CITY OF SPRINGFIELD

Construction Release Abatement Measure (RAM) Completion Report

Former Chapman Valve Manufacturing Facility, 225 Goodwin Street

Springfield, Massachusetts

RTN: 1-00616

January 2009

Weston&Sampson ENGINEERS, INC.

Report

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Letter of Transmittal

January 15, 2009

TO:

Mr. Brian Connors
Planning & Economic Development
70 Tapley Street
Springfield, MA 01104

WE ARE SENDING YOU [x] Attached [ ] Under separate cover via _____ the following items:

[ ] Shop Drawings [ ] Prints [ ] Plan [ ] Sample Report [ ] Specifications
[ ] Copy of Letter [ ] Change Order [ ] Schedule Application

COPIES	DATE	NO.	DESCRIPTION
1 copy	1/15/09	1	Construction Release Abatement Measure (RAM) Completion Report Former Chapman Valve Manufacturing Facility RTN: 1-00616

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1.0 INTRODUCTION

1.1 General

Weston & Sampson, on behalf of the City of Springfield, has prepared this Construction Release Abatement Measure (RAM) Completion Report for the Former Chapman Valve Manufacturing Facility Building Demolition project located at 225 Goodwin Street in Springfield, Massachusetts (the Site). The purpose of this Construction RAM Completion Report is to document the response actions conducted during building demolition and removal of underground storage tanks (USTs) at the Site, that the objectives of the RAM Plan have been met and that all ongoing remedial actions related to the RAM have been terminated. The City of Springfield acquired the Site through non-payment of taxes and, as a result, is undertaking voluntary response actions. In accordance with those response actions and a letter dated November 8, 2007, the City is not considered a Potentially Responsible Party with liability for response action cost and damages under M.G.L. c. 21e. Since the City is electing to conduct response actions voluntarily, the City is not obliged to meet any deadline requirements specified under the Massachusetts Contingency Plan (MCP).

1.2 Background and Site Location

The Site is located in an industrial/residential section of Springfield, Massachusetts. A site locus map is included in Figure 1. The Goodwin Street property is a former steel foundry site consisting of an 11.9-acre parcel and a 141,000-square foot, generally rectangular, industrial building. A release had occurred from a group of six underground storage tanks (USTs), which were located near the northwest corner of the Site building. The oil release at the Site is listed by the Massachusetts Department of Environmental Protection (DEP) under the name American Dream Modular Homes, release tracking number (RTN) 1-0616, and is listed as a confirmed Tier II disposal site. The release of petroleum from the subject USTs was first reported to DEP in January 2001. A more detailed description of the Site is provided in Section 2.0 of this report.

A Phase I Report and Tier Classification for the No. 6 fuel oil storage tank release on 225 Goodwin Street was prepared by O'Reilly, Talbot, & Okun Associates, Inc. (OTO) in March 2002. The disposal site score was 133, supporting a Tier II Classification. OTO also conducted several investigations and subsurface explorations between 2000 and 2003 in order to characterize the possible presence, nature, and extent of oil and hazardous material (OHM) in soil and groundwater. The investigations included soil borings and monitoring well installation, field screening of soil samples, and laboratory analysis of soil samples and groundwater samples. A Phase II Comprehensive Site Assessment Report/Phase III Remedial Action Plan for the oil release was prepared by OTO in June 2003.

2.0 RAM COMPLETION STATEMENT

The MCP requirements for the RAM Completion Report (310 CMR 40.0445) are shown below in ***italic*** text and the RAM activities are shown in normal text. The original signed and stamped BWSC-106 form is attached with a copy included in Appendix A. Laboratory reports are included in Appendix B. A copy of the Bill Of Lading (BOL) is included in Appendix C. The originals have been sent to DEP under a separate cover.

(a) A description of the release or threat of release, site conditions, and surrounding receptors;

On January 10, 2001, the City of Springfield submitted a Release Notification form to the DEP regarding a release of petroleum hydrocarbons from a group of six 15,000-gallon underground storage tanks (USTs), which were located near the northwest corner of the Site building. underground storage tanks located near the northwest corner of the site building. This notification was based upon subsurface information collected from the Phase II Comprehensive Site Assessment (CSA). The data indicated that petroleum constituents were present in soil adjacent to the underground storage tanks above the RCS-1 reportable standard.

Description of the Release

Releases of OHM to Soil

Selected soil samples from the soil borings that were performed by O'Reilly, Talbot & Okun Associates, Inc (OTO) were submitted to Amro Environmental Laboratories of Merrimack, New Hampshire for laboratory analysis. Parameters analyzed included Volatile Organic Compounds (VOCs), Extractable and Volatile Petroleum Hydrocarbons (EPH/VPH), Polychlorinated Biphenyls (PCBs), and RCRA-8 metals.

The soil analytical data is included in Appendix B. Three chlorinated VOCs, various petroleum constituents (VOCs, VPH, and EPH), one PCB Aroclor, and four metals were detected. Six analytes were detected in at least one soil sample above their respective Reportable Concentration RCS-1 Standard, (1,1-dichloroethene; C_9-C_{10} aromatic hydrocarbons; C_{11}-C_{22} aromatic hydrocarbons; methylene chloride; 2-methylnapthalene, and benzo(a) anthracene). These analytes were detected in samples from borings EP-1 or EP-4, both of which were located near/between the USTs. Each of these analytes is likely a constituent of petroleum, except 1,1-dichloroethene, which is a chlorinated VOC.

