETRACHLOROPHENOL		< 50	< 50		< 50	< 50	
2,4,5-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4,6-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DIMETHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DINITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2,4-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,6-DICHLOROPHENOL		< 10	< 10		< 10	< 10	
2,6-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-ACETYLAMINOFLUORENE		< 100	< 100		< 100	< 100	
2-CHLORONAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-CHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLNAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-NAPHTHYLAMINE		< 10	< 10		< 10	< 10	
2-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-NITROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-PICOLINE		< 20	< 20		< 20	< 20	
2-SEC-BUTYL-4,6-DINITROPHENOL		< 20	< 20		< 20	< 20	
3,3'-DICHLOROBENZIDINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
3,3'-DIMETHYLBENZIDINE		< 50	< 50		< 50	< 50	
3-METHYLCHOLANTHRENE		< 20	< 20		< 20	< 20	
3-METHYLPHENOL		< 10	< 10		< 10	< 10	
3-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4,6-DINITRO-2-METHYLPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-AMINOBIPHENYL		< 50	< 50		< 50	< 50	
4-BROMOPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLORO-3-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROANILINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROQUINOLINE-1-OXIDE		< 100	< 100		< 100	< 100	
5-NITRO-O-TOLUIDINE		< 20	< 20		< 20	< 20	
7,12-DIMETHYLBENZ(A)ANTHRACENE		< 20	< 20		< 20	< 20	
A,A-DIMETHYLPHENETHYLAMINE		< 50	< 50		< 50	< 50	
ACENAPHTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACENAPHTHYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETOPHENONE		< 10	< 10		< 10	< 10	
ALPHA,ALPHA-DIMETHYLPHENETHYLAMINE							
ANILINE		< 10	< 10		< 10	< 10	
ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ARAMITE		< 10	< 10		< 10	< 10	
BENZO(A)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(A)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(B)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(GHI)PERYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(K)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZYL ALCOHOL		< 10	< 10		< 10	< 10	
BIS(2-CHLORO-1-METHYLETHYL) ETHER		< 10	< 10		< 10	< 10	
BIS(2-CHLOROETHOXY)METHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-CHLOROETHYL) ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-ETHYLHEXYL) PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BUTYL BENZYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CARBAZOLE	< 10	< 10	< 10	< 10	< 10	< 10	< 10

Blank Cell=Not Analyzed
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The Payne Firm, Inc.

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Norwood Facility
Cincinnati, Ohio
Project No. 0100-58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW026A 2003-09-03 GW A3I040194004 µg/L	MW026A 2004-03-26 GW A4C270142006 µg/L	MW026A 2004-03-26 GWRERAN A4C270142006 µg/L	MW027 2003-09-03 GW A3I040194003 µg/L	MW027 2004-03-26 GW A4C270142008 µg/L	MW027 2004-03-26 GWRERAN A4C270142008 µg/L	MW030 2003-09-04 GW A3I050168002 µg/L
CHLOROBENZILATE		< 10	< 10		< 10	< 10	
CHRYSENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIALLATE		< 20	< 20		< 20	< 20	
DIBENZ(A,H)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIBENZOFURAN	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIMETHOATE		< 20	< 20		< 20	< 20	
DIMETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-BUTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-OCTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIPHENYLAMINE		< 10	< 10		< 10	< 10	
DISULFOTON		< 50	< 50		< 50	< 50	
ETHYL METHANESULFONATE		< 10	< 10		< 10	< 10	
FAMPHUR		< 10	< 10		< 10	< 10	
FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
FLUORENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBUTADIENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROCYCLOPENTADIENE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
HEXACHLOROETHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROPROPENE		< 100	< 100		< 100	< 100	
INDENO(1,2,3-CD)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOPHORONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOSAFROLE		< 20	< 20		< 20	< 20	
METHAPYRILENE		< 50	< 50		< 50	< 50	
METHYL METHANESULFONATE		< 10	< 10		< 10	< 10	
METHYL PARATHION		< 10	< 10		< 10	< 10	
NAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NITROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIETHYLAMINE		< 10	< 10		< 10	< 10	
N-NITROSODIMETHYLAMINE		< 10	< 10		< 10	< 10	
N-NITROSODI-N-BUTYLAMINE		< 10	< 10		< 10	< 10	
N-NITROSODI-N-PROPYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIPHENYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSOMETHYLETHYLAMINE		< 10	< 10		< 10	< 10	
N-NITROSOMORPHOLINE		< 10	< 10		< 10	< 10	
N-NITROSOPIPERIDINE		< 10	< 10		< 10	< 10	
N-NITROSOPYRROLIDINE		< 10	< 10		< 10	< 10	
O,O,O-TRIETHYL PHOSPHOROTHIOATE		< 50	< 50		< 50	< 50	
O,O-DIETHYL-O-(2-PYRAZINYL) PHOSPHOROTHIOATE		< 50	< 50		< 50	< 50	
O-TOLUIDINE		< 20	< 20		< 20	< 20	
PARATHION		< 10	< 10		< 10	< 10	
P-CHLOROBENZILATE							
P-DIMETHYLAMINOAZOBENZENE		< 20	< 20		< 20	< 20	
PENTACHLOROBENZENE		< 10	< 10		< 10	< 10	
PENTACHLOROETHANE		< 50	< 50		< 50	< 50	
PENTACHLORONITROBENZENE		< 50	< 50		< 50	< 50	
PENTACHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENACETIN		< 20	< 20		< 20	< 20	
PHENANTHRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHORATE		< 50	< 50		< 50	< 50	
P-PHENYLENE DIAMINE		< 100	< 100		< 100	< 100	
PRONAMIDE		< 20	< 20		< 20	< 20	
PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PYRIDINE		< 20	< 20		< 20	< 20	
SAFROLE		< 20	< 20		< 20	< 20	
TETRAETHYLDITHIOPYROPHOSPHATE		< 50	< 50		< 50	< 50	

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µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW030 2004-03-29 GW A4C300268005 µg/L	MW031A 2003-09-05 GW A3I060169003 µg/L	MW031A 2004-03-29 GW A4C300268004 µg/L	MW031C 2003-09-05 GW A3I060169002 µg/L	MW031C 2004-03-29 GW A4C300268007 µg/L	MW031D 2003-09-05 GW A3I060169004 µg/L	MW031D 2003-09-05 QDUPGW A3I060169010 µg/L
1,2,4,5-TETRACHLOROBENZENE	< 10		< 10		< 10		
1,2,4-TRICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3,5-TRINITROBENZENE	< 50		< 50		< 50		
1,3-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3-DINITROBENZENE	< 10		< 10		< 10		
1,4-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,4-NAPHTHOQUINONE	< 50		< 50		< 50		
1-NAPHTHYLAMINE	< 10		< 10		< 10		
2,2'-OXYBIS(1-CHLOROPROPANE)		< 10		< 10		< 10	< 10
2,3,4,6-TETRACHLOROPHENOL	< 50		< 50		< 50		
2,4,5-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4,6-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DIMETHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DINITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2,4-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,6-DICHLOROPHENOL	< 10		< 10		< 10		
2,6-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-ACETYLAMINOFLUORENE	< 100		< 100		< 100		
2-CHLORONAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-CHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLNAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-NAPHTHYLAMINE	< 10		< 10		< 10		
2-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-NITROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-PICOLINE	< 20		< 20		< 20		
2-SEC-BUTYL-4,6-DINITROPHENOL	< 20		< 20		< 20		
3,3'-DICHLOROBENZIDINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
3,3'-DIMETHYLBENZIDINE	< 50		< 50		< 50		
3-METHYLCHOLANTHRENE	< 20		< 20		< 20		
3-METHYLPHENOL	< 10		< 10		< 10		
3-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4,6-DINITRO-2-METHYLPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-AMINOBIPHENYL	< 50		< 50		< 50		
4-BROMOPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLORO-3-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROANILINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROQUINOLINE-1-OXIDE	< 100		< 100		< 100		
5-NITRO-O-TOLUIDINE	< 20		< 20		< 20		
7,12-DIMETHYLBENZ(A)ANTHRACENE	< 20		< 20		< 20		
A,A-DIMETHYLPHENETHYLAMINE	< 50		< 50		< 50		
ACENAPHTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACENAPHTHYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETOPHENONE	< 10		< 10		< 10		
ALPHA,ALPHA-DIMETHYLPHENETHYLAMINE							
ANILINE	< 10		< 10		< 10		
ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ARAMITE	< 10		< 10		< 10		
BENZO(A)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(A)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(B)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(GHI)PERYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(K)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZYL ALCOHOL	< 10		< 10		< 10		
BIS(2-CHLORO-1-METHYLETHYL) ETHER	< 10		< 10		< 10		
BIS(2-CHLOROETHOXY)METHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-CHLOROETHYL) ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-ETHYLHEXYL) PHTHALATE	< 10	29	< 10	11	< 10	< 10	< 10
BUTYL BENZYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CARBAZOLE	< 10	< 10	< 10	< 10	< 10	< 10	< 10

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
SVOCs = Semi Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW030 2004-03-29 GW A4C300268005 µg/L	MW031A 2003-09-05 GW A3I060169003 µg/L	MW031A 2004-03-29 GW A4C300268004 µg/L	MW031C 2003-09-05 GW A3I060169002 µg/L	MW031C 2004-03-29 GW A4C300268007 µg/L	MW031D 2003-09-05 GW A3I060169004 µg/L	MW031D 2003-09-05 QDUPGW A3I060169010 µg/L
CHLOROBENZILATE	< 10		< 10		< 10		
CHRYSENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIALLATE	< 20		< 20		< 20		
DIBENZ(A,H)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIBENZOFURAN	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIMETHOATE	< 20		< 20		< 20		
DIMETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-BUTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-OCTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIPHENYLAMINE	< 10		< 10		< 10		
DISULFOTON	< 50		< 50		< 50		
ETHYL METHANESULFONATE	< 10		< 10		< 10		
FAMPHUR	< 10		< 10		< 10		
FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
FLUORENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBUTADIENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROCYCLOPENTADIENE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
HEXACHLOROETHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROPROPENE	< 100		< 100		< 100		
INDENO(1,2,3-CD)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOPHORONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOSAFROLE	< 20		< 20		< 20		
METHAPYRILENE	< 50		< 50		< 50		
METHYL METHANESULFONATE	< 10		< 10		< 10		
METHYL PARATHION	< 10		< 10		< 10		
NAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NITROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIETHYLAMINE	< 10		< 10		< 10		
N-NITROSODIMETHYLAMINE	< 10		< 10		< 10		
N-NITROSODI-N-BUTYLAMINE	< 10		< 10		< 10		
N-NITROSODI-N-PROPYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIPHENYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSOMETHYLETHYLAMINE	< 10		< 10		< 10		
N-NITROSOMORPHOLINE	< 10		< 10		< 10		
N-NITROSOPIPERIDINE	< 10		< 10		< 10		
N-NITROSOPYRROLIDINE	< 10		< 10		< 10		
O,O,O-TRIETHYL PHOSPHOROTHIOATE	< 50		< 50		< 50		
O,O-DIETHYL-0-(2-PYRAZINYL) PHOSPHOROTHIOATE	< 50		< 50		< 50		
O-TOLUIDINE	< 20		< 20		< 20		
PARATHION	< 10		< 10		< 10		
P-CHLOROBENZILATE							
P-DIMETHYLAMINOAZOBENZENE	< 20		< 20		< 20		
PENTACHLOROBENZENE	< 10		< 10		< 10		
PENTACHLOROETHANE	< 50		< 50		< 50		
PENTACHLORONITROBENZENE	< 50		< 50		< 50		
PENTACHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENACETIN	< 20		< 20		< 20		
PHENANTHRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHORATE	< 50		< 50		< 50		
P-PHENYLENE DIAMINE	< 100		< 100		< 100		
PRONAMIDE	< 20		< 20		< 20		
PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PYRIDINE	< 20		< 20		< 20		
SAFROLE	< 20		< 20		< 20		
TETRAETHYLDITHIOPYROPHOSPHATE	< 50		< 50		< 50		

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Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW031D 2004-03-29 GW A4C300268003 µg/L	MW042 2003-09-04 GW A3I050168003 µg/L	MW042 2004-03-23 GW A4C240239003 µg/L	MW043A 2003-09-02 GW A3I030288002 µg/L	MW043A 2004-03-30 GW A4C310291005 µg/L	MW043A 2004-03-30 GWRERAN A4C310291005 µg/L	MW044 2004-03-29 GW A4C300268001 µg/L
1,2,4,5-TETRACHLOROBENZENE	< 10		< 10		< 10	< 10	< 10
1,2,4-TRICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3,5-TRINITROBENZENE	< 50		< 50		< 50	< 50	< 50
1,3-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3-DINITROBENZENE	< 10		< 10		< 10	< 10	< 10
1,4-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,4-NAPHTHOQUINONE	< 50		< 50		< 50	< 50	< 50
1-NAPHTHYLAMINE	< 10		< 10		< 10	< 10	< 10
2,2'-OXYBIS(1-CHLOROPROPANE)		< 10		< 10			
2,3,4,6-TETRACHLOROPHENOL	< 50		< 50		< 50	< 50	< 50
2,4,5-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4,6-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DIMETHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DINITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2,4-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,6-DICHLOROPHENOL	< 10		< 10		< 10	< 10	< 10
2,6-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-ACETYLAMINOFLUORENE	< 100		< 100		< 100	< 100	< 100
2-CHLORONAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-CHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLNAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-NAPHTHYLAMINE	< 10		< 10		< 10	< 10	< 10
2-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-NITROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-PICOLINE	< 20		< 20		< 20	< 20	< 20
2-SEC-BUTYL-4,6-DINITROPHENOL	< 20		< 20		< 20	< 20	< 20
3,3'-DICHLOROBENZIDINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
3,3'-DIMETHYLBENZIDINE	< 50		< 50		< 50	< 50	< 50
3-METHYLCHOLANTHRENE	< 20		< 20		< 20	< 20	< 20
3-METHYLPHENOL	< 10		< 10		< 10	< 10	< 10
3-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4,6-DINITRO-2-METHYLPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-AMINOBIPHENYL	< 50		< 50		< 50	< 50	< 50
4-BROMOPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLORO-3-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROANILINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROQUINOLINE-1-OXIDE	< 100		< 100		< 100	< 100	< 100
5-NITRO-O-TOLUIDINE	< 20		< 20		< 20	< 20	< 20
7,12-DIMETHYLBENZ(A)ANTHRACENE	< 20		< 20		< 20	< 20	< 20
A,A-DIMETHYLPHENETHYLAMINE	< 50		< 50		< 50	< 50	< 50
ACENAPHTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACENAPHTHYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETOPHENONE	< 10		< 10		< 10	< 10	< 10
ALPHA,ALPHA-DIMETHYLPHENETHYLAMINE							
ANILINE	< 10		< 10		< 10	< 10	< 10
ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ARAMITE	< 10		< 10		< 10	< 10	< 10
BENZO(A)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(A)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(B)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(GHI)PERYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(K)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZYL ALCOHOL	< 10		< 10		< 10	< 10	< 10
BIS(2-CHLORO-1-METHYLETHYL) ETHER	< 10		< 10		< 10	< 10	< 10
BIS(2-CHLOROETHOXY)METHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-CHLOROETHYL) ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-ETHYLHEXYL) PHTHALATE	< 10	< 10	18	< 10	< 10	< 10	< 10
BUTYL BENZYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CARBAZOLE	< 10	< 10	< 10	< 10	< 10	< 10	< 10

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TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW031D 2004-03-29 GW A4C300268003 µg/L	MW042 2003-09-04 GW A3I050168003 µg/L	MW042 2004-03-23 GW A4C240239003 µg/L	MW043A 2003-09-02 GW A3I030288002 µg/L	MW043A 2004-03-30 GW A4C310291005 µg/L	MW043A 2004-03-30 GWRERAN A4C310291005 µg/L	MW044 2004-03-29 GW A4C300268001 µg/L
CHLOROBENZILATE	< 10		< 10		< 10	< 10	< 10
CHRYSENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIALLATE	< 20		< 20		< 20	< 20	< 20
DIBENZ(A,H)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIBENZOFURAN	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIMETHOATE	< 20		< 20		< 20	< 20	< 20
DIMETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-BUTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-OCTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIPHENYLAMINE	< 10		< 10		< 10	< 10	< 10
DISULFOTON	< 50		< 50		< 50	< 50	< 50
ETHYL METHANESULFONATE	< 10		< 10		< 10	< 10	< 10
FAMPHUR	< 10		< 10		< 10	< 10	< 10
FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
FLUORENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBUTADIENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROCYCLOPENTADIENE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
HEXACHLOROETHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROPROPENE	< 100		< 100		< 100	< 100	< 100
INDENO(1,2,3-CD)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOPHORONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOSAFROLE	< 20		< 20		< 20	< 20	< 20
METHAPYRILENE	< 50		< 50		< 50	< 50	< 50
METHYL METHANESULFONATE	< 10		< 10		< 10	< 10	< 10
METHYL PARATHION	< 10		< 10		< 10	< 10	< 10
NAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NITROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIETHYLAMINE	< 10		< 10		< 10	< 10	< 10
N-NITROSODIMETHYLAMINE	< 10		< 10		< 10	< 10	< 10
N-NITROSODI-N-BUTYLAMINE	< 10		< 10		< 10	< 10	< 10
N-NITROSODI-N-PROPYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIPHENYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSOMETHYLETHYLAMINE	< 10		< 10		< 10	< 10	< 10
N-NITROSOMORPHOLINE	< 10		< 10		< 10	< 10	< 10
N-NITROSOPIPERIDINE	< 10		< 10		< 10	< 10	< 10
N-NITROSOPYRROLIDINE	< 10		< 10		< 10	< 10	< 10
O,O,O-TRIETHYL PHOSPHOROTHIOATE	< 50		< 50		< 50	< 50	< 50
O,O-DIETHYL-O-(2-PYRAZINYL) PHOSPHOROTHIOATE	< 50		< 50		< 50	< 50	< 50
O-TOLUIDINE	< 20		< 20		< 20	< 20	< 20
PARATHION	< 10		< 10		< 10	< 10	< 10
P-CHLOROBENZILATE							
P-DIMETHYLAMINOAZOBENZENE	< 20		< 20		< 20	< 20	< 20
PENTACHLOROBENZENE	< 10		< 10		< 10	< 10	< 10
PENTACHLOROETHANE	< 50		< 50		< 50	< 50	< 50
PENTACHLORONITROBENZENE	< 50		< 50		< 50	< 50	< 50
PENTACHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENACETIN	< 20		< 20		< 20	< 20	< 20
PHENANTHRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHORATE	< 50		< 50		< 50	< 50	< 50
P-PHENYLENE DIAMINE	< 100		< 100		< 100	< 100	< 100
PRONAMIDE	< 20		< 20		< 20	< 20	< 20
PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PYRIDINE	< 20		< 20		< 20	< 20	< 20
SAFROLE	< 20		< 20		< 20	< 20	< 20
TETRAETHYLDITHIOPYROPHOSPHATE	< 50		< 50		< 50	< 50	< 50