Low levels of chlorinated VOCs have historically been detected in groundwater at the site. C_9-C_{10} aromatic hydrocarbons, C_{11}-C_{22} aromatic hydrocarbons, 2-methylnapthalene, and benzo(a) anthracene are petroleum constituents that are likely associated with leaks from the tanks. Petroleum stained soils and/or odors were observed at depths of 9 to 17 feet in borings EP-1 and EP-4, indicating that at least one of the USTs in the area had leaked. As a result of these detections, a Release Notification Form was submitted to MADEP by the City of Springfield in January 2001.

Four near surface soil samples were collected to assess soil quality at other locations on the site. Sample results indicated that there were no detections above MCP reportable concentrations in these soils.

Releases of OHM to Groundwater

Groundwater samples were collected by OTO in August 2000 and February 2003 and submitted to Amro Environmental Laboratory for analysis of VOCs by EPA Method 8260, EPH/VPH, and dissolved RCRA-8 metals. Groundwater analytical data indicated that low levels of chlorinated VOCs were reported in three of the wells sampled. Petroleum constituents (VPH and EPH) were identified in groundwater in three locations in the tank vicinity. Two metals (arsenic and barium) were reported in groundwater, but at low concentrations likely due to background geologic conditions.

Acetone was reported in groundwater from four monitoring wells that were installed by Corporate Environmental Advisors, Inc. (CEA). This compound was not detected in any of the wells installed by OTO, even ones in the same vicinity of the site. Based on the absence of a pattern to detection and its presence only in CEA wells, it was believed by OTO that the source of acetone might have been bentonite pellets used during well installation. In the Phase II CSA report, OTO stated that certain brands of coated bentonite pellets have been found to contribute significant concentrations of acetone to groundwater (DEP, 2003). Acetone concentrations did not exceed MCP Method 1 Standards.

Site Conditions and Surrounding Receptors

The Goodwin Street property is a former steel foundry site consisting of an 11.9-acre parcel and a 114,000 square foot, generally rectangular, industrial building. The approximate geographical coordinates for the property are as follows:

UTM Coordinates:	4,669,460 m N 706,640 m E
Latitude/Longitude:	42° 09' 07" N 72° 29' 57" W

The City's objective was to demolish the site building, remove UST's and remediate associated soil and level the Site as a prelude to Site development in the future. Prior to the Site work, the land around the site building was generally overgrown with brush and small trees. An abandoned railroad siding was present on the east and west sides of the building. The railroad tracks had been removed, however, the stone ballast is still present. Significant quantities of construction debris, electrical equipment, manufacturing equipment, miscellaneous trash, and concrete rubble were located around the building exterior.

The Site building included a single story manufacturing area and a small two-story office area. The manufacturing portion of the building was a large open space with high ceilings and a concrete slab on grade. At least two small basements were located in the southeast and southwest corners of the manufacturing area. Portions of the structures were damaged by a fire started on the interior of the building. The building was of steal frame construction. Most of the upper exterior walls were constructed of transite board. The roof had multiple levels and was constructed with an asphalt membrane.

The site abutters consist of: the Truss Engineering Corporation to the east; Goodwin Street followed by vacant land which was formerly part of the Chapman Valve Manufacturing Facility to the north; residential properties to the west; and the former Chapman Valve Casting Sand Landfill to the south.

No institutions specified in 310 CMR 40.0483 (1)(a)(7) are located within 500 feet of the Site. No natural resource areas as described in 310 CMR 40.0483 (1)(a)(8) are located within 500 feet of the Site. Based on review of Massachusetts GIS maps (Figure 3), a reconnaissance of the area, and review of USGS topographic maps, and discussion with local officials, none of the following natural resource areas are located within 500 feet of the Site:

1. Mapped surface waters, including wetlands, vernal pools, ponds, lakes, streams, rivers and reservoirs;
2. Public drinking water supplies consisting of Zone II areas, Interim Wellhead Protection areas, Zone A areas, or Potentially Productive Aquifers; or
3. Areas of Critical Environmental Concern, Sole Source Aquifers, local, state or federal open protected space, fish habitats and habitats of Species of Special Concern or Threatened or Endangered Species.

(b) A description of the Release Abatement Measure completed at the disposal site, including work undertaken in response to any conditions of approval imposed by the Department;

The Construction RAM Plan described anticipated MCP response actions that might be encountered during Site work related to demolition, foundation work and removal of the UST's. The potential activities consisted of:

- Excavation and disposal of OHM-Contaminated Soil
- Underground Storage Tank Removal
- Recovery of Separate-Phase Product
- Treatment of contaminated groundwater (if encountered)
- Containing Sudden Releases of OHM

RAM activities consisted primarily of the removal of UST's and associated impacted soil as well as management of debris encountered at the Site. Please note that debris was encountered below slabs at various locations. The nature of the debris varied from fill to specific areas of contaminated OHM (asbestos debris, solid waste). If contamination was suspected or

encountered then it was handled appropriately. If the material was primarily fill with no recognized contamination it was left at the Site.

In general foundation was cut to approximately 4 feet below grade. Some foundation existed 15 feet below grade. All foundation below 4 feet were left in place. Concrete from shallow foundation was crushed and used as shallow backfill in accordance with DEP's asphalt, sand and concrete (ABC) policy.

UST's

MCP response actions under the RAM were related to the removal of 6 15,000-gallon USTs and the management of associated contaminated soil. In each case minimal groundwater was observed at the base of the excavation and as such groundwater dewatering was not required.