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
SVOCs = Semi Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW044 2004-03-29 GWRERAN A4C300268001 µg/L	MW044 2004-03-29 QDUPGW A4C300268009 µg/L	MW504 2003-09-08 GW A3I100121002 µg/L	MW504 2004-03-30 GW A4C310291003 µg/L	MW504 2004-03-30 GWRERAN A4C310291003 µg/L	MW505A 2003-09-05 GW A3I060169007 µg/L	MW505A 2004-03-24 GW A4C250250003 µg/L
1,2,4,5-TETRACHLOROBENZENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
1,2,4-TRICHLOROBENZENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
1,2-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
1,3,5-TRINITROBENZENE	< 50	< 50	< 50	< 50	< 91	< 50	< 50
1,3-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
1,3-DINITROBENZENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
1,4-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
1,4-NAPHTHOQUINONE	< 50	< 50	< 50	< 50	< 91	< 50	< 50
1-NAPHTHYLAMINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2,2'-OXYBIS(1-CHLOROPROPANE)			< 10			< 10	
2,3,4,6-TETRACHLOROPHENOL	< 50	< 50	< 50	< 50	< 91	< 50	< 50
2,4,5-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2,4,6-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2,4-DICHLOROPHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2,4-DIMETHYLPHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2,4-DINITROPHENOL	< 50	< 50	< 50	< 50	< 91	< 50	< 50
2,4-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2,6-DICHLOROPHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2,6-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2-ACETYLAMINOFLUORENE	< 100	< 100	< 100	< 100	< 180	< 100	< 100
2-CHLORONAPHTHALENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2-CHLOROPHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2-METHYLNAPHTHALENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2-METHYLPHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2-NAPHTHYLAMINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2-NITROANILINE	< 50	< 50	< 50	< 50	< 91	< 50	< 50
2-NITROPHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
2-PICOLINE	< 20	< 20	< 20	< 20	< 36	< 20	< 20
2-SEC-BUTYL-4,6-DINITROPHENOL	< 20	< 20		< 20	< 36		< 20
3,3'-DICHLOROBENZIDINE	< 50	< 50	< 50	< 50	< 91	< 50	< 50
3,3'-DIMETHYLBENZIDINE	< 50	< 50	< 50	< 50	< 91	< 50	< 50
3-METHYLCHOLANTHRENE	< 20	< 20	< 20	< 20	< 36	< 20	< 20
3-METHYLPHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
3-NITROANILINE	< 50	< 50	< 50	< 50	< 91	< 50	< 50
4,6-DINITRO-2-METHYLPHENOL	< 50	< 50	< 50	< 50	< 91	< 50	< 50
4-AMINOBIPHENYL	< 50	< 50	< 50	< 50	< 91	< 50	< 50
4-BROMOPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 18	< 10	< 10
4-CHLORO-3-METHYLPHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
4-CHLOROANILINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
4-CHLOROPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 18	< 10	< 10
4-METHYLPHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
4-NITROANILINE	< 50	< 50	< 50	< 50	< 91	< 50	< 50
4-NITROPHENOL	< 50	< 50	< 50	< 50	< 91	< 50	< 50
4-NITROQUINOLINE-1-OXIDE	< 100	< 100	< 100	< 100	< 180	< 100	< 100
5-NITRO-O-TOLUIDINE	< 20	< 20	< 20	< 20	< 36	< 20	< 20
7,12-DIMETHYLBENZ(A)ANTHRACENE	< 20	< 20	< 20	< 20	< 36	< 20	< 20
A,A-DIMETHYLPHENETHYLAMINE	< 50	< 50		< 50	< 91		< 50
ACENAPHTHENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
ACENAPHTHYLENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
ACETOPHENONE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
ALPHA,ALPHA-DIMETHYLPHENETHYLAMINE			< 50			< 50	
ANILINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
ANTHRACENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
ARAMITE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
BENZO(A)ANTHRACENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
BENZO(A)PYRENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
BENZO(B)FLUORANTHENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
BENZO(GHI)PERYLENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
BENZO(K)FLUORANTHENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
BENZYL ALCOHOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
BIS(2-CHLORO-1-METHYLETHYL) ETHER	< 10	< 10		< 10	< 18		< 10
BIS(2-CHLOROETHOXY)METHANE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
BIS(2-CHLOROETHYL) ETHER	< 10	< 10	< 10	< 10	< 18	< 10	< 10
BIS(2-ETHYLHEXYL) PHTHALATE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
BUTYL BENZYL PHTHALATE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
CARBAZOLE	< 10	< 10	< 10	< 10	< 18	< 10	< 10

Blank Cell=Not Analyzed
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GW = Ground Water
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EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
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TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW044 2004-03-29 GWRERAN A4C300268001 µg/L	MW044 2004-03-29 QDUPGW A4C300268009 µg/L	MW504 2003-09-08 GW A3I100121002 µg/L	MW504 2004-03-30 GW A4C310291003 µg/L	MW504 2004-03-30 GWRERAN A4C310291003 µg/L	MW505A 2003-09-05 GW A3I060169007 µg/L	MW505A 2004-03-24 GW A4C250250003 µg/L
CHLOROBENZILATE	< 10	< 10		< 10	< 18		< 10
CHRYSENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
DIALLATE	< 20	< 20	< 20	< 20	< 36	< 20	< 20
DIBENZ(A,H)ANTHRACENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
DIBENZOFURAN	< 10	< 10	< 10	< 10	< 18	< 10	< 10
DIETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
DIMETHOATE	< 20	< 20	< 20	< 20	< 36	< 20	< 20
DIMETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
DI-N-BUTYL PHTHALATE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
DI-N-OCTYL PHTHALATE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
DIPHENYLAMINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
DISULFOTON	< 50	< 50		< 50	< 91		< 50
ETHYL METHANESULFONATE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
FAMPHUR	< 10	< 10		< 10	< 18		< 10
FLUORANTHENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
FLUORENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
HEXACHLOROBENZENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
HEXACHLOROBUTADIENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
HEXACHLOROCYCLOPENTADIENE	< 50	< 50	< 50	< 50	< 91	< 50	< 50
HEXACHLOROETHANE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
HEXACHLOROPROPENE	< 100	< 100	< 100	< 100	< 180	< 100	< 100
INDENO(1,2,3-CD)PYRENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
ISOPHORONE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
ISOSAFROLE	< 20	< 20	< 20	< 20	< 36	< 20	< 20
METHAPYRILENE	< 50	< 50	< 50	< 50	< 91	< 50	< 50
METHYL METHANESULFONATE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
METHYL PARATHION	< 10	< 10		< 10	< 18		< 10
NAPHTHALENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
NITROBENZENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
N-NITROSODIETHYLAMINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
N-NITROSODIMETHYLAMINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
N-NITROSODI-N-BUTYLAMINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
N-NITROSODI-N-PROPYLAMINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
N-NITROSODIPHENYLAMINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
N-NITROSOMETHYLETHYLAMINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
N-NITROSOMORPHOLINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
N-NITROSOPIPERIDINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
N-NITROSOPYRROLIDINE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
O,O,O-TRIETHYL PHOSPHOROTHIOATE	< 50	< 50		< 50	< 91		< 50
O,O-DIETHYL-O-(2-PYRAZINYL) PHOSPHOROTHIOATE	< 50	< 50		< 50	< 91		< 50
O-TOLUIDINE	< 20	< 20	< 20	< 20	< 36	< 20	< 20
PARATHION	< 10	< 10		< 10	< 18		< 10
P-CHLOROBENZILATE			< 10			< 10	
P-DIMETHYLAMINOAZOBENZENE	< 20	< 20	< 20	< 20	< 36	< 20	< 20
PENTACHLOROBENZENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
PENTACHLOROETHANE	< 50	< 50	< 50	< 50	< 91	< 50	< 50
PENTACHLORONITROBENZENE	< 50	< 50	< 50	< 50	< 91	< 50	< 50
PENTACHLOROPHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
PHENACETIN	< 20	< 20	< 20	< 20	< 36	< 20	< 20
PHENANTHRENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
PHENOL	< 10	< 10	< 10	< 10	< 18	< 10	< 10
PHORATE	< 50	< 50		< 50	< 91		< 50
P-PHENYLENE DIAMINE	< 100	< 100	< 100	< 100	< 180	< 100	< 100
PRONAMIDE	< 20	< 20	< 20	< 20	< 36	< 20	< 20
PYRENE	< 10	< 10	< 10	< 10	< 18	< 10	< 10
PYRIDINE	< 20	< 20	< 20	< 20	< 36	< 20	< 20
SAFROLE	< 20	< 20	< 20	< 20	< 36	< 20	< 20
TETRAETHYLDITHIOPYROPHOSPHATE	< 50	< 50		< 50	< 91		< 50

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Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW505B 2003-09-05 GW A3I060169008 µg/L	MW505B 2004-03-24 GW A4C250250004 µg/L	MW506 2003-09-04 GW A3I050168005 µg/L	MW506 2004-03-25 GW A4C270142003 µg/L	MW506 2004-03-25 GWRERAN A4C270142003 µg/L	MW507 2003-09-05 GWRERAN A3I060169006 µg/L	MW507 2004-03-24 GW A4C250250005 µg/L
1,2,4,5-TETRACHLOROBENZENE	< 10	< 10		< 10	< 10	< 10	< 40
1,2,4-TRICHLOROBENZENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
1,2-DICHLOROBENZENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
1,3,5-TRINITROBENZENE	< 50	< 50		< 50	< 50	< 50	< 200
1,3-DICHLOROBENZENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
1,3-DINITROBENZENE	< 10	< 10		< 10	< 10	< 10	< 40
1,4-DICHLOROBENZENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
1,4-NAPHTHOQUINONE	< 50	< 50		< 50	< 50	< 50	< 200
1-NAPHTHYLAMINE	< 10	< 10		< 10	< 10	< 10	< 40
2,2'-OXYBIS(1-CHLOROPROPANE)	< 10		< 25			< 10	
2,3,4,6-TETRACHLOROPHENOL	< 50	< 50		< 50	< 50	< 50	< 200
2,4,5-TRICHLOROPHENOL	< 10	< 10	< 25	< 10	< 10	< 10	< 40
2,4,6-TRICHLOROPHENOL	< 10	< 10	< 25	< 10	< 10	< 10	< 40
2,4-DICHLOROPHENOL	< 10	< 10	< 25	< 10	< 10	< 10	< 40
2,4-DIMETHYLPHENOL	< 10	< 10	< 25	< 10	< 10	< 10	< 40
2,4-DINITROPHENOL	< 50	< 50	< 120	< 50	< 50	< 50	< 200
2,4-DINITROTOLUENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
2,6-DICHLOROPHENOL	< 10	< 10		< 10	< 10	< 10	< 40
2,6-DINITROTOLUENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
2-ACETYLAMINOFLUORENE	< 100	< 100		< 100	< 100	< 100	< 400
2-CHLORONAPHTHALENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
2-CHLOROPHENOL	< 10	< 10	< 25	< 10	< 10	< 10	< 40
2-METHYLNAPHTHALENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
2-METHYLPHENOL	< 10	< 10	< 25	< 10	< 10	< 10	< 40
2-NAPHTHYLAMINE	< 10	< 10		< 10	< 10	< 10	< 40
2-NITROANILINE	< 50	< 50	< 120	< 50	< 50	< 50	< 200
2-NITROPHENOL	< 10	< 10	< 25	< 10	< 10	< 10	< 40
2-PICOLINE	< 20	< 20		< 20	< 20	< 20	< 80
2-SEC-BUTYL-4,6-DINITROPHENOL		< 20		< 20	< 20		< 80
3,3'-DICHLOROBENZIDINE	< 50	< 50	< 120	< 50	< 50	< 50	< 200
3,3'-DIMETHYLBENZIDINE	< 50	< 50		< 50	< 50	< 50	< 200
3-METHYLCHOLANTHRENE	< 20	< 20		< 20	< 20	< 20	< 80
3-METHYLPHENOL	< 10	< 10		< 10	< 10	< 10	< 40
3-NITROANILINE	< 50	< 50	< 120	< 50	< 50	< 50	< 200
4,6-DINITRO-2-METHYLPHENOL	< 50	< 50	< 120	< 50	< 50	< 50	< 200
4-AMINOBIPHENYL	< 50	< 50		< 50	< 50	< 50	< 200
4-BROMOPHENYL PHENYL ETHER	< 10	< 10	< 25	< 10	< 10	< 10	< 40
4-CHLORO-3-METHYLPHENOL	< 10	< 10	< 25	< 10	< 10	< 10	< 40
4-CHLOROANILINE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
4-CHLOROPHENYL PHENYL ETHER	< 10	< 10	< 25	< 10	< 10	< 10	< 40
4-METHYLPHENOL	< 10	< 10	< 25	< 10	< 10	< 10	< 40
4-NITROANILINE	< 50	< 50	< 120	< 50	< 50	< 50	< 200
4-NITROPHENOL	< 50	< 50	< 120	< 50	< 50	< 50	< 200
4-NITROQUINOLINE-1-OXIDE	< 100	< 100		< 100	< 100	< 100	< 400
5-NITRO-O-TOLUIDINE	< 20	< 20		< 20	< 20	< 20	< 80
7,12-DIMETHYLBENZ(A)ANTHRACENE	< 20	< 20		< 20	< 20	< 20	< 80
A,A-DIMETHYLPHENETHYLAMINE		< 50		< 50	< 50		< 200
ACENAPHTHENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
ACENAPHTHYLENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
ACETOPHENONE	< 10	< 10		< 10	< 10	< 10	< 40
ALPHA,ALPHA-DIMETHYLPHENETHYLAMINE	< 50					< 50	
ANILINE	< 10	< 10		< 10	< 10	< 10	< 40
ANTHRACENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
ARAMITE	< 10	< 10		< 10	< 10	< 10	< 40
BENZO(A)ANTHRACENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
BENZO(A)PYRENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
BENZO(B)FLUORANTHENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
BENZO(GHI)PERYLENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
BENZO(K)FLUORANTHENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
BENZYL ALCOHOL	< 10	< 10		< 10	< 10	< 10	< 40
BIS(2-CHLORO-1-METHYLETHYL) ETHER		< 10		< 10	< 10		< 40
BIS(2-CHLOROETHOXY)METHANE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
BIS(2-CHLOROETHYL) ETHER	< 10	< 10	< 25	< 10	< 10	< 10	< 40
BIS(2-ETHYLHEXYL) PHTHALATE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
BUTYL BENZYL PHTHALATE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
CARBAZOLE	< 10	< 10	< 25	< 10	< 10	< 10	< 40

Blank Cell=Not Analyzed
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TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW505B 2003-09-05 GW A3I060169008 µg/L	MW505B 2004-03-24 GW A4C250250004 µg/L	MW506 2003-09-04 GW A3I050168005 µg/L	MW506 2004-03-25 GW A4C270142003 µg/L	MW506 2004-03-25 GWRERAN A4C270142003 µg/L	MW507 2003-09-05 GWRERAN A3I060169006 µg/L	MW507 2004-03-24 GW A4C250250005 µg/L
CHLOROBENZILATE		< 10		< 10	< 10		< 40
CHRYSENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
DIALLATE	< 20	< 20		< 20	< 20	< 20	< 80
DIBENZ(A,H)ANTHRACENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
DIBENZOFURAN	< 10	< 10	< 25	< 10	< 10	< 10	< 40
DIETHYL PHTHALATE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
DIMETHOATE	< 20	< 20		< 20	< 20	< 20	< 80
DIMETHYL PHTHALATE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
DI-N-BUTYL PHTHALATE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
DI-N-OCTYL PHTHALATE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
DIPHENYLAMINE	< 10	< 10		< 10	< 10	< 10	< 40
DISULFOTON		< 50		< 50	< 50		< 200
ETHYL METHANESULFONATE	< 10	< 10		< 10	< 10	< 10	< 40
FAMPHUR		< 10		< 10	< 10		< 40
FLUORANTHENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
FLUORENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
HEXACHLOROBENZENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
HEXACHLOROBUTADIENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
HEXACHLOROCYCLOPENTADIENE	< 50	< 50	< 120	< 50	< 50	< 50	< 200
HEXACHLOROETHANE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
HEXACHLOROPROPENE	< 100	< 100		< 100	< 100	< 100	< 400
INDENO(1,2,3-CD)PYRENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
ISOPHORONE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
ISOSAFROLE	< 20	< 20		< 20	< 20	< 20	< 80
METHAPYRILENE	< 50	< 50		< 50	< 50	< 50	< 200
METHYL METHANESULFONATE	< 10	< 10		< 10	< 10	< 10	< 40
METHYL PARATHION		< 10		< 10	< 10		< 40
NAPHTHALENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
NITROBENZENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
N-NITROSODIETHYLAMINE	< 10	< 10		< 10	< 10	< 10	< 40
N-NITROSODIMETHYLAMINE	< 10	< 10		< 10	< 10	< 10	< 40
N-NITROSODI-N-BUTYLAMINE	< 10	< 10		< 10	< 10	< 10	< 40
N-NITROSODI-N-PROPYLAMINE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
N-NITROSODIPHENYLAMINE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
N-NITROSOMETHYLETHYLAMINE	< 10	< 10		< 10	< 10	< 10	< 40
N-NITROSOMORPHOLINE	< 10	< 10		< 10	< 10	< 10	< 40
N-NITROSOPIPERIDINE	< 10	< 10		< 10	< 10	< 10	< 40
N-NITROSOPYRROLIDINE	< 10	< 10		< 10	< 10	< 10	< 40
O,O,O-TRIETHYL PHOSPHOROTHIOATE		< 50		< 50	< 50		< 200
O,O-DIETHYL-O-(2-PYRAZINYL) PHOSPHOROTHIOATE		< 50		< 50	< 50		< 200
O-TOLUIDINE	< 20	< 20		< 20	< 20	< 20	< 80
PARATHION		< 10		< 10	< 10		< 40
P-CHLOROBENZILATE	< 10					< 10	
P-DIMETHYLAMINOAZOBENZENE	< 20	< 20		< 20	< 20	< 20	< 80
PENTACHLOROBENZENE	< 10	< 10		< 10	< 10	< 10	< 40
PENTACHLOROETHANE	< 50	< 50		< 50	< 50	< 50	< 200
PENTACHLORONITROBENZENE	< 50	< 50		< 50	< 50	< 50	< 200
PENTACHLOROPHENOL	< 10	< 10	< 25	< 10	< 10	< 10	< 40
PHENACETIN	< 20	< 20		< 20	< 20	< 20	< 80
PHENANTHRENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
PHENOL	< 10	< 10	< 25	< 10	< 10	< 10	< 40
PHORATE		< 50		< 50	< 50		< 200
P-PHENYLENE DIAMINE	< 100	< 100		< 100	< 100	< 100	< 400
PRONAMIDE	< 20	< 20		< 20	< 20	< 20	< 80
PYRENE	< 10	< 10	< 25	< 10	< 10	< 10	< 40
PYRIDINE	< 20	< 20		< 20	< 20	< 20	< 80
SAFROLE	< 20	< 20		< 20	< 20	< 20	< 80
TETRAETHYLDITHIOPYROPHOSPHATE		< 50		< 50	< 50		< 200

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µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW508 2003-09-05 GW A3I060169005 µg/L	MW508 2004-03-24 GW A4C250250006 µg/L	P001 2003-09-02 GW A3I030288004 µg/L	P001 2004-03-30 GW A4C310291007 µg/L	P001 2004-03-30 GWRERAN A4C310291007 µg/L	P006 2003-09-02 GW A3I030288001 µg/L	P006 2004-04-01 GW A4D020251002 µg/L	P006 2004-04-01 QDUPGW A4D020251004 µg/L
1,2,4,5-TETRACHLOROBENZENE	< 10	< 10		< 10	< 10		< 10	< 10
1,2,4-TRICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3,5-TRINITROBENZENE	< 50	< 50		< 50	< 50		< 50	< 50
1,3-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,3-DINITROBENZENE	< 10	< 10		< 10	< 10		< 10	< 10
1,4-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,4-NAPHTHOQUINONE	< 50	< 50		< 50	< 50		< 50	< 50
1-NAPHTHYLAMINE	< 10	< 10		< 10	< 10		< 10	< 10
2,2'-OXYBIS(1-CHLOROPROPANE)	< 10		< 10			< 10		
2,3,4,6-TETRACHLOROPHENOL	< 50	< 50		< 50	< 50		< 50	< 50
2,4,5-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4,6-TRICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DICHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DIMETHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-DINITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2,4-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,6-DICHLOROPHENOL	< 10	< 10		< 10	< 10		< 10	< 10
2,6-DINITROTOLUENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-ACETYLAMINOFLUORENE	< 100	< 100		< 100	< 100		< 100	< 100
2-CHLORONAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-CHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLNAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-NAPHTHYLAMINE	< 10	< 10		< 10	< 10		< 10	< 10
2-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-NITROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-PICOLINE	< 20	< 20		< 20	< 20		< 20	< 20
2-SEC-BUTYL-4,6-DINITROPHENOL		< 20		< 20	< 20		< 20	< 20
3,3'-DICHLOROBENZIDINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
3,3'-DIMETHYLBENZIDINE	< 50	< 50		< 50	< 50		< 50	< 50
3-METHYLCHOLANTHRENE	< 20	< 20		< 20	< 20		< 20	< 20
3-METHYLPHENOL	< 10	< 10		< 10	< 10		< 10	< 10
3-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4,6-DINITRO-2-METHYLPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-AMINOBIPHENYL	< 50	< 50		< 50	< 50		< 50	< 50
4-BROMOPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLORO-3-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROANILINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-CHLOROPHENYL PHENYL ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-METHYLPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-NITROANILINE	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROPHENOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-NITROQUINOLINE-1-OXIDE	< 100	< 100		< 100	< 100		< 100	< 100
5-NITRO-O-TOLUIDINE	< 20	< 20		< 20	< 20		< 20	< 20
7,12-DIMETHYLBENZ(A)ANTHRACENE	< 20	< 20		< 20	< 20		< 20	< 20
A,A-DIMETHYLPHENETHYLAMINE		< 50		< 50	< 50		< 50	< 50
ACENAPHTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACENAPHTHYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETOPHENONE	< 10	< 10		< 10	< 10		< 10	< 10
ALPHA,ALPHA-DIMETHYLPHENETHYLAMINE	< 50							
ANILINE	< 10	< 10		< 10	< 10		< 10	< 10
ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ARAMITE	< 10	< 10		< 10	< 10		< 10	< 10
BENZO(A)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(A)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(B)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(GHI)PERYLENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZO(K)FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BENZYL ALCOHOL	< 10	< 10		< 10	< 10		< 10	< 10
BIS(2-CHLORO-1-METHYLETHYL) ETHER		< 10		< 10	< 10		< 10	< 10
BIS(2-CHLOROETHOXY)METHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-CHLOROETHYL) ETHER	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BIS(2-ETHYLHEXYL) PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BUTYL BENZYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CARBAZOLE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10

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Norwood Facility
Cincinnati, Ohio
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TABLE 8: Ground Water SVOC Results (September 2004 - December 2004)

ANALYTE	MW508 2003-09-05 GW A3I060169005 µg/L	MW508 2004-03-24 GW A4C250250006 µg/L	P001 2003-09-02 GW A3I030288004 µg/L	P001 2004-03-30 GW A4C310291007 µg/L	P001 2004-03-30 GWRERAN A4C310291007 µg/L	P006 2003-09-02 GW A3I030288001 µg/L	P006 2004-04-01 GW A4D020251002 µg/L	P006 2004-04-01 QDUPGW A4D020251004 µg/L
CHLOROBENZILATE		< 10		< 10	< 10		< 10	< 10
CHRYSENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIALLATE	< 20	< 20		< 20	< 20		< 20	< 20
DIBENZ(A,H)ANTHRACENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIBENZOFURAN	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIMETHOATE	< 20	< 20		< 20	< 20		< 20	< 20
DIMETHYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-BUTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DI-N-OCTYL PHTHALATE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
DIPHENYLAMINE	< 10	< 10		< 10	< 10		< 10	< 10
DISULFOTON		< 50		< 50	< 50		< 50	< 50
ETHYL METHANESULFONATE	< 10	< 10		< 10	< 10		< 10	< 10
FAMPHUR		< 10		< 10	< 10		< 10	< 10
FLUORANTHENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
FLUORENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROBUTADIENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROCYCLOPENTADIENE	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
HEXACHLOROETHANE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
HEXACHLOROPROPENE	< 100	< 100		< 100	< 100		< 100	< 100
INDENO(1,2,3-CD)PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOPHORONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ISOSAFROLE	< 20	< 20		< 20	< 20		< 20	< 20
METHAPYRILENE	< 50	< 50		< 50	< 50		< 50	< 50
METHYL METHANESULFONATE	< 10	< 10		< 10	< 10		< 10	< 10
METHYL PARATHION		< 10		< 10	< 10		< 10	< 10
NAPHTHALENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NITROBENZENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIETHYLAMINE	< 10	< 10		< 10	< 10		< 10	< 10
N-NITROSODIMETHYLAMINE	< 10	< 10		< 10	< 10		< 10	< 10
N-NITROSODI-N-BUTYLAMINE	< 10	< 10		< 10	< 10		< 10	< 10
N-NITROSODI-N-PROPYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSODIPHENYLAMINE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
N-NITROSOMETHYLETHYLAMINE	< 10	< 10		< 10	< 10		< 10	< 10
N-NITROSOMORPHOLINE	< 10	< 10		< 10	< 10		< 10	< 10
N-NITROSOPIPERIDINE	< 10	< 10		< 10	< 10		< 10	< 10
N-NITROSOPYRROLIDINE	< 10	< 10		< 10	< 10		< 10	< 10
O,O,O-TRIETHYL PHOSPHOROTHIOATE		< 50		< 50	< 50		< 50	< 50
O,O-DIETHYL-O-(2-PYRAZINYL) PHOSPHOROTHIOATE		< 50		< 50	< 50		< 50	< 50
O-TOLUIDINE	< 20	< 20		< 20	< 20		< 20	< 20
PARATHION		< 10		< 10	< 10		< 10	< 10
P-CHLOROBENZILATE	< 10							
P-DIMETHYLAMINOAZOBENZENE	< 20	< 20		< 20	< 20		< 20	< 20
PENTACHLOROBENZENE	< 10	< 10		< 10	< 10		< 10	< 10
PENTACHLOROETHANE	< 50	< 50		< 50	< 50		< 50	< 50
PENTACHLORONITROBENZENE	< 50	< 50		< 50	< 50		< 50	< 50
PENTACHLOROPHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENACETIN	< 20	< 20		< 20	< 20		< 20	< 20
PHENANTHRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHENOL	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PHORATE		< 50		< 50	< 50		< 50	< 50
P-PHENYLENE DIAMINE	< 100	< 100		< 100	< 100		< 100	< 100
PRONAMIDE	< 20	< 20		< 20	< 20		< 20	< 20
PYRENE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
PYRIDINE	< 20	< 20		< 20	< 20		< 20	< 20
SAFROLE	< 20	< 20		< 20	< 20		< 20	< 20
TETRAETHYLDITHIOPYROPHOSPHATE		< 50		< 50	< 50		< 50	< 50

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TABLE 9: Ground Water Metals Results (September 2004 - December 2004)

ANALYTE	Extraction Reference	MW008 2004-03-31 GW A4D010333002 mg/L	MW011C 2004-03-26 GW A4C270142004 mg/L	MW015 2003-09-03 GW A3I040194010 mg/L	MW015 2004-03-26 GW A4C270142005 mg/L	MW015B 2003-09-03 GW A3I040194006 mg/L	MW015B 2004-03-29 GW A4C300268006 mg/L	MW017 2003-09-04 GW A3I050168004 mg/L	MW017 2004-03-23 GW A4C240239002 mg/L
ARSENIC	Filtered	< 0.01	< 0.01	0.013	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
ARSENIC	Unfiltered	0.077	< 0.01	0.021	0.079	< 0.01	< 0.01	< 0.01	< 0.01
CHROMIUM	Filtered	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0078	< 0.005
CHROMIUM	Unfiltered	0.0096	< 0.005	0.25	1.9	0.018	0.0077	2.4	0.53
NICKEL	Filtered	< 0.04	< 0.04	< 0.04	0.072	< 0.04	< 0.04	0.1	0.051
NICKEL	Unfiltered	< 0.04	< 0.04	0.18	2.2	< 0.04	< 0.04	0.25	0.07

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Norwood Facility

Cincinnati, Ohio

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TABLE 9: Ground Water Metals Results (September 2004 - December 2004)

ANALYTE	MW018 2003-09-03 GW A3I040194007 mg/L	MW018 2004-03-30 GW A4C310291006 mg/L	MW023 2003-09-09 GW A3I100121001 mg/L	MW023 2004-03-31 GW A4D010333003 mg/L	MW024 2004-03-29 GW A4C300268002 mg/L	MW026 2004-03-26 GW A4C270142007 mg/L	MW026A 2004-03-26 GW A4C270142006 mg/L	MW027 2003-09-03 GW A3I040194003 mg/L	MW027 2004-03-26 GW A4C270142008 mg/L
ARSENIC	< 0.01	< 0.01	0.065	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
ARSENIC	0.064	< 0.01	0.19	0.012	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHROMIUM	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHROMIUM	0.12	0.019	0.15	0.014	< 0.005	0.013	< 0.005	0.0068	0.0052
NICKEL	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
NICKEL	0.1	< 0.04	0.12	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04

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mg/L = milligrams per liter

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TABLE 9: Ground Water Metals Results (September 2004 - December 2004)

ANALYTE	MW030 2004-03-29 GW A4C300268005 mg/L	MW031A 2004-03-29 GW A4C300268004 mg/L	MW031C 2004-03-29 GW A4C300268007 mg/L	MW031D 2004-03-29 GW A4C300268003 mg/L	MW042 2003-09-04 GW A3I050168003 mg/L	MW042 2004-03-23 GW A4C240239003 mg/L	MW043A 2003-09-03 GW A3I040194008 mg/L	MW043A 2004-03-30 GW A4C310291005 mg/L	MW044 2004-03-29 GW A4C300268001 mg/L
ARSENIC	< 0.01	0.018	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
ARSENIC	< 0.01	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHROMIUM	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHROMIUM	0.026	0.012	0.0072	< 0.005	0.0088	0.01	0.029	0.0058	0.013
NICKEL	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.064
NICKEL	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.05

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TABLE 9: Ground Water Metals Results (September 2004 - December 2004)

ANALYTE	MW044 2004-03-29 QDUPGW A4C300268009 mg/L	MW504 2003-09-08 GW A3I100121002 mg/L	MW504 2004-03-24 GW A4C250250002 mg/L	MW505A 2003-09-05 GW A3I060169007 mg/L	MW505A 2004-03-24 GW A4C250250003 mg/L	MW505B 2003-09-05 GW A3I060169008 mg/L	MW505B 2004-03-24 GW A4C250250004 mg/L	MW506 2003-09-05 GW A3I060169001 mg/L	MW506 2004-03-25 GW A4C270142003 mg/L
ARSENIC	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
ARSENIC	< 0.01	0.02 G	0.015	0.014	< 0.01	< 0.01	0.023	0.025	< 0.01
CHROMIUM	< 0.005	0.02	0.11	< 0.005	0.0062	< 0.005	< 0.005	0.0084	0.22
CHROMIUM	0.0089	73.1	40.6	1.1	0.21	0.026	0.15	48.8	2.7
NICKEL	0.061	3.5	4.8	< 0.04	0.21	0.073	0.078	4	4.7
NICKEL	0.059	6.8	4.1	0.19	0.33	0.11	0.19	7.6	5

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Cincinnati, Ohio
Project No. 0100.58.25

TABLE 9: Ground Water Metals Results (September 2004 - December 2004)

ANALYTE	MW507 2003-09-05 GW A3I060169006 mg/L	MW507 2004-03-24 GW A4C250250005 mg/L	MW508 2003-09-05 GW A3I060169005 mg/L	MW508 2004-03-24 GW A4C250250006 mg/L	P001 2003-09-03 GW A3I040194009 mg/L	P001 2004-03-30 GW A4C310291007 mg/L	P006 2004-04-01 GW A4D020251002 mg/L	P006 2004-04-01 QDUPGW A4D020251004 mg/L
ARSENIC	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
ARSENIC	0.12	0.028	0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHROMIUM	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHROMIUM	0.051	0.013	2	0.31	0.019	0.0076	< 0.005	< 0.005
NICKEL	< 0.04	< 0.04	0.053	0.044	< 0.04	< 0.04	< 0.04	< 0.04
NICKEL	0.062	< 0.04	0.62	0.087	< 0.04	< 0.04	< 0.04	< 0.04

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
mg/L = milligrams per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility

Cincinnati, Ohio

Project No. 0100.58.25

TABLE 10: Aqueous QA/QC VOC Results (September 2003 - December 2004)

ANALYTE	FIELD BLANK 2003-09-03 QFB A31040194012 µg/L	FIELD BLANK 2003-09-05 QFB A31060169011 µg/L	FIELD BLANK 2004-03-26 QFB A4C270142002 µg/L	FIELD BLANK 2004-03-30 QFB A4C310291002 µg/L	FIELD BLANK 2004-06-16 QFB A4F170167015 µg/L	FIELD BLANK 2004-06-17 QFB A4F180238020 µg/L	FIELD BLANK 2004-07-09 QFB A4G100202018 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 200	< 200	< 200	< 200	< 50	< 50	< 50
2-BTANONE	< 10	< 10	< 10	< 10	< 10	0.75 J	12
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	< 10	< 10	< 10	20	24	6.8 J
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	< 1	< 1	0.32 J
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISLFIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	0.16 J
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE			< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLENE	< 1	< 1	< 1	< 1	0.65 J	0.37 J	0.84 J
TRANS-1,2-DICHLOROETHENE			< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	0.58 J

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
QA/QC = Quality Assurance/Quality Control
VOCs = Volatile Organic Compounds
GW = Ground Water
QFB = Field Blank Sample
QRIN = Equipment Rinseate Sample
QTB = Trip Blank Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. D100.58.25

TABLE 10: Aqueous QA/QC VOC Results (September 2003 - December 2004)

ANALYTE	FIELD BLANK 2004-08-13 QFB A4H140136004 µg/L	FIELD BLANK 2004-08-17 QFB A4H180231016 µg/L	FIELD BLANK 2004-08-18 QFB A4H190207010 µg/L	FIELD BLANK 2004-09-01 QFB A4I020164009 µg/L	FIELD BLANK 2004-12-20 QFB A4L230115014 µg/L	FIELD BLANK 2004-12-21 QFB A4L230115013 µg/L	RINSEATE 2004-04-01 QRIN A4D020251003 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 50	35 J	< 50	< 50	< 50	18 J	< 200
2-BTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISLFIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	1.5	2.4	2.2	1.5	1.8	2.4	< 1
CHLOROMETHANE	< 1	0.31 J	0.39 J	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	0.56 J B	< 1	< 1	< 1	0.45 J B	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	1.5 J	< 2	< 2	< 2	< 2	< 2