UST#1 and UST#2

On December 19, 2007 Weston & Sampson observed initial excavation activities at the Site in accordance with the September 2007 Construction RAM Plan. See Figure 2 for the approximate area where excavation activities were conducted. Soil was observed for visual and olfactory evidence of petroleum contamination and screened for total volatile organic compounds (TVOCs) with a photoionization detector (PID) using the DEP-recommended jar headspace analytical screening procedure every 20 cubic yards (cy). PID readings ranged from <0.1 parts per million (ppm) to 8 ppm. Approximately 6 cy of contaminated soil was stockpiled on and covered by 6-mil poly sheeting. During excavation activated asbestos was encountered attached to the west concrete wall of UST#1. Excavation activities were immediately stopped and an asbestos hygienist was notified in order to define the extent of the asbestos contamination.

On January 4 & 7 2008, Weston & Sampson returned to the Site and documented the removal and excavation of two 15,000-gallon No. 2 fuel oil USTs (UST 1 and UST 2). Please see Figure 2 for UST removal locations. Weston & Sampson excavated to an average depth of approximately 18 feet below grade and stockpiled approximately 100 cy of petroleum-contaminated soil on 6-mil poly sheeting. Confirmatory soil samples were taken from the sidewalls and bottom of the excavation. The samples were submitted to a Massachusetts-certified laboratory for the analysis of extractable and volatile petroleum hydrocarbons (EPH/VPH) with target polycyclic aromatic hydrocarbons (PAHs) and target volatile organic compounds (VOCs).

Mr. John S. Bourcier from DEP was on Site January 4, 2008, and Ms. Caprice G. Shaw from DEP was on Site January 7, 2008, to observe excavation and UST removal activities conducted by Weston & Sampson. See Figure 2 for the approximate area where excavation activities and UST removal activities were conducted.

During excavation and UST removal, soil was observed for visual and olfactory evidence of petroleum contamination and screened for TVOCs with a PID using the DEP-recommended jar headspace analytical screening procedure every 20 cy. PID readings ranged from <0.1 ppm to 107 ppm. Please see Table 1 for PID screening results. Gray petroleum stained soils and a moderate petroleum odor were detected in soils from approximately 15 and 19 feet below ground surface (bgs).

Limited groundwater was encountered at approximately 15 feet below grade. Dewatering was not conducted because soils encountered at the bottom of the excavation appeared to be reddish brown till with low permeability that limited the amount of groundwater entering the excavation. Due to the limit of reach of the excavator and the difficulty in excavating the till, excavation was terminated at approximately 20 feet bgs. Grossly impacted soils were removed however some residual petroleum-impacted soils were left in place at depths >15 feet below ground surface. After excavation was terminated Weston & Sampson collected two confirmatory samples from the bottom of the excavation. The excavation was not backfilled until further evaluation from abutting tanks was completed and the data reviewed.

The USTs were in fair condition. No holes were observed. Pits and rusted areas were observed. Possible releases from both USTs were observed due to evidence of petroleum-stained soil observed on the west end wall of UST 1 and the east end wall of UST 2.

On January 7, 2008 the two 15,000-gallon USTs were transported off-Site by Associated Building Wreckers, Inc. Springfield, Massachusetts and taken to Mass Tank Disposal, Chicopee, Massachusetts, an approved tank disposal yard, in accordance with the provisions of M.G.L. Chapter 148, Section 38A, 527 CMR 9.00.

On January 8, 2008 Weston & Sampson collected one water sample from a raceway approximately 10 inches deep containing approximately 1 inch of standing water. The source of the water may have been floor runoff generated during cleanout of the boiler room. The raceway contained pipes leading from the USTs into the building. The sample was submitted to a Massachusetts-certified laboratory for the analysis of EPH/VPH, VOCs, polychlorinated biphenyls (PCBs), and total unfiltered Resource Conservation and Recovery Act (RCRA) 8 metals. See Figure 2 for pipe raceway location.

Weston & Sampson also collected one water sample from a sub-floor concrete vault located inside the boiler room where oily water was observed. The source of the water could not be determined. During sampling, Weston & Sampson observed that the vault contained an undetermined thickness of non-aqueous phase liquid (NAPL) similar to No. 2 fuel oil. The sample was submitted to a Massachusetts-certified laboratory for the analysis of EPH/VPH, VOCs, PCBs, and total unfiltered RCRA 8 metals. See Figure 2 for pipe raceway and vault locations.

<u>UST#3 and UST#4</u>

On January 29 & 30 2008, Weston & Sampson documented the removal and excavation of two 15,000-gallon No. 6 fuel oil USTs (UST#3 and UST#4) by the contractor, Associated Building Wreckers (ABW). See Figure 2 for the approximate area where excavation activities and UST removal activities were conducted. Caprice G. Shaw from DEP was on Site on January 30, 2008, to observe excavation and UST removal activities conducted by ABW.

During excavation and UST removal, soil was observed for visual and olfactory evidence of petroleum contamination and screened for total volatile organic compounds (TVOCs) with a

photoionization detector (PID) using the DEP-recommended jar headspace analytical screening procedure every 20 cubic yards (cy). PID readings ranged from <0.1 parts per million (ppm) to 8 ppm. Please see Table 1 for PID screening results. Black petroleum stained soils and a moderate petroleum odor were detected in soils from approximately 6 feet below ground surface (bgs). Weston & Sampson observed soil contamination along the east wall of the excavation. Oil appeared to have leaked from the supply/return piping and raceway at this location. ABW excavated to an average depth of approximately 16 feet below grade and stockpiled approximately 60 cy of petroleum-contaminated soil on 6-mil poly sheeting.