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GW = Ground Water
QFB = Field Blank Sample
QRIN = Equipment Rinseate Sample
QTB = Trip Blank Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 10: Aqueous QA/QC VOC Results (September 2003 - December 2004)

ANALYTE	RINSEATE 2004-06-16 QRIN A4F170167016 µg/L	RINSEATE 2004-06-17 QRIN A4F180238021 µg/L	RINSEATE 2004-08-13 QRIN A4H140136008 µg/L	RINSEATE 2004-12-21 QRIN A4L230115015 µg/L	RINSEATE 2004-12-21 QRIN A4L230115016 µg/L	TRIP BLANK 2003-09-02 QTB A3I030288005 µg/L	TRIP BLANK 2003-09-03 QTB A3I040194013 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 50	< 50	80	< 50	< 50	< 200	< 200
2-BTANONE	0.83 J	0.57 J	< 10	< 10	< 10	< 10	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	17	4.9 J	< 10	1.5 J	< 10	< 10	< 10
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISLFIDE	< 1	< 1	< 1	0.47 J	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	1.2	2.2	1.9	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1		
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	2.2 B	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLENE	0.28 J	0.29 J	< 1	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1		
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
QA/QC = Quality Assurance/Quality Control
VOCs = Volatile Organic Compounds
GW = Ground Water
QFB = Field Blank Sample
QRIN = Equipment Rinseate Sample
QTB = Trip Blank Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility

Cincinnati, Ohio

Project No. 0100.58.25

TABLE 10: Aqueous QA/QC VOC Results (September 2003 - December 2004)

ANALYTE	TRIP BLANK 2003-09-04 QTB A3I050168006 µg/L	TRIP BLANK 2003-09-05 QTB A3I060169012 µg/L	TRIP BLANK 2003-09-08 QTB A3I100121003 µg/L	TRIP BLANK 2004-03-23 QTB A4C240239001 µg/L	TRIP BLANK 2004-03-24 QTB A4C250250001 µg/L	TRIP BLANK 2004-03-26 QTB A4C270142001 µg/L	TRIP BLANK 2004-03-29 QTB A4C300268008 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 200	< 200	< 200	< 200	< 200	< 200	< 200
2-BTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISLFIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE				< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE				< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
QA/QC = Quality Assurance/Quality Control
VOCs = Volatile Organic Compounds
GW = Ground Water
QFB = Field Blank Sample
QRIN = Equipment Rinseate Sample
QTB = Trip Blank Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 10: Aqueous QA/QC VOC Results (September 2003 - December 2004)

ANALYTE	TRIP BLANK 2004-03-30 QTB A4C310291001 µg/L	TRIP BLANK 2004-03-31 QTB A4D010333001 µg/L	TRIP BLANK 2004-04-01 QTB A4D020251001 µg/L	TRIP BLANK 2004-06-09 QTB A4F100149016 µg/L	TRIP BLANK 2004-06-11 QTB A4F120158011 µg/L	TRIP BLANK 2004-06-14 QTB A4F150251012 µg/L	TRIP BLANK 2004-06-15 QTB A4F160218002 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 200	< 200	< 200	< 50	< 50	< 50	< 50
2-BTANONE	< 10	< 10	< 10	0.5 J	0.62 J	< 10	1.8 J
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	< 10	< 10	1.2 J B	1.3 J B	1.1 J	5.9 J
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	1.2 B	1.4 B	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISLFIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	1.1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLENE	< 1	< 1	< 1	0.2 J	0.28 J	0.18 J	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
QA/QC = Quality Assurance/Quality Control
VOCs = Volatile Organic Compounds
GW = Ground Water
QFB = Field Blank Sample
QRIN = Equipment Rinsate Sample
QTB = Trip Blank Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 10: Aqueous QA/QC VOC Results (September 2003 - December 2004)

ANALYTE	TRIP BLANK 2004-06-16 QTB A4F170167002 µg/L	TRIP BLANK 2004-06-17 QTB A4F180238001 µg/L	TRIP BLANK 2004-06-21 QTB A4F220155001 µg/L	TRIP BLANK 2004-06-28 QTB A4F290191002 µg/L	TRIP BLANK 2004-07-09 QTB A4G100202019 µg/L	TRIP BLANK 2004-08-13 QTB A4H140136005 µg/L	TRIP BLANK 2004-08-16 QTB A4H170141008 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 50	< 50	< 50	< 200	< 50	< 50	< 50
2-BTANONE	1.1 J	1.2 J	1.1 J	< 10	< 10	0.43 J	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	1.6 J	3.6 J	1.7 J	< 10	1.4 J	1.1 J B	< 10
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	< 1	< 1	0.39 J B
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISLFIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	0.26 J B
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLENE	0.21 J	0.19 J	0.23 J	< 1	< 1	0.41 J	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
QA/QC = Quality Assurance/Quality Control
VOCs = Volatile Organic Compounds
GW = Ground Water
QFB = Field Blank Sample
QRIN = Equipment Rinseate Sample
QTB = Trip Blank Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 10: Aqueous QA/QC VOC Results (September 2003 - December 2004)

ANALYTE	TRIP BLANK 2004-08-17 QTB A4H180231017 µg/L	TRIP BLANK 2004-08-18 QTB A4H190207012 µg/L	TRIP BLANK 2004-09-01 QTB A4I020164011 µg/L	TRIP BLANK 2004-09-13 QTB A4I140148002 µg/L	TRIP BLANK 2004-09-15 QTB A4I160150002 µg/L	TRIP BLANK 2004-09-23 QTB A4I240108007 µg/L	TRIP BLANK 2004-09-24 QTB A4I270179002 µg/L	TRIP BLANK 2004-09-28 QTB A4I290193004 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 50	85	< 50	< 50	320	< 50	< 50	< 50
2-BTANONE	1.6 J	< 10	0.96 J	0.49 J	1.1 J	0.53 J	2.5 J	0.48 J
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	1.6 J	< 10	8.9 J	1.6 J	0.79 J	1.1 J	5.7 J	0.95 J
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	0.28 J	0.27 J B	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISLFIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	0.19 J B	< 1	0.42 J B	0.22 J B
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	0.82 J	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	7.2	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLENE	0.72 J	< 1	0.18 J	0.18 J	0.57 J	0.2 J	0.19 J	0.19 J
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	2.6	< 2	< 2	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
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µg/L = micrograms per liter

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EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 10: Aqueous QA/QC VOC Results (September 2003 - December 2004)

ANALYTE	TRIP BLANK 2004-09-30 QTB A4J010139002 µg/L	TRIP BLANK 2004-10-28 QTB A4J290129009 µg/L	TRIP BLANK 2004-11-11 QTB A4K120249002 µg/L	TRIP BLANK 2004-12-20 QTB A4L230115017 µg/L	TRIP BLANK 2005-01-21 QTB A5A220147002 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 50	< 50	< 50	< 50	< 50
2-BTANONE	0.44 J	< 10	13	3.5 J	4.5 J
2-HEXANONE	< 10	< 10	< 10	0.55 J	0.65 J
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10
ACETONE	1.1 J	2.2 J B	15	9.8 J	12
ACETONITRILE	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1
CARBON DISLFIDE	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1
DICHLOROFLOROMETHANE	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1
ISOBTANOL	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	0.64 J B	4.1 B	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1
TOLENE	0.2 J	< 1	0.57 J	0.28 J	0.33 J
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BTENE	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLOROMETHANE	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	0.53 J	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
QA/QC = Quality Assurance/Quality Control
VOCs = Volatile Organic Compounds
GW = Ground Water
QFB = Field Blank Sample
QRIN = Equipment Rinseate Sample
QTB = Trip Blank Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 11: Aqueous QA/QC SVOC Results (September 2003 - December 2004)

ANALYTE	FIELD BLANK 2003-09-03 QFB A3I040194012 µg/L	FIELD BLANK 2003-09-05 QFB A3I060169011 µg/L	RINSEATE 2004-04-01 QRIN A4D020251003 µg/L
1,2,4,5-TETRACHLOROBENZENE			< 10
1,2,4-TRICHLOROBENZENE	< 10	< 10	< 10
1,2-DICHLOROBENZENE	< 10	< 10	< 10
1,3,5-TRINITROBENZENE			< 50
1,3-DICHLOROBENZENE	< 10	< 10	< 10
1,3-DINITROBENZENE			< 10
1,4-DICHLOROBENZENE	< 10	< 10	< 10
1,4-NAPHTHOQUINONE			< 50
1-NAPHTHYLAMINE			< 10
2,2'-OXYBIS(1-CHLOROPROPANE)	< 10	< 10	
2,3,4,6-TETRACHLOROPHENOL			< 50
2,4,5-TRICHLOROPHENOL	< 10	< 10	< 10
2,4,6-TRICHLOROPHENOL	< 10	< 10	< 10
2,4-DICHLOROPHENOL	< 10	< 10	< 10
2,4-DIMETHYLPHENOL	< 10	< 10	< 10
2,4-DINITROPHENOL	< 50	< 50	< 50
2,4-DINITROTOLUENE	< 10	< 10	< 10
2,6-DICHLOROPHENOL			< 10
2,6-DINITROTOLUENE	< 10	< 10	< 10
2-ACETYLAMINOFLUORENE			< 100
2-CHLORONAPHTHALENE	< 10	< 10	< 10
2-CHLOROPHENOL	< 10	< 10	< 10
2-METHYLNAPHTHALENE	< 10	< 10	< 10
2-METHYLPHENOL	< 10	< 10	< 10
2-NAPHTHYLAMINE			< 10
2-NITROANILINE	< 50	< 50	< 50
2-NITROPHENOL	< 10	< 10	< 10
2-PICOLINE			< 20
2-SEC-BUTYL-4,6-DINITROPHENOL			< 20
3,3'-DICHLOROBENZIDINE	< 50	< 50	< 50
3,3'-DIMETHYLBENZIDINE			< 50
3-METHYLCHOLANTHRENE			< 20
3-METHYLPHENOL			< 10
3-NITROANILINE	< 50	< 50	< 50
4,6-DINITRO-2-METHYLPHENOL	< 50	< 50	< 50
4-AMINOBIPHENYL			< 50
4-BROMOPHENYL PHENYL ETHER	< 10	< 10	< 10
4-CHLORO-3-METHYLPHENOL	< 10	< 10	< 10
4-CHLOROANILINE	< 10	< 10	< 10
4-CHLOROPHENYL PHENYL ETHER	< 10	< 10	< 10
4-METHYLPHENOL	< 10	< 10	< 10
4-NITROANILINE	< 50	< 50	< 50
4-NITROPHENOL	< 50	< 50	< 50
4-NITROQUINOLINE-1-OXIDE			< 100
5-NITRO-O-TOLUIDINE			< 20
7,12-DIMETHYLBENZ(A)ANTHRACENE			< 20
A,A-DIMETHYLPHENETHYLAMINE			< 50
ACENAPHTHENE	< 10	< 10	< 10
ACENAPHTHYLENE	< 10	< 10	< 10
ACETOPHENONE			< 10
ANILINE			< 10
ANTHRACENE	< 10	< 10	< 10
ARAMITE			< 10
BENZO(A)ANTHRACENE	< 10	< 10	< 10
BENZO(A)PYRENE	< 10	< 10	< 10
BENZO(B)FLUORANTHENE	< 10	< 10	< 10
BENZO(GHI)PERYLENE	< 10	< 10	< 10
BENZO(K)FLUORANTHENE	< 10	< 10	< 10
BENZYL ALCOHOL			< 10
BIS(2-CHLORO-1-METHYLETHYL) ETHER			< 10
BIS(2-CHLOROETHOXY)METHANE	< 10	< 10	< 10
BIS(2-CHLOROETHYL) ETHER	< 10	< 10	< 10
BIS(2-ETHYLHEXYL) PHTHALATE	< 10	< 10	< 10
BUTYL BENZYL PHTHALATE	< 10	< 10	< 10
CARBAZOLE	< 10	< 10	< 10
CHLOROBENZILATE			< 10

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
QA/QC = Quality Assurance/Quality Control
SVOCs = Semi Volatile Organic Compounds
GW = Ground Water
QFB = Field Blank Sample
QRIN = Equipment Rinseate Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 11: Aqueous QA/QC SVOC Results (September 2003 - December 2004)

ANALYTE	FIELD BLANK 2003-09-03 QFB A3I040194032 µg/L	FIELD BLANK 2003-09-05 QFB A3I060169011 µg/L	RINSEATE 2004-04-01 QRIN A4D020251003 µg/L
CHRYSENE	< 10	< 10	< 10
DIALLATE			< 20
DIBENZ(A,H)ANTHRACENE	< 10	< 10	< 10
DIBENZOFURAN	< 10	< 10	< 10
DIETHYL PHTHALATE	< 10	< 10	< 10
DIMETHOATE			< 20
DIMETHYL PHTHALATE	< 10	< 10	< 10
DI-N-BUTYL PHTHALATE	< 10	< 10	< 10
DI-N-OCTYL PHTHALATE	< 10	< 10	< 10
DIPHENYLAMINE			< 10
DISULFOTON			< 50
ETHYL METHANESULFONATE			< 10
FAMPHUR			< 10
FLUORANTHENE	< 10	< 10	< 10
FLUORENE	< 10	< 10	< 10
HEXACHLOROBENZENE	< 10	< 10	< 10
HEXACHLOROBUTADIENE	< 10	< 10	< 10
HEXACHLOROCYCLOPENTADIENE	< 50	< 50	< 50
HEXACHLOROETHANE	< 10	< 10	< 10
HEXACHLOROPROPENE			< 100
INDENO(1,2,3-CD)PYRENE	< 10	< 10	< 10
ISOPHORONE	< 10	< 10	< 10
ISOSAFROLE			< 20
METHAPYRILENE			< 50
METHYL METHANESULFONATE			< 10
METHYL PARATHION			< 10
NAPHTHALENE	< 10	< 10	< 10
NITROBENZENE	< 10	< 10	< 10
N-NITROSODIETHYLAMINE			< 10
N-NITROSODIMETHYLAMINE			< 10
N-NITROSODI-N-BUTYLAMINE			< 10
N-NITROSODI-N-PROPYLAMINE	< 10	< 10	< 10
N-NITROSODIPHENYLAMINE	< 10	< 10	< 10
N-NITROSOMETHYLETHYLAMINE			< 10
N-NITROSOMORPHOLINE			< 10
N-NITROSOPIPERIDINE			< 10
N-NITROSOPYRROLIDINE			< 10
O,O,O-TRIETHYL PHOSPHOROTHIOATE			< 50
O,O-DIETHYL-O-(2-PYRAZINYL) PHOSPHOROTHIOATE			< 50
O-TOLUIDINE			< 20
PARATHION			< 10
P-DIMETHYLAMINOAZOBENZENE			< 20
PENTACHLOROBENZENE			< 10
PENTACHLOROETHANE			< 50
PENTACHLORONITROBENZENE			< 50
PENTACHLOROPHENOL	< 10	< 10	< 10
PHENACETIN			< 20
PHENANTHRENE	< 10	< 10	< 10
PHENOL	< 10	< 10	< 10
PHORATE			< 50
P-PHENYLENE DIAMINE			< 100
PRONAMIDE			< 20
PYRENE	< 10	< 10	< 10
PYRIDINE			< 20
SAFROLE			< 20
TETRAETHYLDITHIOPYROPHOSPHATE			< 50

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
QA/QC = Quality Assurance/Quality Control
SVOCs = Semi Volatile Organic Compounds
GW = Ground Water
QFB = Field Blank Sample
QRIN = Equipment Rinseate Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility

Cincinnati, Ohio

Project No. 0100.58.25

TABLE 12: Aqueous QA/QC Metals Results (September 2004 - December 2004)

ANALYTE	Extraction Reference	RINSEATE 2004-04-01 QRIN A4D020251003 mg/L
ARSENIC	Filtered	< 0.01
ARSENIC	Unfiltered	< 0.01
CHROMIUM	Filtered	< 0.005
CHROMIUM	Unfiltered	< 0.005
NICKEL	Filtered	< 0.04
NICKEL	Unfiltered	< 0.04

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
GW = Ground Water
QDUP = Duplicate Sample
QRIN = Equipment Rinseate Sample
RERAN = Laboratory Reanalyzed Sample
mg/L = milligrams per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 13: Off-Facility Soil VOC Results (June 2004)