Confirmatory soil samples were taken from the sidewalls and bottom of the excavation. The samples were submitted to a Massachusetts-certified laboratory for the analysis of extractable and volatile petroleum hydrocarbons (EPH/VPH) with target polycyclic aromatic hydrocarbons (PAHs) and target volatile organic compounds (VOCs).

Limited groundwater was encountered at approximately 15 feet below grade. Weston & Sampson observed some petroleum varying from a sheen to between 1/8 - and ½-inch of oil on groundwater. Given that the petroleum is consistent with the original release and that response actions are underway, Weston & Sampson discussed with DEP if additional reporting was required. It was agreed that because a method for documentation was in place, no additional reporting was required. Once the impacted soil was removed the sheen dissipated.

UST #3 was observed to be in poor condition with areas of severe pitting and rusting. Three holes (0.5-1.5 inches diameter) were observed on UST #3. UST #4 was observed to be in fair condition with areas of significant pitting and rusting. A possible release from UST #3 was observed due to evidence of petroleum-stained soil observed on the south and west end wall and bottom of UST #3. The two 15,000-gallon USTs were transported off-Site by ABW and taken to Mass Tank Disposal, Chicopee, Massachusetts, an approved tank disposal yard, in accordance with the provisions of M.G.L. Chapter 148, Section 38A, 527 CMR 9.00.

<u>UST #6</u>

On February 4, 2008, Weston & Sampson returned to the Site to document the removal and excavation of one 15,000-gallon No. 6 fuel oil UST (UST #6) by ABW. See Figure 2 for the approximate area where excavation activities and UST removal activities were conducted.

During excavation and UST removal, soil was observed for visual and olfactory evidence of petroleum contamination and screened for TVOCs with a PID using the DEP-recommended jar headspace analytical screening procedure every 20 cy. PID readings ranged from <0.1 ppm to 3.8 ppm. Please see Table 1 for PID screening results. Weston & Sampson observed black petroleum stained soils at approximately 4 feet bgs and observed soil contamination along the east wall of the excavation. Oil appeared to have leaked from the supply/return piping and raceway at this location. ABW excavated to an average depth of approximately 16 feet below grade and stockpiled approximately 30 cy of petroleum-contaminated soil on 6-mil poly sheeting.

Confirmatory soil samples were taken from the sidewalls and bottom of the excavation. The samples were submitted to a Massachusetts-certified laboratory for the analysis of EPH/VPH with target PAHs and target VOCs.

Limited groundwater was encountered at approximately 15 feet below grade. Weston & Sampson observed a sheen of oil on groundwater.

UST #6 was observed to be in fair condition with areas of moderate pitting and severe rusting. The 15,000-gallon UST was transported off-Site by ABW and taken to Mass Tank Disposal, Chicopee, Massachusetts, an approved tank disposal yard, in accordance with the provisions of M.G.L. Chapter 148, Section 38A, 527 CMR 9.00.

UST #5

On February 13, 2008, Weston & Sampson returned to the Site to document the removal and excavation of one 15,000-gallon No. 6 fuel oil UST (UST #5) by the ABW. See Figure 2 for the approximate area where excavation activities and UST removal activities were conducted.

During excavation and UST removal, soil was observed for visual and olfactory evidence of petroleum contamination and screened for TVOCs with a PID using the DEP-recommended jar headspace analytical screening procedure every 20 cy. TVOCs were not detected. Please see Table 1 for PID screening results. Weston & Sampson observed soil contamination along the east wall of the excavation. Oil appeared to have leaked from the supply/return piping and raceway at this location. ABW excavated to an average depth of approximately 16 feet below grade and stockpiled approximately 5 cy of petroleum-contaminated soil on 6-mil poly sheeting.

Confirmatory soil samples were taken from the sidewalls and bottom of the excavation. The samples were submitted to a Massachusetts-certified laboratory for the analysis of EPH/VPH with target PAHs and target VOCs.

Limited groundwater was encountered at approximately 15 feet below grade. Weston & Sampson did not observe petroleum impacts to the groundwater.

UST #5 was observed to be in fair condition with areas of moderate pitting and severe rusting. The 15,000-gallon UST was transported off-Site by ABW and taken to Mass Tank Disposal, Chicopee, Massachusetts, an approved tank disposal yard, in accordance with the provisions of M.G.L. Chapter 148, Section 38A, 527 CMR 9.00.

It must be noted that the pit bottom samples were all below 15 feet bgs.

On April 8, 2008 approximately 182 cubic yards of contaminated soil generated from excavation and UST removal activities and transported under a Bill Of Lading (BOL) offsite to an accepting asphalt batch facility.

On March 1, 2008 Weston & Sampson returned to the site to resampled the water from the raceway and from the concrete sub-floor vault that was previously sampled in January 2008. The

raceway was approximately 10 inches deep containing approximately 1 inch of standing water. The source of the water may have been floor runoff generated during cleanout of the boiler room. The raceway contained pipes leading from the USTs into the building. The vault was located inside the boiler room where oily water was observed. The source of the water could not be determined. The sample was submitted to a Massachusetts-certified laboratory for the analysis of EPH/VPH, VOCs, polychlorinated biphenyls (PCBs), and total unfiltered Resource Conservation and Recovery Act (RCRA) 8 metals. See Figure 2 for pipe raceway location.

On May 23, 2008 Weston & Sampson collected one perched water (stormwater runoff, dust control water, and building washdown water) sample from the sub-floor where water was observed for analysis of the City of Springfield Water and Sewer Commission (SWSC) required temporary discharge parameters. The sample was submitted to a Massachusetts certified laboratory.

In accordance with the Temporary Discharge Permit (TDP #81146) obtained by the SWSC dated June 11, 2008 Weston & Sampson discharge approximately 25,000 gallons of water from the raceway, concrete vault and foundry basement to adjacent SWSC sanitary sewer.

Other Suspect OHM

The contractor discovered discrete areas of potential OHM below slab at various locations across the Site (Figure 4). These include an area of black soil (black ash/foundry sand), an area of debris with potential asbestos containing material and a former storage bin area filled with oil-impacted wood blocks. In addition a number of vaults were discovered below the slab. Some of the vaults contained perched water.

On July 2 & 10, 2008 Weston & Sampson returned to the Site to collected samples of the black ash/foundry sand with a petroleum odor found beneath slab (see Figure 4). The soil and groundwater samples collected were submitted to a Massachusetts-certified laboratory for the analysis of EPH/VPH with target PAHs and target VOCs as well as for RCRA 8 Metals. Please see Figure 4 for location.

On August 5, 2008 Weston & Sampson observed suspect asbestos containing material (ACM) found beneath slab at a specific location that appeared to be corrugated transite heat shields. The contractor was directed to have the suspect ACM evaluated for ACM and to dispose of as needed. Please see Figure 4 for location.

On August 12, 2008 one 55-gallon steel drum containing unknown hazardous material was found beneath the floor at the site by the contractor. Please see Figure 4 for location.

On August 13, 2008 Weston & Sampson returned to the Site to sample wood blocks from the former floor. Two samples were collected and submitted to a Massachusetts-certified laboratory for the analysis of PCBs. Please see Figure 4 for location.

(c) All investigatory and monitoring data obtained during the implementation of the Release Abatement Measure;

USTs

Sidewall and pit bottom soil samples from the grave of the six USTs were submitted to a Massachusetts-certified laboratory for the analysis of EPH/VPH with target PAHs and target VOCs as well as VOC analysis. The confirmatory soil analytical results from the excavation walls and bottom are presented in Table 2 and the laboratory data is provided in Appendix B. The analytical results indicate that all sidewall samples were below applicable Method 1 standards. The analytical results indicate that of the six pit bottom samples taken, three of the samples were below applicable Method 1 standards. Two of the samples exceeded the applicable Method 1 standard for C_9-C_{18} aliphatics, C_{11}-C_{22} aromatics, and C_9-C_{10} aromatics, and 1 sample exceeded the applicable Method 1 standard for benzo(a)pyrene. Please see Table 2 for soil analytical results.

Concrete Subfloor Vault/ Raceway in Boiler Room

The laboratory results for the raceway collected on January 8, 2008 indicated non-detect for PCBs and VPH. EPH fractions C_9-C_{18} Aliphatics and C_{19}-C_{36} Aliphatics were detected at concentrations below their respective Method 1 Cleanup Standards and EPH fractiionC_{11}-C_{22} Aromatics were detected at concentrations above the applicable Method 1 Cleanup Standards for groundwater category GW-1. Concentrations of barium, cadmium, chromium and mercury were detected at concentrations below their respective Method 1 Cleanup Standards. Lead was detected above the applicable Method 1 Cleanup Standards for groundwater category GW-1. The raceway in boiler room analytical results are presented in Table 4 and the laboratory data is presented in Appendix B.

Laboratory results for the Concrete Subfloor Vault collected on January 8, 2008 indicated non-detect for PCBs and VPH. EPH fraction C_{19}-C_{36} Aliphatics were detected at concentrations below their respective Method 1 Cleanup Standrads. EPH fraction C_{11}-C_{22} Aromatics were detected at concentrations above the applicable MCP Method 1 Clean-up Standards for groundwater category GW-1. Concentrations of barium, cadmium, chromium and mercury were detected at concentrations below their respective Method 1 Cleanup Standards. Lead was detected above the applicable Method 1 Cleanup Standards for groundwater category GW-1. The concrete subfloor vault analytical results are presented in Table 3 and the laboratory data is presented in Appendix B.

The March 2008 laboratory results collected from the raceway indicated concentration of copper and nickel below their respective Method 1 Cleanup Standards. Zinc was detected above the applicable Method 1 Cleanup Standards for groundwater category GW-1. The raceway in boiler room analytical results are presented in Table 3 and the laboratory data is presented in Appendix B.

The March 2008 laboratory results collected from the concrete subfloor vault indicated concentrations of copper and zinc at concentrations below their respective Method 1 Cleanup

Standards. The concrete subfloor vault analytical results are presented in Table 3 and the laboratory data is presented in Appendix B.

Concrete Subfloor Vault in Foundry

On May 23, 2008 Weston & Sampson collected one perched water (stormwater runoff, dust control water, and building washdown water) sample from the sub-floor vault where water was observed for analysis of the City of Springfield Water and Sewer Commission (SWSC) required temporary discharge parameters. Analytical results indicated the discharge water had contaminant concentrations below the SWSC allowable discharge limits. The concrete subfloor vault in the foundry analytical data is presented in Table 4 and laboratory data is present in Appendix B.

In accordance with the Temporary Discharge Permit (TDP #81146) obtained by the SWSC dated June 11, 2008 Weston & Sampson discharge approximately 25,000 gallons of water from the raceway, concrete vault and foundry basement to adjacent SWSC sanitary sewer.