ANALYTE	DW001 / 29.5-30.5 2004-06-21 SOIL A4F220155002 µg/Kg	VE525 / 02.3-2.9 2004-06-17 SOIL A4F180238003 µg/Kg	VE525 / 07.35-07.9 2004-06-17 SOIL A4F180238004 µg/Kg	VE525 / 08.8-09.0 2004-06-17 SOIL A4F180238005 µg/Kg	VE525 / 10-11 2004-06-17 QDUPSOIL A4F180238009 µg/Kg	VE525 / 10-11 2004-06-17 SOIL A4F180238006 µg/Kg	VE525 / 15.4-15.7 2004-06-17 SOIL A4F180238008 µg/Kg
1,1,1,2-TETRACHLOROETHANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
1,1,1-TRICHLOROETHANE	< 4.6	< 5.5	110 J	< 980	< 480	< 280uj	< 5.7uj
1,1,2,2-TETRACHLOROETHANE	< 4.6	< 5.5	1400	240 J	< 480	< 280uj	< 5.7uj
1,1,2-TRICHLOROETHANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
1,1-DICHLOROETHANE	< 4.6	< 5.5	51 J	< 980	< 480	54 Jj	< 5.7uj
1,1-DICHLOROETHENE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
1,2,3-TRICHLOROPROPANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
1,2-DIBROMO-3-CHLOROPROPANE	< 9.2	< 11	< 430	< 2000	< 960	< 560uj	< 11uj
1,2-DIBROMOETHANE (EDB)	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
1,2-DICHLOROETHANE	< 4.6	2.4 J	3000	6300	14000	8000 j	3.6 Jj
1,2-DICHLOROETHENE (TOTAL)	< 9.2	< 11	1200	< 2000	240 J	130 Jj	< 11uj
1,2-DICHLOROPROPANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
1,4-DIOXANE	< 230	< 280	< 11000	< 49000	< 24000	< 14000uj	62 Jj
2-BUTANONE (MEK)	< 18	< 22	< 870	< 3900	< 1900	< 1100uj	< 23uj
2-HEXANONE	< 18	< 22	< 870	< 3900	< 1900	< 1100uj	< 23uj
3-CHLORO-1-PROPENE	< 9.2	< 11	< 430	< 2000	< 960	< 560uj	< 11uj
4-METHYL-2-PENTANONE (MIBK)	< 18	< 22	< 870	< 3900	< 1900	< 1100uj	< 23uj
ACETONE	11 J B	7.6 J	< 870	< 3900	< 1900	< 1100uj	8.3 Jj
ACETONITRILE	< 92	< 110	< 4300	< 20000	< 9600	< 5600uj	8.3 Jj
ACROLEIN	< 92	< 110	< 4300	< 20000	< 9600	< 5600uj	< 110uj
ACRYLONITRILE	< 92	< 110	< 4300	< 20000	< 9600	< 5600uj	< 110uj
BENZENE	< 4.6	< 5.5	680	430 J	510	210 Jj	< 5.7uj
BROMODICHLOROMETHANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
BROMOFORM	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
BROMOMETHANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
CARBON DISULFIDE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
CARBON TETRACHLORIDE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
CHLOROBENZENE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
CHLOROETHANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
CHLOROFORM	< 4.6	5.6	920	19000	1500	970 j	9 j
CHLOROMETHANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
CHLOROPRENE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
CIS-1,2-DICHLOROETHENE	< 4.6	< 5.5	930	< 980	240 J	130 Jj	< 5.7uj
CIS-1,3-DICHLOROPROPENE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
DIBROMOCHLOROMETHANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
DIBROMOMETHANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
DICHLORODIFLUOROMETHANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
ETHYL METHACRYLATE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
ETHYLBENZENE	< 4.6	< 5.5	29 J	< 980	< 480	< 280uj	< 5.7uj
IODOMETHANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
ISOBUTANOL	< 180	< 220	< 8700	< 39000	< 19000	< 11000uj	< 230uj
METHACRYLONITRILE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
METHYL METHACRYLATE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
METHYLENE CHLORIDE	1.3 J	7.8 Bu	170 J Bu	3500 Bu	< 480	210 J Buj	18 Buj
PROPIONITRILE	< 18	< 22	< 870	< 3900	< 1900	< 1100uj	< 23uj
STYRENE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
TETRACHLOROETHENE	< 4.6	< 5.5	200 J	< 980	< 480	< 280uj	< 5.7uj
TOLUENE	< 4.6	< 5.5	110 J	< 980	< 480	< 280uj	< 5.7uj
TRANS-1,2-DICHLOROETHENE	< 4.6	< 5.5	240	< 980	< 480	< 280uj	< 5.7uj
TRANS-1,3-DICHLOROPROPENE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
TRANS-1,4-DICHLORO-2-BUTENE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
TRICHLOROETHENE	< 4.6	< 5.5	4000	3000	840	110 Jj	< 5.7uj
TRICHLOROFLUOROMETHANE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
VINYL ACETATE	< 9.2	< 11	< 430	< 2000	< 960	< 560uj	< 11uj
VINYL CHLORIDE	< 4.6	< 5.5	< 220	< 980	< 480	< 280uj	< 5.7uj
XYLENES (TOTAL)	< 9.2	< 11	< 430	< 2000	< 960	< 560uj	< 11uj

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds (Update III Method)
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/Kg = micrograms per kilogram

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility

Cincinnati, Ohio

Project No. 0109.58.25

TABLE 13: Off-Facility Soil VOC Results (June 2004)

ANALYTE	VE525 / 19-20 2004-06-17 SOIL A4F180238011 µg/Kg	VE525 / 29-30 2004-06-17 SOIL A4F180238012 µg/Kg	VE525 / 36-37 2004-06-17 SOIL A4F180238013 µg/Kg	VE525 / 39-40 2004-06-17 SOIL A4F180238016 µg/Kg	VE525 / 49-50 2004-06-17 SOIL A4F180238017 µg/Kg	VE525 / 55-56 2004-06-17 SOIL A4F180238019 µg/Kg	VE526 / 06.5-07.5 2004-06-16 SOIL A4F170167001 µg/Kg	VE526 / 11-12 2004-06-16 QDUPSOIL A4F170167008 µg/Kg
1,1,1,2-TETRACHLOROETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
1,1,1-TRICHLOROETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
1,1,2,2-TETRACHLOROETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	81 J	< 5.2uj
1,1,2-TRICHLOROETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
1,1-DICHLOROETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	23 J	< 5.2uj
1,1-DICHLOROETHENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
1,2,3-TRICHLOROPROPANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
1,2-DIBROMO-3-CHLOROPROPANE	< 10uj	< 9.6	< 9.5	< 8.4	< 9.3	< 10uj	< 520	< 10uj
1,2-DIBROMOETHANE (EDB)	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
1,2-DICHLOROETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
1,2-DICHLOROETHENE (TOTAL)	< 10uj	< 9.6	< 9.5	< 8.4	< 9.3	< 10uj	< 520	< 10uj
1,2-DICHLOROPROPANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
1,4-DIOXANE	< 260uj	< 240	< 240	< 210	< 230	< 250uj	< 13000	540 j
2-BUTANONE (MEK)	< 20uj	< 19	< 19	< 17	< 19	< 20uj	< 1000	< 21uj
2-HEXANONE	< 20uj	< 19	< 19	< 17	< 19	< 20uj	< 1000	< 21uj
3-CHLORO-1-PROPENE	< 10uj	< 9.6	< 9.5	< 8.4	< 9.3	< 10uj	< 520	< 10uj
4-METHYL-2-PENTANONE (MIBK)	< 20uj	< 19	< 19	< 17	< 19	< 20uj	< 1000	< 21uj
ACETONE	6.7 Jj	< 19	< 19	5.8 J	< 19	6.8 Jj	< 1000	8.3 Jj
ACETONITRILE	< 100uj	< 96	< 95	< 84	< 93	< 100uj	< 5200	8 Jj
ACROLEIN	< 100uj	< 96	< 95	< 84	< 93	< 100uj	< 5200	< 100uj
ACRYLONITRILE	< 100uj	< 96	< 95	< 84	< 93	< 100uj	< 5200	< 100uj
BENZENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	39 J	< 5.2uj
BROMODICHLOROMETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
BROMOFORM	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
BROMOMETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
CARBON DISULFIDE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
CARBON TETRACHLORIDE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
CHLOROBENZENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
CHLOROETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
CHLOROFORM	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	48 J	< 5.2uj
CHLOROMETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
CHLOROPRENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
CIS-1,2-DICHLOROETHENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
CIS-1,3-DICHLOROPROPENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
DIBROMOCHLOROMETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
DIBROMOMETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
DICHLORODIFLUOROMETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
ETHYL METHACRYLATE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
ETHYLBENZENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
IODOMETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
ISOBUTANOL	< 200uj	< 190	< 190	< 170	< 190	< 200uj	< 10000	< 210uj
METHACRYLONITRILE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
METHYL METHACRYLATE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
METHYLENE CHLORIDE	5.2 Buj	3.9 J Bu	3 J Bu	3.5 J Bu	2.4 J Bu	3.6 J Buj	290 B	4 J Bj
PROPIONITRILE	< 20uj	< 19	< 19	< 17	< 19	< 20uj	< 1000	< 21uj
STYRENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
TETRACHLOROETHENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
TOLUENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
TRANS-1,2-DICHLOROETHENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
TRANS-1,3-DICHLOROPROPENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
TRANS-1,4-DICHLORO-2-BUTENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
TRICHLOROETHENE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	860	< 5.2uj
TRICHLOROFLUOROMETHANE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
VINYL ACETATE	< 10uj	< 9.6	< 9.5	< 8.4	< 9.3	< 10uj	< 520	< 10uj
VINYL CHLORIDE	< 5.1uj	< 4.8	< 4.8	< 4.2	< 4.6	< 5.1uj	< 260	< 5.2uj
XYLENES (TOTAL)	< 10uj	< 9.6	< 9.5	< 8.4	< 9.3	< 10uj	< 520	< 10uj

Blank Cell=Not Analyzed

See data validation memo for definitions of data qualifiers

VOCs = Volatile Organic Compounds (Update III Method)

QDUP = Duplicate Sample

RERAN = Laboratory Reanalyzed Sample

µg/Kg = micrograms per kilogram

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 13: Off-Facility Soil VOC Results (June 2004)

ANALYTE	VE526 / 11-12 2004-06-16 SOIL A4F170167004 µg/Kg	VE526 / 14.5-15.5 2004-06-16 SOIL A4F170167005 µg/Kg	VE526 / 16-17 2004-06-16 SOIL A4F170167006 µg/Kg	VE526 / 26-27 2004-06-16 SOIL A4F170167009 µg/Kg	VE526 / 36-37 2004-06-16 SOIL A4F170167010 µg/Kg	VE526 / 41.5-41.8 2004-06-16 SOIL A4F170167012 µg/Kg	VE526 / 46-47 2004-06-16 SOIL A4F170167014 µg/Kg	VE527 / 02.1-02.7 2004-06-14 SOIL A4F150251001 µg/Kg
1,1,1,2-TETRACHLOROETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
1,1,1-TRICHLOROETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
1,1,2,2-TETRACHLOROETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
1,1,2-TRICHLOROETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
1,1-DICHLOROETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	93 J
1,1-DICHLOROETHENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
1,2,3-TRICHLOROPROPANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
1,2-DIBROMO-3-CHLOROPROPANE	< 11	< 9.6uj	< 11	< 9	< 9.1	< 9.3	< 7.9	< 670
1,2-DIBROMOETHANE (EDB)	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
1,2-DICHLOROETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
1,2-DICHLOROETHENE (TOTAL)	< 11	< 9.6uj	< 11	< 9	< 9.1	< 9.3	< 7.9	260 J
1,2-DICHLOROPROPANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
1,4-DIOXANE	710	89 Jj	< 270	< 230	< 230	< 230	< 200	< 17000
2-BUTANONE (MEK)	< 22	< 19uj	< 21	< 18	< 18	< 19	< 16	< 1300
2-HEXANONE	< 22	< 19uj	< 21	< 18	< 18	< 19	< 16	< 1300
3-CHLORO-1-PROPENE	< 11	< 9.6uj	< 11	< 9	< 9.1	< 9.3	< 7.9	< 670
4-METHYL-2-PENTANONE (MIBK)	< 22	< 19uj	< 21	< 18	< 18	< 19	< 16	< 1300
ACETONE	6.2 J	6 Jj	8.5 J	< 18	< 18	< 19	5.6 J	< 1300
ACETONITRILE	< 110	8.2 Jj	< 110	< 90	< 91	< 93	< 79	< 6700
ACROLEIN	< 110	< 96uj	< 110	< 90	< 91	< 93	< 79	< 6700
ACRYLONITRILE	< 110	< 96uj	< 110	< 90	< 91	< 93	< 79	< 6700
BENZENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	870
BROMODICHLOROMETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
BROMOFORM	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
BROMOMETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
CARBON DISULFIDE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
CARBON TETRACHLORIDE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
CHLOROBENZENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
CHLOROETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
CHLOROFORM	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
CHLOROMETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
CHLOROPRENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
CIS-1,2-DICHLOROETHENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	170 J
CIS-1,3-DICHLOROPROPENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
DIBROMOCHLOROMETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
DIBROMOMETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
DICHLORODIFLUOROMETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
ETHYL METHACRYLATE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
ETHYLBENZENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
IODOMETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
ISOBUTANOL	< 220	< 190uj	< 210	< 180	< 180	< 190	< 160	< 13000
METHACRYLONITRILE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
METHYL METHACRYLATE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
METHYLENE CHLORIDE	4.6 J B	4.4 J Bj	3.7 J B	3 J B	2.3 J B	2.6 J B	3.4 J B	350
PROPIONITRILE	< 22	< 19uj	< 21	< 18	< 18	< 19	< 16	< 1300
STYRENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
TETRACHLOROETHENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
TOLUENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
TRANS-1,2-DICHLOROETHENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	84 J
TRANS-1,3-DICHLOROPROPENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
TRANS-1,4-DICHLORO-2-BUTENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
TRICHLOROETHENE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
TRICHLOROFLUOROMETHANE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
VINYL ACETATE	< 11	< 9.6uj	< 11	< 9	< 9.1	< 9.3	< 7.9	< 670
VINYL CHLORIDE	< 5.5	< 4.8uj	< 5.3	< 4.5	< 4.6	< 4.7	< 3.9	< 330
XYLENES (TOTAL)	< 11	< 9.6uj	< 11	< 9	< 9.1	< 9.3	< 7.9	< 670

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds (Update III Method)
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/Kg = micrograms per kilogram

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility

Cincinnati, Ohio

Project No. 0100.58.25

TABLE 13: Off-Facility Soil VOC Results (June 2004)

ANALYTE	VE527 / 07.3-08.5 2004-06-14 SOIL A4F150251003 µg/Kg	VE527 / 12.5-13.5 2004-06-14 SOIL A4F150251004 µg/Kg	VE527 / 27-28 2004-06-14 SOIL A4F150251006 µg/Kg	VE527 / 37-38 2004-06-14 SOIL A4F150251007 µg/Kg	VE527 / 47-48 2004-06-14 SOIL A4F150251008 µg/Kg	VE527 / 53.5-54.5 2004-06-14 SOIL A4F150251009 µg/Kg	VE527 / 56.5-57.5 2004-06-14 SOIL A4F150251011 µg/Kg
1,1,1,2-TETRACHLOROETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
1,1,1-TRICHLOROETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
1,1,2,2-TETRACHLOROETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
1,1,2-TRICHLOROETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
1,1-DICHLOROETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
1,1-DICHLOROETHENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
1,2,3-TRICHLOROPROPANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
1,2-DIBROMO-3-CHLOROPROPANE	< 13 U	< 10 U	< 10 U	< 9.6 U	< 8.6 U	< 9.7 U	< 9.2 U
1,2-DIBROMOETHANE (EDB)	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
1,2-DICHLOROETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
1,2-DICHLOROETHENE (TOTAL)	< 13 U	< 10 U	< 10 U	< 9.6 U	< 8.6 U	< 9.7 U	< 9.2 U
1,2-DICHLOROPROPANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
1,4-DIOXANE	300 J	< 260 U	< 250 U	< 240 U	< 220 U	< 240 U	< 230 U
2-BUTANONE (MEK)	< 25 U	< 21 U	< 20 U	< 19 U	< 17 U	< 19 U	< 18 U
2-HEXANONE	< 25 U	< 21 U	< 20 U	< 19 U	< 17 U	< 19 U	< 18 U
3-CHLORO-1-PROPENE	< 13 U	< 10 U	< 10 U	< 9.6 U	< 8.6 U	< 9.7 U	< 9.2 U
4-METHYL-2-PENTANONE (MIBK)	< 25 U	< 21 U	< 20 U	< 19 U	< 17 U	< 19 U	< 18 U
ACETONE	7.4 J	22	< 20 U	< 19 U	10 J	6.2 J	33
ACETONITRILE	< 130 U	8.9 J	< 100 U	< 96 U	< 86 U	< 97 U	< 92 U
ACROLEIN	< 130 U	< 100 U	< 100 U	< 96 U	< 86 U	< 97 U	< 92 U
ACRYLONITRILE	< 130 U	< 100 U	< 100 U	< 96 U	< 86 U	< 97 U	< 92 U
BENZENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
BROMODICHLOROMETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
BROMOFORM	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
BROMOMETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
CARBON DISULFIDE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
CARBON TETRACHLORIDE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
CHLOROBENZENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
CHLOROETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
CHLOROFORM	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
CHLOROMETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
CHLOROPRENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
CIS-1,2-DICHLOROETHENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
CIS-1,3-DICHLOROPROPENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
DIBROMOCHLOROMETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
DIBROMOMETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
DICHLORODIFLUOROMETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
ETHYL METHACRYLATE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
ETHYLBENZENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
IODOMETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
ISOBUTANOL	< 250 U	< 210 U	< 200 U	< 190 U	< 170 U	< 190 U	< 180 U
METHACRYLONITRILE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
METHYL METHACRYLATE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
METHYLENE CHLORIDE	3.8 J B	4.6 J B	2.5 J B	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
PROPIONITRILE	< 25 U	< 21 U	< 20 U	< 19 U	< 17 U	< 19 U	< 18 U
STYRENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
TETRACHLOROETHENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
TOLUENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
TRANS-1,2-DICHLOROETHENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
TRANS-1,3-DICHLOROPROPENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
TRANS-1,4-DICHLORO-2-BUTENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
TRICHLOROETHENE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
TRICHLOROFLUOROMETHANE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
VINYL ACETATE	< 13 U	< 10 U	< 10 U	< 9.6 U	< 8.6 U	< 9.7 U	< 9.2 U
VINYL CHLORIDE	< 6.3 U	< 5.2 U	< 5 U	< 4.8 U	< 4.3 U	< 4.8 U	< 4.6 U
XYLENES (TOTAL)	< 13 U	< 10 U	< 10 U	< 9.6 U	< 8.6 U	< 9.7 U	< 9.2 U

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds (Update III Method)
QDUP = Duplicate Sample
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Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 13: Off-Facility Soil VOC Results (June 2004)