Other Suspect OHM

The laboratory results for the black ash/foundry sand with a petroleum odor found beneath slab collected on July 2, 2008 indicated low levels of benzene, toluene, chromium and lead detected at concentrations below their respective MCP Method 1 Standards. Please see Table 5 for soil analytical results. The ash/foundry sand sample collected on July 10, 2008 detected benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene and dibenzo(a,h)anthracene at concentrations above the applicable Method 1 Standards for S-1/GW-1 and S-1/GW-3 soils. Low levels of barium, cadmium, chromium, lead, mercury, and silver were detected at concentrations below their applicable standards. The soil fill analytical results for samples collected on July 10, 2008 indicated that all analytes were detected below the laboratories reportable limit. The soil analytical results are presented in Table 5 and laboratory data is presented in Appendix B.

Laboratory results for the wood block samples collected on August 13, 2008 indicated non-detected for PCB's. The wood block sample analytical results are presented in Table 6 and laboratory data is presented in Appendix B.

(d) A succinct statement of findings and conclusions resulting from implementation of the Release Abatement Measure, including a statement as to whether the objectives of the Release Abatement Measure have been met;

The RAM activities performed between October 2007 and January 2009 associated with RTN 1-0616 to document the response actions conducted during building demolition, UST removal and disposal of contaminated soil and other OHM at the Site have been completed under this RAM and all ongoing remedial actions related to the RAM have been terminated.

(e) Details and documentation on the management of any Remediation Waste, Remedial Wastewater and/or Remedial Additives managed at the site as part of the Release Abatement Measure; and

Between April 8, 2008 and April 9, 2008, approximately 310 tons (approximately 180 cubic yards) of contaminated soil generated from UST excavation and removal activities was transported off-site to an accepting asphalt batch facility (Ted Ondrick Company, Chicopee, MA) under a Bill Of Lading (BOL). The BOL is included as Appendix C.1.

On January 5, 2009 approximately 92 tons (approximately 50 cubic yards) of contaminated ash fill/foundry sand material (excavated from beneath the building floor slab) was transported off-site for disposal to a licensed landfill facility (Connecticut Valley Landfill, Chicopee, MA) under a BOL. The BOL is included as Appendix C.2.

On October 29, 2008 approximately 195 tons of asbestos contaminated soil material (excavated from beneath the building floor slab) was transported off-site for disposal to a licensed asbestos disposal facility (Minerva Enterprise, Inc., Waynesburg, OH), in accordance with a DEP Conditional Approval letter (dated September 9, 2008). A Copy of the Conditional Approval letter and the material shipping documents is included as Appendix C.3.

Between December 7, 2007 and February 21, 2008, approximately 41,400 gallons of fuel oil generated from UST pump-out, cleaning and removal activities was transported off-site to various licensed disposal facilities under hazardous waste manifest documentation. The hazardous waste manifest documentation is included as Appendix C.4.

On November 19, 2008, a 55-gallon drum containing unknown hazardous materials (discovered beneath the building floor slab) was transported off-site to a licensed disposal facility (CWM Chemical Services, Model City, NY) under a hazardous waste manifest. A copy of the hazardous waste manifest is included as Appendix C.5.

(f) A description of any ongoing activities related to the Release Abatement Measure that will be conducted at the disposal site, including monitoring activities, and the maintenance of fences, caps and other passive systems.

No additional activities are required at the Site regarding RTN 1-0616. The RAM activities were conducted in accordance with the Construction RAM Plan. The Licensed Site Professional (LSP) Opinion is included in the attached RAM Transmittal form (BWSC-106).

Figures

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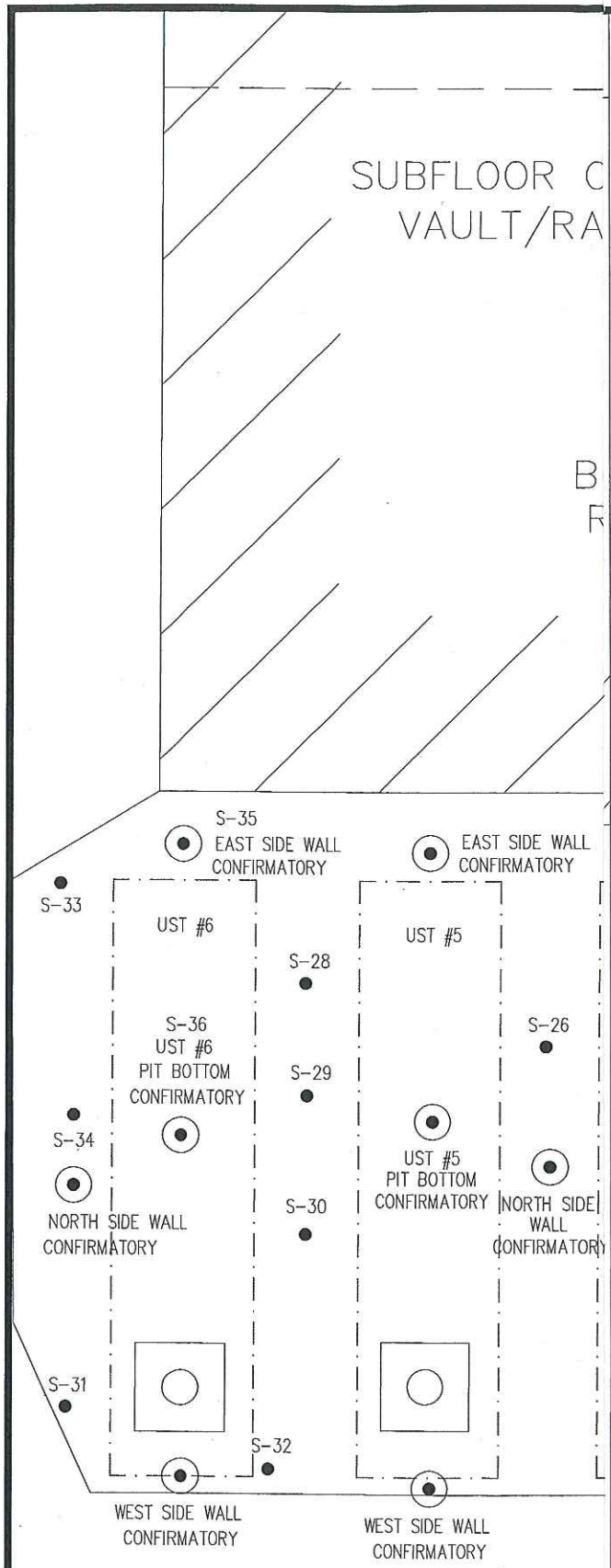