ANALYTE	VE528 / 13-14.5 2004-06-11 SOIL A4F120153003 µg/Kg	VE528 / 22-23 2004-06-11 SOIL A4F120153004 µg/Kg	VE528 / 34-35 2004-06-11 SOIL A4F120158002 µg/Kg	VE528 / 44-45 2004-06-11 SOIL A4F120158003 µg/Kg	VE528 / 54-55 2004-06-11 SOIL A4F120158005 µg/Kg	VE528 / 56.7-57.4 2004-06-11 SOIL A4F120158007 µg/Kg	VE528 / 58-58.5 2004-06-11 SOIL A4F120158008 µg/Kg	VE528 / 64-65 2004-06-11 SOIL A4F120158009 µg/Kg
1,1,1,2-TETRACHLOROETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
1,1,1-TRICHLOROETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
1,1,2,2-TETRACHLOROETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
1,1,2-TRICHLOROETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
1,1-DICHLOROETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
1,1-DICHLOROETHENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
1,2,3-TRICHLOROPROPANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
1,2-DIBROMO-3-CHLOROPROPANE	< 12	< 12	< 9.4	< 9.5	< 10	< 13	< 12	< 9.9
1,2-DIBROMOETHANE (EDB)	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
1,2-DICHLOROETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
1,2-DICHLOROETHENE (TOTAL)	< 12	< 12	< 9.4	< 9.5	< 10	< 13	< 12	< 9.9
1,2-DICHLOROPROPANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
1,4-DIOXANE	< 290	< 310	< 240	< 240	< 260	< 320	< 310	< 250
2-BUTANONE (MEK)	< 23	< 24	< 19	< 19	1.5 J	3.8 J	< 24	< 20
2-HEXANONE	< 23	< 24	< 19	< 19	< 20	< 25	< 24	< 20
3-CHLORO-1-PROPENE	< 12	< 12	< 9.4	< 9.5	< 10	< 13	< 12	< 9.9
4-METHYL-2-PENTANONE (MIBK)	< 23	< 24	< 19	< 19	< 20	< 25	< 24	< 20
ACETONE	< 23	10 J	< 19	< 19	8.8 J	12 J	< 24	6 J
ACETONITRILE	< 120	< 120	< 94	< 95	< 100	< 130	< 120	< 99
ACROLEIN	< 120	< 120	< 94	< 95	< 100	< 130	< 120	< 99
ACRYLONITRILE	< 120	< 120	< 94	< 95	< 100	< 130	< 120	< 99
BENZENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	0.59 J	< 6.1	< 5
BROMODICHLOROMETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
BROMOFORM	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
BROMOMETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
CARBON DISULFIDE	< 5.8	2.3 J	< 4.7	< 4.8	1.6 J	2 J	< 6.1	< 5
CARBON TETRACHLORIDE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
CHLOROBENZENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
CHLOROETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
CHLOROFORM	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
CHLOROMETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
CHLOROPRENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
CIS-1,2-DICHLOROETHENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
CIS-1,3-DICHLOROPROPENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
DIBROMOCHLOROMETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
DIBROMOMETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
DICHLORODIFLUOROMETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
ETHYL METHACRYLATE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
ETHYLBENZENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
IODOMETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
ISOBUTANOL	< 230	< 240	< 190	< 190	< 200	< 250	< 240	< 200
METHACRYLONITRILE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
METHYL METHACRYLATE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
METHYLENE CHLORIDE	< 5.8	4.5 J Bu	< 4.7	2.3 J B	< 5.1	< 6.3	5.5 J B	2.7 J B
PROPIONITRILE	< 23	< 24	< 19	< 19	< 20	< 25	< 24	< 20
STYRENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
TETRACHLOROETHENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
TOLUENE	< 5.8	< 6.1	< 4.7	< 4.8	0.7 J	1.1 J	< 6.1	< 5
TRANS-1,2-DICHLOROETHENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
TRANS-1,3-DICHLOROPROPENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
TRANS-1,4-DICHLORO-2-BUTENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
TRICHLOROETHENE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
TRICHLOROFLUOROMETHANE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
VINYL ACETATE	< 12	< 12	< 9.4	< 9.5	< 10	< 13	< 12	< 9.9
VINYL CHLORIDE	< 5.8	< 6.1	< 4.7	< 4.8	< 5.1	< 6.3	< 6.1	< 5
XYLENES (TOTAL)	< 12	< 12	< 9.4	< 9.5	< 10	< 13	< 12	< 9.9

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds (Update III Method)
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/Kg = micrograms per kilogram

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility

Cincinnati, Ohio

Project No. 0100.58.25

TABLE 13: Off-Facility Soil VOC Results (June 2004)

ANALYTE	VE528 / 66.5-67.5 2004-06-11 SOIL A4F120158010 µg/Kg	VE528 / 8-9.5 2004-06-11 SOIL A4F120153001 µg/Kg	VE529 / 04.7-06.2 2004-06-15 SOIL A4F160218001 µg/Kg	VE529 / 10-11 2004-06-15 SOIL A4F160218004 µg/Kg	VE529 / 16.5-17.5 2004-06-15 SOIL A4F160218005 µg/Kg	VE529 / 17.5-18.5 2004-06-15 SOIL A4F160218006 µg/Kg	VE529 / 17.5-18.5 2004-06-15 SOILRERAN A4F160218006 µg/Kg
1,1,1,2-TETRACHLOROETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
1,1,1-TRICHLOROETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
1,1,2,2-TETRACHLOROETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
1,1,2-TRICHLOROETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
1,1-DICHLOROETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
1,1-DICHLOROETHENE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
1,2,3-TRICHLOROPROPANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
1,2-DIBROMO-3-CHLOROPROPANE	< 13	< 12	< 16	< 11	< 11uj	< 11	< 11
1,2-DIBROMOETHANE (EDB)	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
1,2-DICHLOROETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
1,2-DICHLOROETHENE (TOTAL)	< 13	< 12	< 16	< 11	< 11uj	< 11	< 11
1,2-DICHLOROPROPANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
1,4-DIOXANE	< 310	< 290	< 400	< 270	< 270uj	< 270	< 270
2-BUTANONE (MEK)	< 25	< 23	< 32	< 22	< 21uj	< 21	< 21
2-HEXANONE	< 25	< 23	< 32	< 22	< 21uj	< 21	< 21
3-CHLORO-1-PROPENE	< 13	< 12	< 16	< 11	< 11uj	< 11	< 11
4-METHYL-2-PENTANONE (MIBK)	< 25	< 23	< 32	< 22	< 21uj	< 21	< 21
ACETONE	8.6 J	< 23	< 32	< 22	9.8 Jj	< 21	< 21
ACETONITRILE	< 130	< 120	< 160	< 110	< 110uj	< 110	< 110
ACROLEIN	< 130	< 120	< 160	< 110	< 110uj	< 110	< 110
ACRYLONITRILE	< 130	< 120	< 160	< 110	< 110uj	< 110	< 110
BENZENE	0.46 J	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
BROMODICHLOROMETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
BROMOFORM	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
BROMOMETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
CARBON DISULFIDE	2.5 J	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
CARBON TETRACHLORIDE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
CHLOROBENZENE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
CHLOROETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
CHLOROFORM	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
CHLOROMETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
CHLOROPRENE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
CIS-1,2-DICHLOROETHENE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
CIS-1,3-DICHLOROPROPENE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
DIBROMOCHLOROMETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
DIBROMOMETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
DICHLORODIFLUOROMETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
ETHYL METHACRYLATE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
ETHYLBENZENE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
IODOMETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
ISOBUTANOL	< 250	< 230	< 320	< 220	< 210uj	< 210	< 210
METHACRYLONITRILE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
METHYL METHACRYLATE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
METHYLENE CHLORIDE	6.6 B	< 5.8	4.4 J B	2.4 J B	4.3 J Bj	3.7 J B	2.5 J B
PROPIONITRILE	< 25	< 23	< 32	< 22	< 21uj	< 21	< 21
STYRENE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
TETRACHLOROETHENE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
TOLUENE	1.2 J	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
TRANS-1,2-DICHLOROETHENE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
TRANS-1,3-DICHLOROPROPENE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
TRANS-1,4-DICHLORO-2-BUTENE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
TRICHLOROETHENE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
TRICHLOROFLUOROMETHANE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
VINYL ACETATE	< 13	< 12	< 16	< 11	< 11uj	< 11	< 11
VINYL CHLORIDE	< 6.3	< 5.8	< 8	< 5.4	< 5.4uj	< 5.4	< 5.4
XYLENES (TOTAL)	< 13	< 12	< 16	< 11	< 11uj	< 11	< 11

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds (Update III Method)
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/Kg = micrograms per kilogram

The Payne Firm, Inc.

EMD Chemicals Inc.
Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 13: Off-Facility Soil VOC Results (June 2004)

ANALYTE	VE529 / 27.5-28.5 2004-06-15 SOIL A4F160218008 µg/Kg	VE529 / 37.5-38.5 2004-06-15 SOIL A4F160218009 µg/Kg	VE529 / 47.5-48.5 2004-06-15 SOIL A4F160218011 µg/Kg	VE530 / 05-06.5 2004-06-09 SOIL A4F100149002 µg/Kg	VE530 / 09-11 2004-06-09 SOIL A4F100149004 µg/Kg	VE530 / 13-15 2004-06-09 SOIL A4F100149006 µg/Kg	VE530 / 26-28 2004-06-09 SOIL A4F100149008 µg/Kg
1,1,1,2-TETRACHLOROETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
1,1,1-TRICHLOROETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
1,1,2,2-TETRACHLOROETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
1,1,2-TRICHLOROETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
1,1-DICHLOROETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
1,1-DICHLOROETHENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
1,2,3-TRICHLOROPROPANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
1,2-DIBROMO-3-CHLOROPROPANE	< 11	< 10	< 8.4	< 11	< 11	< 12	< 12
1,2-DIBROMOETHANE (EDB)	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
1,2-DICHLOROETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
1,2-DICHLOROETHENE (TOTAL)	< 11	< 10	< 8.4	< 11	< 11	< 12	< 12
1,2-DICHLOROPROPANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
1,4-DIOXANE	< 260	< 260	< 210	< 280	< 270	< 300	< 300
2-BUTANONE (MEK)	< 21	< 21	< 17	< 22	< 21	< 24	< 24
2-HEXANONE	< 21	< 21	< 17	< 22	< 21	< 24	< 24
3-CHLORO-1-PROPENE	< 11	< 10	< 8.4	< 11	< 11	< 12	< 12
4-METHYL-2-PENTANONE (MIBK)	< 21	< 21	< 17	< 22	< 21	< 24	< 24
ACETONE	< 21	8.5 J	< 17	< 22	8.5 J	7.9 J	< 24
ACETONITRILE	< 110	< 100	< 84	< 110	< 110	< 120	< 120
ACROLEIN	< 110	< 100	< 84	< 110	< 110	< 120	< 120
ACRYLONITRILE	< 110	< 100	< 84	< 110	< 110	< 120	< 120
BENZENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
BROMODICHLOROMETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
BROMOFORM	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
BROMOMETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
CARBON DISULFIDE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
CARBON TETRACHLORIDE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
CHLOROBENZENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
CHLOROETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
CHLOROFORM	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
CHLOROMETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
CHLOROPRENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
CIS-1,2-DICHLOROETHENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
CIS-1,3-DICHLOROPROPENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
DIBROMOCHLOROMETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
DIBROMOMETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
DICHLORODIFLUOROMETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
ETHYL METHACRYLATE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
ETHYLBENZENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
IODOMETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
ISOBUTANOL	< 210	< 210	< 170	< 220	< 210	< 240	< 240
METHACRYLONITRILE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
METHYL METHACRYLATE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
METHYLENE CHLORIDE	3.2 J B	3.4 J B	2.3 J B	< 5.6	2.8 J B	3.2 J B	< 6
PROPIONITRILE	< 21	< 21	< 17	< 22	< 21	< 24	< 24
STYRENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
TETRACHLOROETHENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
TOLUENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
TRANS-1,2-DICHLOROETHENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
TRANS-1,3-DICHLOROPROPENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
TRANS-1,4-DICHLORO-2-BUTENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
TRICHLOROETHENE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
TRICHLOROFLUOROMETHANE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
VINYL ACETATE	< 11	< 10	< 8.4	< 11	< 11	< 12	< 12
VINYL CHLORIDE	< 5.3	< 5.2	< 4.2	< 5.6	< 5.3	< 6	< 6
XYLENES (TOTAL)	< 11	< 10	< 8.4	< 11	< 11	< 12	< 12

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds (Update III Method)
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/Kg = micrograms per kilogram

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility

Cincinnati, Ohio

Project No. 0100.58.25

TABLE 13: Off-Facility Soil VOCs Results (June 2004)

ANALYTE	VE530 / 34-36 2004-06-09 SOIL A4F100149010 µg/Kg	VE530 / 41.5-43.5 2004-06-09 SOIL A4F100149012 µg/Kg	VE530 / 47-49 2004-06-09 SOIL A4F100149014 µg/Kg
1,1,1,2-TETRACHLOROETHANE	< 8.2	< 7.4	< 5.8
1,1,1-TRICHLOROETHANE	< 8.2	< 7.4	< 5.8
1,1,2,2-TETRACHLOROETHANE	< 8.2	< 7.4	< 5.8
1,1,2-TRICHLOROETHANE	< 8.2	< 7.4	< 5.8
1,1-DICHLOROETHANE	< 8.2	< 7.4	< 5.8
1,1-DICHLOROETHENE	< 8.2	< 7.4	< 5.8
1,2,3-TRICHLOROPROPANE	< 8.2	< 7.4	< 5.8
1,2-DIBROMO-3-CHLOROPROPANE	< 16	< 15	< 12
1,2-DIBROMOETHANE (EDB)	< 8.2	< 7.4	< 5.8
1,2-DICHLOROETHANE	< 8.2	< 7.4	< 5.8
1,2-DICHLOROETHENE (TOTAL)	< 16	< 15	< 12
1,2-DICHLOROPROPANE	< 8.2	< 7.4	< 5.8
1,4-DIOXANE	< 410	< 370	< 290
2-BUTANONE (MEK)	< 33	< 29	< 23
2-HEXANONE	< 33	< 29	< 23
3-CHLORO-1-PROPENE	< 16	< 15	< 12
4-METHYL-2-PENTANONE (MIBK)	< 33	< 29	< 23
ACETONE	11 J	< 29	7.9 J B
ACETONITRILE	< 160	< 150	< 120
ACROLEIN	< 160	< 150	< 120
ACRYLONITRILE	< 160	< 150	< 120
BENZENE	< 8.2	< 7.4	< 5.8
BROMODICHLOROMETHANE	< 8.2	< 7.4	< 5.8
BROMOFORM	< 8.2	< 7.4	< 5.8
BROMOMETHANE	< 8.2	< 7.4	< 5.8
CARBON DISULFIDE	< 8.2	< 7.4	< 5.8
CARBON TETRACHLORIDE	< 8.2	< 7.4	< 5.8
CHLOROBENZENE	< 8.2	< 7.4	< 5.8
CHLOROETHANE	< 8.2	< 7.4	< 5.8
CHLOROFORM	< 8.2	< 7.4	< 5.8
CHLOROMETHANE	< 8.2	< 7.4	< 5.8
CHLOROPRENE	< 8.2	< 7.4	< 5.8
CIS-1,2-DICHLOROETHENE	< 8.2	< 7.4	< 5.8
CIS-1,3-DICHLOROPROPENE	< 8.2	< 7.4	< 5.8
DIBROMOCHLOROMETHANE	< 8.2	< 7.4	< 5.8
DIBROMOMETHANE	< 8.2	< 7.4	< 5.8
DICHLORODIFLUOROMETHANE	< 8.2	< 7.4	< 5.8
ETHYL METHACRYLATE	< 8.2	< 7.4	< 5.8
ETHYLBENZENE	< 8.2	< 7.4	< 5.8
IODOMETHANE	< 8.2	< 7.4	< 5.8
ISOBUTANOL	< 330	< 290	< 230
METHACRYLONITRILE	< 8.2	< 7.4	< 5.8
METHYL METHACRYLATE	< 8.2	< 7.4	< 5.8
METHYLENE CHLORIDE	4.4 J B	< 7.4	< 5.8
PROPIONITRILE	< 33	< 29	< 23
STYRENE	< 8.2	< 7.4	< 5.8
TETRACHLOROETHENE	< 8.2	< 7.4	< 5.8
TOLUENE	< 8.2	< 7.4	< 5.8
TRANS-1,2-DICHLOROETHENE	< 8.2	< 7.4	< 5.8
TRANS-1,3-DICHLOROPROPENE	< 8.2	< 7.4	< 5.8
TRANS-1,4-DICHLORO-2-BUTENE	< 8.2	< 7.4	< 5.8
TRICHLOROETHENE	< 8.2	< 7.4	< 5.8
TRICHLOROFLUOROMETHANE	< 8.2	< 7.4	< 5.8
VINYL ACETATE	< 16	< 15	< 12
VINYL CHLORIDE	< 8.2	< 7.4	< 5.8
XYLENES (TOTAL)	< 16	< 15	< 12

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds (Update III Method)
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/Kg = micrograms per kilogram

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility

Cincinnati Ohio

Project No. 0300.58.25

TABLE 14: Remedial Design Ground Water VOC Results (June through November)

ANALYTE	DPE02 2004-09-15 GW A4I160150001 µg/L	DPE02 2004-09-15 GWRERAN A4I160150001 µg/L	DW001 2004-07-09 GW A4G100202014 µg/L	DW001 2004-09-28 GW A4I290236004 µg/L	DW001 2004-10-28 GW A4J290129008 µg/L	DW002 2004-07-09 GW A4G100202015 µg/L	DW002 2004-09-28 GW A4I290236003 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	0.35 J	< 20	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 40	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 20	< 1	< 1	< 1	< 1	0.24 J
1,2-DICHLOROETHENE (TOTAL)	< 2	< 40	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	26000 E	25000	< 50	< 50	< 50	< 50	< 50
2-BUTANONE	0.49 J	29 J	< 10	0.44 J	< 10	< 10	< 10
2-HEXANONE	< 10	< 200	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 40	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 200	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	< 200	11	0.93 J	< 10	6.5 J	< 10
ACETONITRILE	< 20	< 400	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 400	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 400	< 20	< 20	< 20	< 20	< 20
BENZENE	2.9	5.5 J	< 1	< 1	< 1	< 1	0.24 J
BROMODICHLOROMETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 20	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 20	1.5	0.79 J	< 1	0.71 J	0.73 J
CARBON TETRACHLORIDE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	0.84 J	< 20	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 20	0.24 J	< 1	< 1	< 1	< 1
CHLOROMETHANE	0.2 J B	3.4 J B	< 1	< 1	< 1	< 1	0.25 J
CHLOROPRENE	< 2	< 40	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 40	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	0.26 J	< 20	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 1000	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 40	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 40	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 80	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
TOLUENE	0.65 J	< 20	0.29 J	< 1	< 1	0.21 J	0.3 J
TRANS-1,2-DICHLOROETHENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 40	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 20	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	0.67 J	< 40	< 2	< 2	< 2	< 2	< 2