PID SAMPLE #	DEPTH (FEET BELOW GROUND SURFACE)	READING (PARTS PER MILLION BY VOLUME)
S-1	4	0.2
S-2	6	1.0
S-3	8	0.3
S-4	4	0.1
S-5	6	0.5
S-6	9	0.8
S-7	10	0.8
S-8	15	19
S-9	3.5	3.6
S-10	5	2.5
S-11	6	0.5
S-12	8	0.2
S-13	7	0.2
S-14	8	0.0
S-15	15	42
S-16	18	89
S-17	19	107
S-18	17	74
S-19	5	0.0
S-20	7	0.0
S-21	10	0.0
S-22	13	0.0
S-23	7	0.0
S-24	6	0.0
S-25	7	0.0
S-26	4	0.0
S-27	6	0.0
S-28	3	0.0
S-29	5	5.0
S-30	7	5.0
S-31	9	0.0
S-32	6	3.8
S-33	9	0.0
S-34	12.5	0.0
S-35	8	3.3
S-36	17	1.0

FIGURE 2

FORMER CHAPMAN VALVE MANUFACTURING FACILITY
SPRINGFIELD, MASSACHUSETTS

UNDERGROUND STORAGE TANK SITE PLAN
RTN 1-00616

DESIGNED BY: MAK	CHECKED BY: GDN	DATE: MARCH 2008

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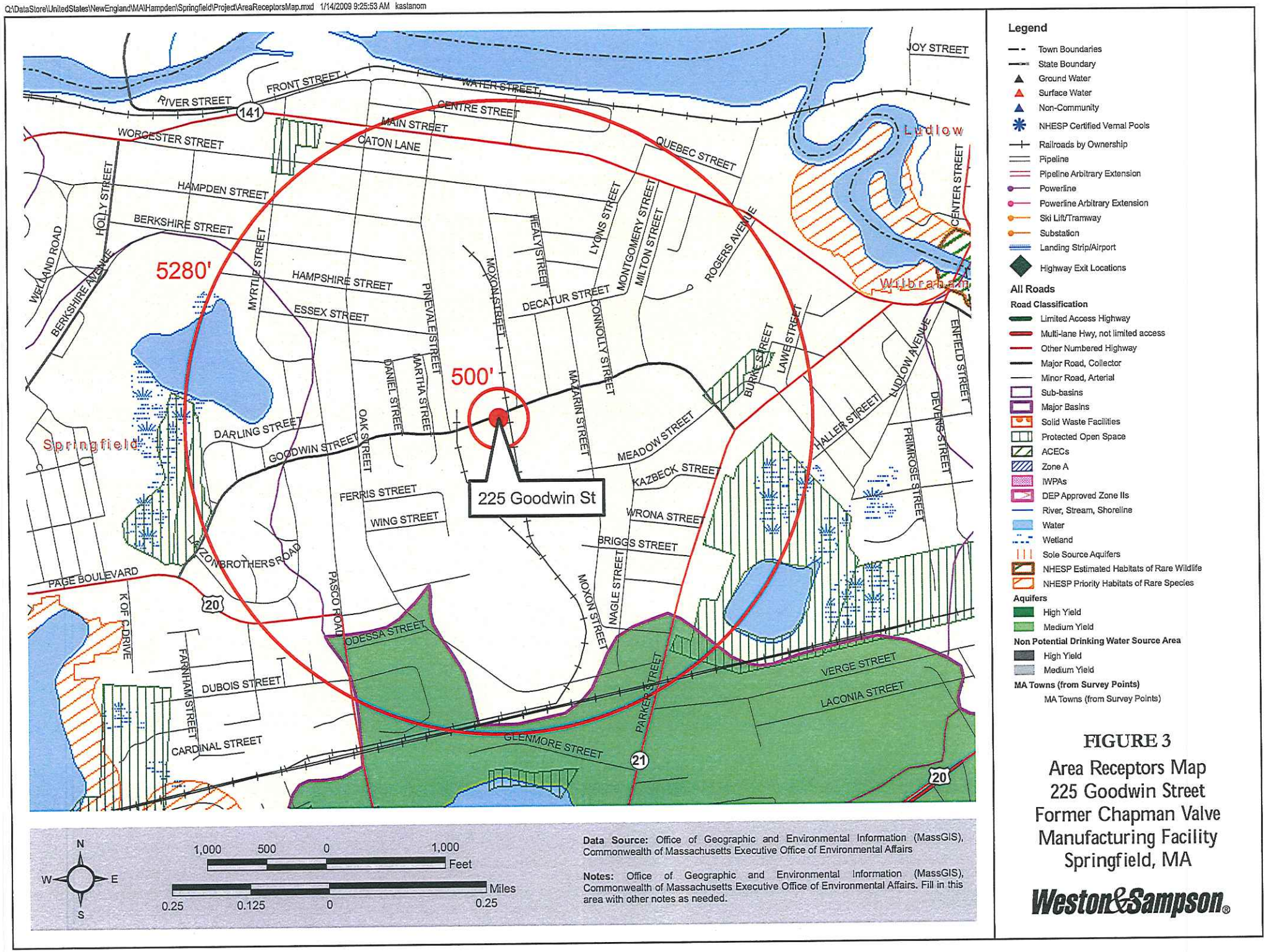