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QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 14: Remedial Design Ground Water VOC Results (June through November)

ANALYTE	DW002 2004-10-28 GW A4J290129005 µg/L	DW003 2004-07-09 GW A4G100202016 µg/L	DW003 2004-09-28 GW A4I290236002 µg/L	DW003 2004-10-28 GW A4J290129006 µg/L	DW004 2004-07-09 GW A4G100202017 µg/L	DW004 2004-09-28 GW A4I290236001 µg/L	DW004 2004-10-28 GW A4J290129007 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	0.57 J	0.4 J	0.51 J	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-BUTANONE	< 10	1.1 J	< 10	< 10	0.92 J	0.42 J	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	12	< 10	< 10	< 10	< 10	< 10
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	1.1	0.52 J	< 1	1.3	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	0.5 J	< 1	< 1	0.23 J	< 1	< 1
CHLOROMETHANE	< 1	< 1	0.29 J	< 1	< 1	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	0.48 J	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	< 1	< 1	< 1	< 1	0.2 J	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 14: Remedial Design Ground Water VOC Results (June through November)

ANALYTE	MW004 2004-09-01 GW A4I020164004 µg/L	MW004 2004-09-01 GWRERAN A4I020164004 µg/L	MW006 2004-09-01 GW A4I020164002 µg/L	MW012 2004-09-01 GW A4I020164003 µg/L	MW012 2004-09-01 GWRERAN A4I020164003 µg/L	MW012 2004-09-01 QDUPGW A4I020164010 µg/L	MW012 2004-09-01 QDUPGWRERAN A4I020164010 µg/L
1,1,1,2-TETRACHLOROETHANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
1,1,1-TRICHLOROETHANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
1,1,2,2-TETRACHLOROETHANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
1,1,2-TRICHLOROETHANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
1,1-DICHLOROETHANE	< 100	3.3 J	1.1	4.6 J	4.1	3.6 J	3.7
1,1-DICHLOROETHENE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
1,2,3-TRICHLOROPROPANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 200	< 20	< 2	< 20	< 2	< 20	< 2
1,2-DIBROMOETHANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
1,2-DICHLOROETHANE	< 100	< 10	0.22 J	< 10	< 1	< 10	< 1
1,2-DICHLOROETHENE (TOTAL)	< 200	< 20	6.3	5.2 J	4.8	4.9 J	5.8
1,2-DICHLOROPROPANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
1,4-DIOXANE	2200 J	2200	< 50	2300	3800 E	3700	2000 E
2-BUTANONE	< 1000	< 100	< 10	< 100	< 10	< 100	< 10
2-HEXANONE	< 1000	< 100	< 10	< 100	< 10	< 100	< 10
3-CHLOROPROPENE	< 200	< 20	< 2	< 20	< 2	< 20	< 2
4-METHYL-2-PENTANONE	< 1000	< 100	< 10	< 100	< 10	< 100	< 10
ACETONE	< 1000	< 100	< 10	< 100	< 10	< 100	< 10
ACETONITRILE	< 2000	< 200	< 20	< 200	< 20	< 200	< 20
ACROLEIN	< 2000	< 200	< 20	< 200	< 20	< 200	< 20
ACRYLONITRILE	< 2000	< 200	< 20	< 200	< 20	< 200	< 20
BENZENE	2100	1300 E	< 1	63	59 E	46	57 E
BROMODICHLOROMETHANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
BROMOFORM	< 100	< 10	< 1	< 10	< 1	< 10	< 1
BROMOMETHANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
CARBON DISULFIDE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
CARBON TETRACHLORIDE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
CHLOROBENZENE	< 100	2.1 J	< 1	14	14	12	13
CHLOROETHANE	< 100	< 10	< 1	< 10	2.7	2.5 J	1.8
CHLOROFORM	< 100	< 10	3.2	< 10	< 1	< 10	< 1
CHLOROMETHANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
CHLOROPRENE	< 200	< 20	< 2	< 20	< 2	< 20	< 2
CIS-1,2-DICHLOROETHENE	< 100	< 10	6	5.2 J	4.8	4.9 J	5.6
CIS-1,3-DICHLOROPROPENE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
DIBROMOCHLOROMETHANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
DIBROMOMETHANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
DICHLOROFLUOROMETHANE	< 200	< 20	< 2	< 20	< 2	< 20	< 2
ETHYL METHACRYLATE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
ETHYLBENZENE	< 100	< 10	< 1	< 10	< 1	< 10	0.19 J
IODOMETHANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
ISOBUTANOL	< 5000	< 500	< 50	< 500	< 50	< 500	< 50
METHACRYLONITRILE	< 200	< 20	< 2	< 20	< 2	< 20	< 2
METHYL METHACRYLATE	< 200	< 20	< 2	< 20	< 2	< 20	< 2
METHYLENE CHLORIDE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
PROPIONITRILE	< 400	< 40	< 4	< 40	< 4	< 40	< 4
STYRENE	< 100	< 10	< 1	< 10	0.46 J	< 10	< 1
TETRACHLOROETHENE	< 100	< 10	3.9	< 10	< 1	< 10	< 1
TOLUENE	< 100	2.9 J	< 1	< 10	0.8 J	< 10	0.75 J
TRANS-1,2-DICHLOROETHENE	< 100	< 10	0.26 J	< 10	< 1	< 10	0.26 J
TRANS-1,3-DICHLOROPROPENE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
TRICHLOROETHENE	< 100	< 10	5.5	< 10	< 1	< 10	< 1
TRICHLOROFLUOROMETHANE	< 100	< 10	< 1	< 10	< 1	< 10	< 1
VINYL ACETATE	< 200	< 20	< 2	< 20	< 2	< 20	< 2
VINYL CHLORIDE	< 100	< 10	1.6	4.6 J	3.4	3.9 J	3.2
XYLENES (TOTAL)	< 200	32	< 2	< 20	0.54 J	< 20	0.5 J

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QDUP = Duplicate Sample
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µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 14: Remedial Design Ground Water VOC Results (June through November)

ANALYTE	MW026 2004-09-13 GW A4I140148001 µg/L	MW026 2004-09-13 GWRERAN A4I140148001 µg/L	MW035 2004-09-01 GW A4I020164005 µg/L	MW035 2004-09-01 GWRERAN A4I020164005 µg/L	MW302 2004-09-01 GW A4I020164001 µg/L	MW302 2004-09-01 GWRERAN A4I020164001 µg/L	MW504 2004-07-08 GW A4G100202008 µg/L
1,1,1,2-TETRACHLOROETHANE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
1,1,1-TRICHLOROETHANE	< 5.6	< 1	15	12	250 J	270	< 1
1,1,2,2-TETRACHLOROETHANE	< 5.6	< 1	18	14	< 500	91	< 1
1,1,2-TRICHLOROETHANE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
1,1-DICHLOROETHANE	< 5.6	< 1	2.9 J	2.4	970	890	< 1
1,1-DICHLOROETHENE	< 5.6	0.37 J	< 8	0.67 J	< 500	45 J	< 1
1,2,3-TRICHLOROPROPANE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 11	< 2	< 16	< 2	< 1000	< 100	< 2
1,2-DIBROMOETHANE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
1,2-DICHLOROETHANE	< 5.6	0.72 J	11	8.9	17000	16000 E	< 1
1,2-DICHLOROETHENE (TOTAL)	33	45 E	3 J	2.6	17000	20000 E	< 2
1,2-DICHLOROPROPANE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
1,4-DIOXANE	< 280	49 J	< 400	48 J	7000 J	26000	83
2-BUTANONE	3.3 J	2.9 J	< 80	< 10	< 5000	< 500	1.2 J
2-HEXANONE	< 56	< 10	< 80	< 10	< 5000	< 500	< 10
3-CHLOROPROPENE	< 11	< 2	< 16	< 2	< 1000	< 100	< 2
4-METHYL-2-PENTANONE	< 56	< 10	< 80	< 10	< 5000	< 500	< 10
ACETONE	7.3 J	< 10	< 80	< 10	390 J B	95 J B	5.2 J
ACETONITRILE	< 110	< 20	< 160	< 20	< 10000	< 1000	< 20
ACROLEIN	< 110	< 20	< 160	< 20	< 10000	< 1000	< 20
ACRYLONITRILE	< 110	< 20	< 160	< 20	< 10000	< 1000	< 20
BENZENE	1.2 J	0.48 J	< 8	< 1	1900	2000	< 1
BROMODICHLOROMETHANE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
BROMOFORM	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
BROMOMETHANE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
CARBON DISULFIDE	< 5.6	< 1	< 8	1.3	< 500	< 50	1.9
CARBON TETRACHLORIDE	< 5.6	< 1	89	75 E	< 500	< 50	< 1
CHLOROBENZENE	< 5.6	< 1	< 8	< 1	280 J	280	< 1
CHLOROETHANE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
CHLOROFORM	< 5.6	< 1	240	180 E	16000	16000 E	3.1
CHLOROMETHANE	< 5.6	< 1	< 8	< 1	< 500	< 50	0.4 J
CHLOROPRENE	< 11	< 2	< 16	< 2	< 1000	< 100	< 2
CIS-1,2-DICHLOROETHENE	31	42 E	3 J	2.3	17000	19000 E	< 1
CIS-1,3-DICHLOROPROPENE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
DIBROMOCHLOROMETHANE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
DIBROMOMETHANE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
DICHLOROFLUOROMETHANE	< 11	< 2	< 16	< 2	< 1000	< 100	< 2
ETHYL METHACRYLATE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
ETHYLBENZENE	< 5.6	< 1	< 8	< 1	< 500	36 J	< 1
IODOMETHANE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
ISOBUTANOL	< 280	< 50	< 400	< 50	< 25000	< 2500	< 50
METHACRYLONITRILE	< 11	< 2	< 16	< 2	< 1000	< 100	< 2
METHYL METHACRYLATE	< 11	< 2	< 16	< 2	< 1000	< 100	< 2
METHYLENE CHLORIDE	< 5.6	< 1	< 8	< 1	8300	8200 E	< 1
PROPIONITRILE	< 22	< 4	< 32	< 4	< 2000	< 200	< 4
STYRENE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
TETRACHLOROETHENE	< 5.6	< 1	55	49 E	240 J	290	0.73 J
TOLUENE	< 5.6	< 1	< 8	0.85 J	1300	1400	< 1
TRANS-1,2-DICHLOROETHENE	2.1 J	3	< 8	0.34 J	140 J	140	< 1
TRANS-1,3-DICHLOROPROPENE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
TRICHLOROETHENE	100	140 E	36	31	3200	3500 E	1.6
TRICHLOROFLUOROMETHANE	< 5.6	< 1	< 8	< 1	< 500	< 50	< 1
VINYL ACETATE	< 11	< 2	< 16	< 2	< 1000	< 100	< 2
VINYL CHLORIDE	< 5.6	< 1	< 8	< 1	7400	7700 E	< 1
XYLENES (TOTAL)	< 11	< 2	< 16	< 2	< 1000	170	< 2

Blank Cell=Not Analyzed
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RERAN = Laboratory Reanalyzed Sample
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The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 14: Remedial Design Ground Water VOC Results (June through November)

ANALYTE	MW505A 2004-07-08 GW A4G100202006 µg/L	MW505B 2004-07-08 GW A4G100202007 µg/L	MW506 2004-07-09 GW A4G100202013 µg/L	MW507 2004-07-08 GW A4G100202002 µg/L	MW507 2004-07-08 QDUPGW A4G100202001 µg/L	MW507B 2004-07-08 GW A4G100202003 µg/L	MW508 2004-07-09 GW A4G100202011 µg/L
1,1,1,2-TETRACHLOROETHANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	5 J	< 8.3	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 20	< 17	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	110	< 8.3	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	310	23	< 2	1.2 J	1.1 J	< 2	2.8
1,2-DICHLOROPROPANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	5000	12000	< 50	120	94	< 50	1100
2-BUTANONE	< 100	< 83	< 10	< 10	< 10	1.3 J Bu	< 10
2-HEXANONE	< 100	< 83	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 20	< 17	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 100	< 83	< 10	< 10	< 10	< 10	< 10
ACETONE	< 100	< 83	1.3 J	1.3 J	1.2 J	5.1 J Bu	1.4 J
ACETONITRILE	< 200	< 170	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 200	< 170	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 200	< 170	< 20	< 20	< 20	< 20	< 20
BENZENE	< 10	< 8.3	< 1	< 1	< 1	0.24 J	< 1
BROMODICHLOROMETHANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	5.9 J	< 8.3	< 1	0.5 J	< 1	0.35 J	< 1
CARBON TETRACHLORIDE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 10	< 8.3	< 1	< 1	< 1	1.1	< 1
CHLOROMETHANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
CHLOROPRENE	< 20	< 17	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	270	18	< 1	1.2	1.1	< 1	2.6
CIS-1,3-DICHLOROPROPENE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 10	< 8.3	< 1	< 1	< 1	0.45 J	< 1
DICHLOROFLUOROMETHANE	< 20	< 17	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 500	< 420	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 20	< 17	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 20	< 17	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	4.1 J Bu	3.1 J Bu	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 40	< 33	< 4	< 4	< 4	< 4	< 4
STYRENE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 10	< 8.3	< 1	< 1	< 1	0.51 J	< 1
TRANS-1,2-DICHLOROETHENE	39	4.8 J	< 1	< 1	< 1	< 1	0.21 J
TRANS-1,3-DICHLOROPROPENE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	3.2 J	< 8.3	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 10	< 8.3	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 20	< 17	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	77	2.2 J	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 20	< 17	< 2	< 2	< 2	0.78 J	< 2

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The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0108.58.25

TABLE 14: Remedial Design Ground Water VOC Results (June through November)

ANALYTE	MW508B 2004-06-28 GW A4F290191001 µg/L	MW508B 2004-07-09 GW A4G100202012 µg/L	MW509A 2004-07-08 GW A4G100202005 µg/L	MW509B 2004-07-08 GW A4G100202004 µg/L	MW510A 2004-07-09 GW A4G100202009 µg/L	MW510B 2004-07-09 GW A4G100202010 µg/L	P006 2004-11-11 GW A4K120249001 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	0.49 J	< 1	4.1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	0.27 J	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	13	< 2	2.2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	< 200	250	54	88	1700	140	< 50
2-BUTANONE	< 10	< 10	< 10	0.63 J	< 10	< 10	0.76 J
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	< 10	2.6 J	1.8 J	< 10	< 10	1.6 J	1.2 J
ACETONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	0.6 J	< 1	< 1
BROMODICHLOROMETHANE	1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	0.48 J	0.96 J	< 1	0.45 J	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	0.26 J	0.2 J	0.39 J	0.56 J	0.37 J	< 1
CHLOROMETHANE	< 1	< 1	0.16 J	0.22 J	0.27 J	< 1	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	12	< 1	2.2
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	1.8	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	0.29 J	< 1	< 1	< 1	0.23 J	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	0.35 J	< 1	0.24 J	0.48 J	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	0.83 J	< 1	< 1	15	< 1	2.4
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	0.49 J

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The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 14: Remedial Design Ground Water VOC Results (June through November)

ANALYTE	WRPZ05 2004-09-01 GW A4I020164006 µg/L	WRPZ05 2004-09-28 GW A4I290236005 µg/L	WRPZ05 2004-10-28 GW A4J290129001 µg/L	WRPZ10 2004-09-28 GW A4I290236006 µg/L	WRPZ10 2004-10-28 GW A4J290129003 µg/L	WRPZ15 2004-09-28 GW A4I290236007 µg/L	WRPZ15 2004-10-28 GW A4J290129004 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	13 J	52	130	< 50	< 50	< 50	< 50
2-BUTANONE	3.3 J	< 10	< 10	0.41 J	< 10	< 10	< 10
2-HEXANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ACETONE	30 B	< 10	< 10	1.3 J	< 10	1.5 J	< 10
ACETONITRILE	< 20	< 20	< 20	3 J	< 20	2.5 J	< 20
ACROLEIN	< 20	< 20	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20	< 20	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	0.37 J	1.4	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 1	< 1	0.17 J	< 1	0.22 J	< 1
CHLOROPRENE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4	< 4	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2	< 2	< 2	< 2	< 2

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Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 14: Remedial Design Ground Water VOC Results (June through November)

ANALYTE	WRPZ20 2004-09-01 GW A4I020164007 µg/L	WRPZ20 2004-09-28 GW A4I290236008 µg/L	WRPZ20 2004-10-28 GW A4J290129002 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 1	< 1	< 1
1,4-DIOXANE	< 50	< 50	< 50
2-BUTANONE	0.67 J	< 10	0.93 J
2-HEXANONE	< 10	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 10
ACETONE	2.4 J B	< 10	3.3 J B
ACETONITRILE	< 20	2.8 J	7.8 J
ACROLEIN	< 20	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 20
BENZENE	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1
CHLOROFORM	< 1	< 1	< 1
CHLOROMETHANE	< 1	0.16 J	< 1
CHLOROPRENE	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1
IODOMETHANE	< 1	< 1	< 1
ISOBUTANOL	< 50	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1
PROPIONITRILE	< 4	< 4	< 4
STYRENE	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1
TOLUENE	0.23 J	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1
TRICHLOROETHENE	< 1	< 1	< 1
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1
VINYL ACETATE	< 2	< 2	< 2
VINYL CHLORIDE	< 1	< 1	< 1
XYLENES (TOTAL)	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 15: Remedial Design Ground Water VOC Results from Temporary Geoprobe Monitoring Wells (September 2004)

ANALYTE	VE536 / 06-11 2004-09-23 GW A4I240108001 µg/L	VE536 / 12-17 2004-09-23 GW A4I240108002 µg/L	VE537 / 05.5-10.5 2004-09-23 GW A4I240108003 µg/L	VE537 / 12.5-17.5 2004-09-23 GW A4I240108004 µg/L	VE538 / 06.5-11.5 2004-09-23 GW A4I240108005 µg/L	VE538 / 13-18 2004-09-23 GW A4I240108006 µg/L	VE539 / 12.5-17.5 2004-09-24 GW A4I270179001 µg/L
1,1,1,2-TETRACHLOROETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
1,1,1-TRICHLOROETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 170	< 4	< 2	< 2	< 2	< 2	< 2
1,2-DIBROMOETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	2400	68	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHENE (TOTAL)	< 170	< 4	< 2	< 2	< 2	< 2	< 2
1,2-DICHLOROPROPANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
1,4-DIOXANE	1800 J	130	460	21 J	13 J	< 50	< 50
2-BUTANONE	< 830	1 J	1.4 J	1.3 J	0.5 J	0.92 J	< 10
2-HEXANONE	< 830	< 20	< 10	< 10	< 10	< 10	< 10
3-CHLOROPROPENE	< 170	< 4	< 2	< 2	< 2	< 2	< 2
4-METHYL-2-PENTANONE	< 830	< 20	< 10	< 10	< 10	< 10	< 10
ACETONE	< 830	3.7 J	4.9 J	4.7 J	1.3 J	3.4 J	< 10
ACETONITRILE	< 1700	< 40	< 20	< 20	< 20	< 20	< 20
ACROLEIN	< 1700	< 40	< 20	< 20	< 20	< 20	< 20
ACRYLONITRILE	< 1700	< 40	< 20	< 20	< 20	< 20	< 20
BENZENE	< 83	< 2	0.3 J B	0.27 J B	0.25 J B	0.25 J B	< 1
BROMODICHLOROMETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 83	< 2	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 83	< 2	< 1	< 1	< 1	< 1	< 1
CHLOROMETHANE	< 83	< 2	< 1	< 1	< 1	< 1	0.42 J B
CHLOROPRENE	< 170	< 4	< 2	< 2	< 2	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
CIS-1,3-DICHLOROPROPENE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
DIBROMOMETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
DICHLOROFLUOROMETHANE	< 170	< 4	< 2	< 2	< 2	< 2	< 2
ETHYL METHACRYLATE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
IODOMETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
ISOBUTANOL	< 4200	< 100	< 50	< 50	< 50	< 50	< 50
METHACRYLONITRILE	< 170	< 4	< 2	< 2	< 2	< 2	< 2
METHYL METHACRYLATE	< 170	< 4	< 2	< 2	< 2	< 2	< 2
METHYLENE CHLORIDE	36 J B	0.66 J B	< 1	< 1	< 1	< 1	< 1
PROPIONITRILE	< 330	< 8	< 4	< 4	< 4	< 4	< 4
STYRENE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
TOLUENE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	< 83	< 2	< 1	< 1	< 1	< 1	3.5
TRICHLOROFLUOROMETHANE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
VINYL ACETATE	< 170	< 4	< 2	< 2	< 2	< 2	< 2
VINYL CHLORIDE	< 83	< 2	< 1	< 1	< 1	< 1	< 1
XYLENES (TOTAL)	< 170	< 4	< 2	< 2	< 2	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

The Payne Firm, Inc.

EMD Chemicals Inc.

Norwood Facility
Cincinnati, Ohio
Project No. 0100.58.25

TABLE 15: Remedial Design Ground Water VOC Results from Temporary Geoprobe Monitoring Wells (September 2004)

ANALYTE	VE540 / 21-26 2004-09-28 GW A4I290193001 µg/L	VE540 / 35.5-40.5 2004-09-28 GW A4I290193002 µg/L	VE541 / 15.5-20.5 2004-09-30 GW A4J010139001 µg/L	VE541 / 15.5-20.5 2004-09-30 GWRERAN A4J010139001 µg/L	VE541 / 26.5-31.5 2004-09-28 GW A4I290193003 µg/L
1,1,1,2-TETRACHLOROETHANE	< 1	< 1	< 1.7	< 1	< 1
1,1,1-TRICHLOROETHANE	< 1	0.48 J	0.88 J	1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1.7	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1.7	< 1	< 1
1,1-DICHLOROETHANE	< 1	< 1	1.3 J	1.5	< 1
1,1-DICHLOROETHENE	< 1	< 1	< 1.7	< 1	< 1
1,2,3-TRICHLOROPROPANE	< 1	< 1	< 1.7	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	< 2	< 2	< 3.3	< 2	< 2
1,2-DIBROMOETHANE	< 1	< 1	< 1.7	< 1	< 1
1,2-DICHLOROETHANE	4.5	< 1	47	53 E	2.4
1,2-DICHLOROETHENE (TOTAL)	< 2	< 2	3.4	3.9	0.9 J
1,2-DICHLOROPROPANE	< 1	< 1	< 1.7	< 1	< 1
1,4-DIOXANE	720	20 J	190	72	18 J
2-BUTANONE	2.3 J	1.7 J	2.5 J	2.2 J	2.2 J
2-HEXANONE	< 10	< 10	< 17	< 10	< 10
3-CHLOROPROPENE	< 2	< 2	< 3.3	< 2	< 2
4-METHYL-2-PENTANONE	< 10	< 10	< 17	< 10	< 10
ACETONE	5.5 J	6.8 J	13 J	13	5.3 J
ACETONITRILE	< 20	< 20	< 33	< 20	< 20
ACROLEIN	< 20	< 20	< 33	< 20	< 20
ACRYLONITRILE	< 20	< 20	< 33	< 20	< 20
BENZENE	0.27 J	< 1	< 1.7	< 1	0.24 J
BROMODICHLOROMETHANE	< 1	< 1	< 1.7	< 1	< 1
BROMOFORM	< 1	< 1	< 1.7	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1.7	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 1.7	0.36 J	< 1
CARBON TETRACHLORIDE	< 1	< 1	< 1.7	< 1	< 1
CHLOROBENZENE	< 1	< 1	< 1.7	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1.7	< 1	< 1
CHLOROFORM	< 1	0.18 J	7.6	9.4	0.27 J
CHLOROMETHANE	0.43 J B	0.24 J B	< 1.7	< 1	0.29 J B
CHLOROPRENE	< 2	< 2	< 3.3	< 2	< 2
CIS-1,2-DICHLOROETHENE	< 1	< 1	2.8	3.2	0.9 J
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1.7	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1.7	< 1	< 1
DIBROMOMETHANE	< 1	< 1	< 1.7	< 1	< 1
DICHLOROFLUOROMETHANE	< 2	< 2	< 3.3	< 2	< 2
ETHYL METHACRYLATE	< 1	< 1	< 1.7	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1.7	< 1	< 1
IODOMETHANE	< 1	< 1	< 1.7	< 1	< 1
ISOBUTANOL	< 50	< 50	< 84	< 50	< 50
METHACRYLONITRILE	< 2	< 2	< 3.3	< 2	< 2
METHYL METHACRYLATE	< 2	< 2	< 3.3	< 2	< 2
METHYLENE CHLORIDE	< 1	< 1	< 1.7	< 1	< 1
PROPIONITRILE	< 4	< 4	< 6.7	< 4	< 4
STYRENE	< 1	< 1	< 1.7	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1.7	< 1	< 1
TOLUENE	0.33 J	< 1	< 1.7	0.24 J	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	0.53 J	0.65 J	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1.7	< 1	< 1
TRANS-1,4-DICHLORO-2-BUTENE	< 1	< 1	< 1.7	< 1	< 1
TRICHLOROETHENE	< 1	0.39 J	7.4	8.1	0.38 J
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1.7	< 1	< 1
VINYL ACETATE	< 2	< 2	< 3.3	< 2	< 2
VINYL CHLORIDE	< 1	< 1	0.71 J	0.72 J	< 1
XYLENES (TOTAL)	< 2	< 2	< 3.3	< 2	< 2

Blank Cell=Not Analyzed
See data validation memo for definitions of data qualifiers
VOCs = Volatile Organic Compounds
GW = Ground Water
QDUP = Duplicate Sample
RERAN = Laboratory Reanalyzed Sample
µg/L = micrograms per liter

APPENDIX I (VCAA Documentation):

A. **UPI Quality Assurance Project Plan (QAPP)**

B. **UPI Well Search Document**

C. **EMD Chemicals Inc. Norwood Facility Zoning Designation and Applicable Ordinance.**

D. **Technical Memorandum "Current Status of Solid Waste Management Units and Areas of Concern Specified in the PA/VSI Report"**

E. **UPI Statements of Work (SOWs)**

F. **2005 UPI Report (Text, Tables, Figures)**

Appendix II (Field Collected Data):

A. UPI Boring and Well Construction Logs

B. UPI Ground Water Collection Forms

C. Slug Test Curves

Appendix III (Analytical Reports and Data):

A. UPI Laboratory Analytical and Geotechnical Reports

B. UPI Data Validation Memoranda

C. Graphs of VOC-COCs vs. Time

EMD Chemicals Inc.
RCRA Voluntary Agreement
Facility History

The Payne Firm, Inc.
CH2M Hill, Inc.
July 28, 2004

Facility History

- Facility used for chemical manufacturing (late1940s to present).
- Facility has mainly been utilized for the high purity distillation, formulation, repackaging, and warehousing of organic and inorganic chemicals, and acids.
- Facility owned and operated by Matheson Coleman & Bell and later MC/B Chemist from 1954 to 1973.
- G.D. Searle owned and operated Facility from 1973 to 1977.
- EM Industries, Inc. (EMI) purchased Facility in 1977, and operated it as a division called "EM Science, Inc."
- EMI and EM Science were incorporated into EMD Chemicals Inc. in 2002.
- EMD Chemicals Inc. is an affiliate of Merck KGaA, Darmstadt, Germany.

Facility History

- West Ravine
  - -filled from the 1950s to the 1970s in three distinct sections (upper, middle, lower).
  - -mainly filled with construction fill materials and non-engineered soil
  - -lower portion contains glass chemical bottles and debris (e.g. over-stocks and out-of-spec chemicals).
  - -clay tile pipe at the bottom of the ravine; discharges to the sump at the Mouth of the West Ravine

- East Ravine
  - -filled from the 1940s to the 1970s
  - -non-engineered soil; no chemical waste or debris
  - -very little construction debris
  - -84-inch storm sewer at the bottom of the ravine.

Chronological Regulatory History

- **November 19, 1980**, Part A permit application received by USEPA.
- **1981**, USEPA/OEPA RCRA inspections document contaminated leachate at the Mouth of the West Ravine.
- **February 4, 1982**, USEPA notifies EMD that its Part A application is complete with respect to Section 3005 (e) interim status requirements.
- **May 4, 1982**, Modified Part A application received by USEPA.
- **July 2, 1982**, EMD requests to change Facility operation from interim status to generator.

Chronological Regulatory History

- **August 17,1982**, EMD submits closure plan to USEPA for "main hazardous storage area" to fulfill change in hazardous waste status request.
- **October 20,1982**, OEPA recommends to USEPA approval of EMD's request to designate Facility as non-TSD generator.
- **December 3,1990**, RCRA PA/VSI report completed.
- **December 24, 1992**, EMD enters into a Consent Order with OEPA to conduct a RI/FS.
- **May 2004**, OEPA Consent Order satisfied.
- **July 2004**, EMD signs RCRA Voluntary Agreement with USEPA.

Other Pre-OEPA Consent Order Events

- 1982-1985—G.D. Searle Litigation/Settlement
- 1984-1992—Voluntary Investigations and Interim Actions Conducted by EMD
    a. Sump Collection/Treatment at Mouth of West Ravine (1984)
    b. French Drain Ground Water Collection/Treatment (1987)
    c. Storm Water Management (1991)
    d. P6A Ground Water Pumping and Treatment (1992-1998)

SWMUs Identified in 1990 PA/VSI

1. Building 4 HW Drum Storage Area
2. Main HW Drum Storage Area
3. pH Neutralization Treatment System
4. New Tank Farm
5. Waste Distillate Collection System
6. Building 10/East Ravine Discharge; and French Drain ground water collection system
7. Building 10 Sewer Line and West Ravine Fill
8. Old Tank Farm and Spent Oleum Waste Pit
9. Building 4 Floor Trench
10. West Ravine Leachate and Collection Sump

AOCs Identified in 1990 PA/VSI

- Feedstock Drum Storage Areas
- Process Air Release Controls

Chronology of OEPA Consent Order Events

- 1993-1996—EMD site Remedial Investigation including SWMUs identified in PA/VSI.
- 1997-1999—EMD Treatability Studies and Draft Feasibility Study.
- 2001-2004—OEPA Completion of Feasibility Study.
- 1993-Present—Monthly monitoring of French Drain and Sump Collection interim actions (P6A capture well shut-down in 1998).

Remedial Investigation

- Soil contamination focused to central portion of the Facility.
- Ground contamination restricted to perched ground water system (PGWS).
- PGWS underlain by 75 to 85 feet of low-permeability glacial till and unsaturated sand and gravel.
- Norwood Trough Aquifer located 160 feet below the surface (Sole Source Aquifer).
- VOCs are the primary contributor to current and future risk. VOCs above risk-based or ARAR-based standards exist in portions of fill, soil, and in the PGWS.

OEPA FS Range of Remedial Alternatives

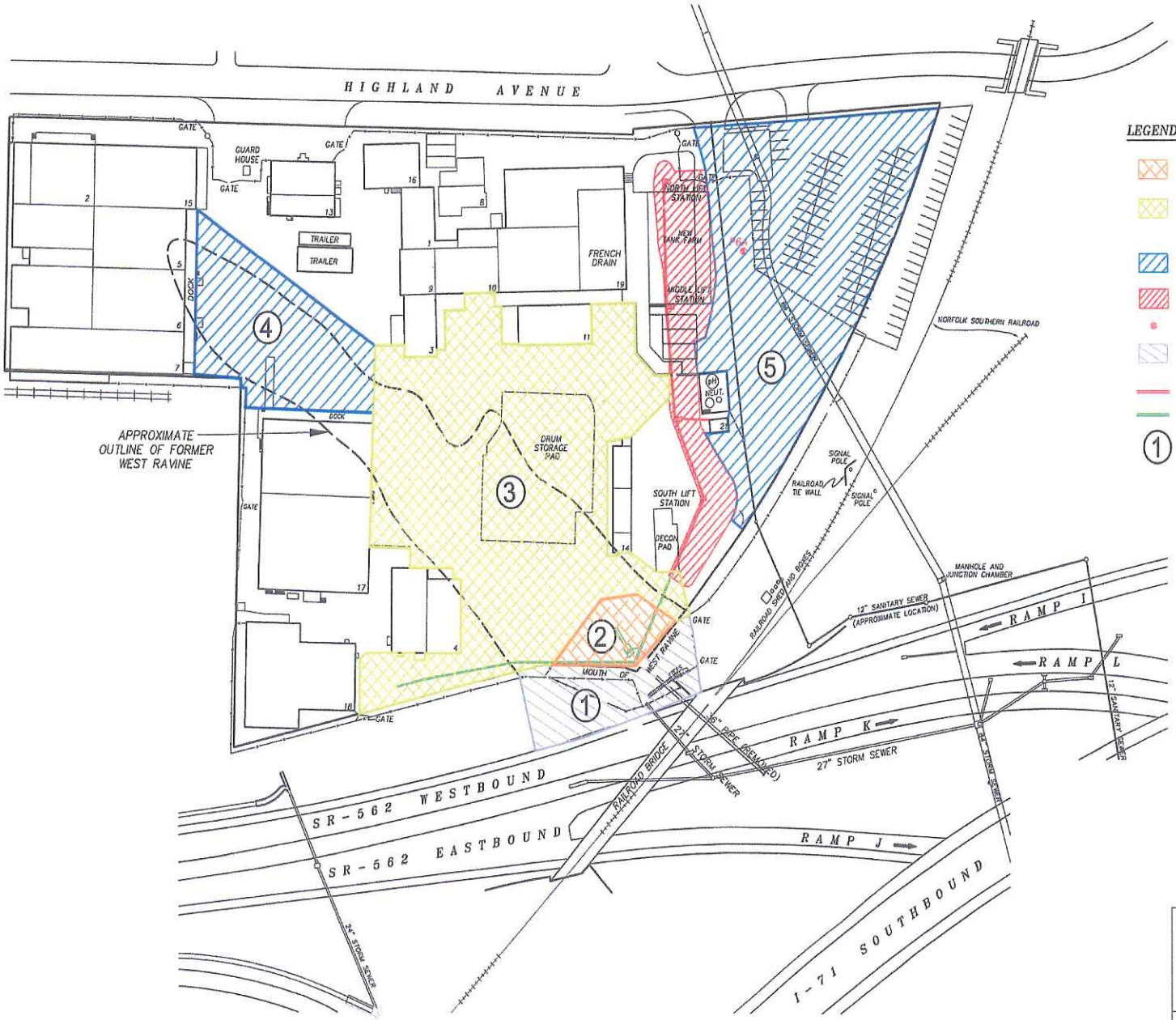
Containment of Soil, and Ground Water Collection, and Treatment (GWCT)

-Multi-Layer Cap over Middle West Ravine

Containment of Soil, and GWCT

-MatCon Asphalt Cap over Middle West Ravine

Soil Excavation, Containment, and GWCT



SOURCE: Modified from The Payne Firm, Inc. 2001.

FIGURE 4-2
ALTERNATIVE 3-
PERIMETER LEACHATE COLLECTION, LIMITED ON-PROPERTY EXCAVATION, DISPOSAL, AND ON-PROPERTY CONTAINMENT (PREPARED GRADE)

EM SCIENCE SITE

OhioEPA Ohio Environmental Protection Agency