FIGURE 3

Area Receptors Map
225 Goodwin Street
Former Chapman Valve
Manufacturing Facility
Springfield, MA

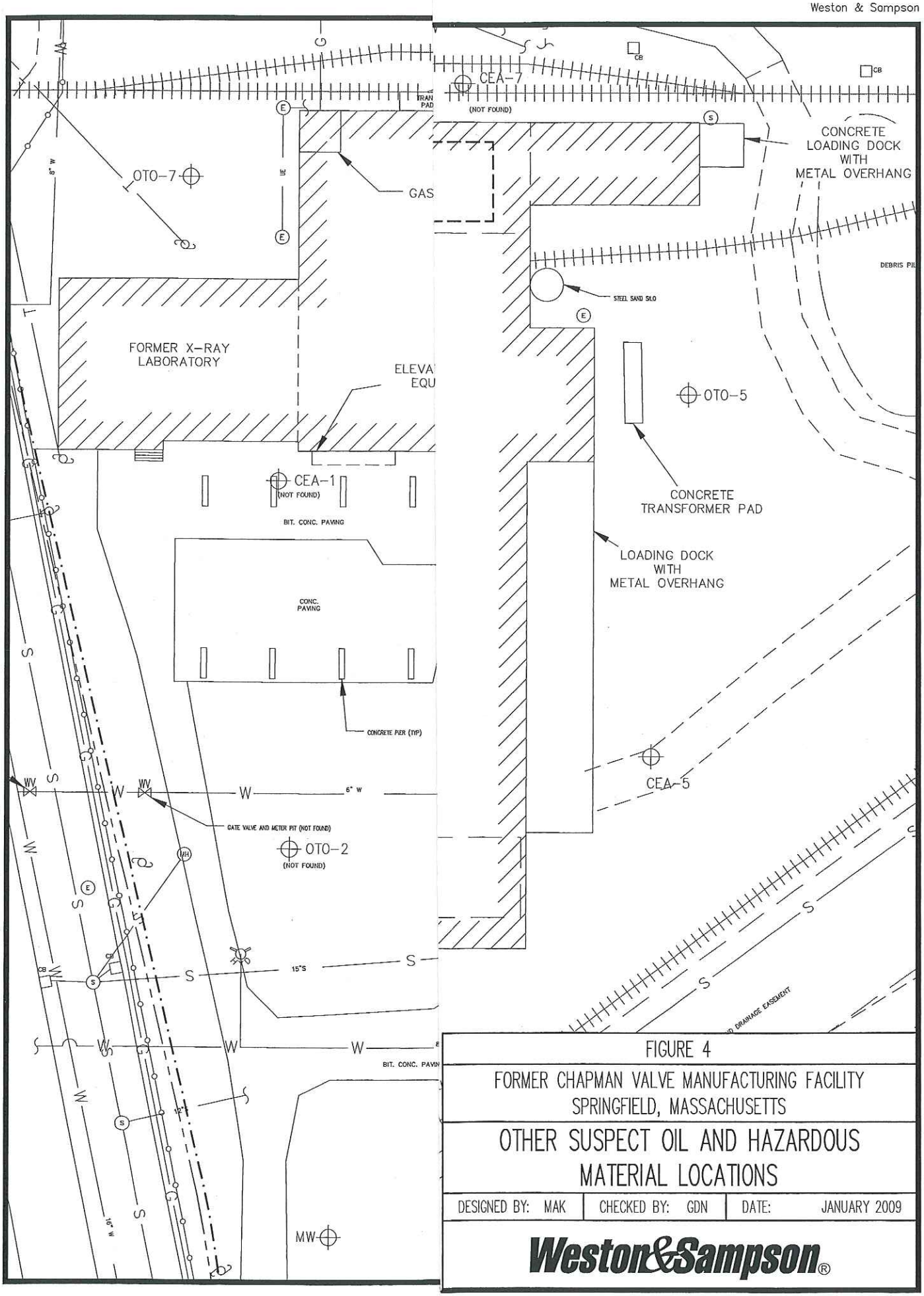

FIGURE 4

FORMER CHAPMAN VALVE MANUFACTURING FACILITY
SPRINGFIELD, MASSACHUSETTS

OTHER SUSPECT OIL AND HAZARDOUS MATERIAL LOCATIONS

DESIGNED BY: MAK	CHECKED BY: GDN	DATE: JANUARY 2009

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Tables

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Table 2
Soil Analytical Results
Chapman Valve Facility
Springfield MA
January/February 2008

Parameter	Units	MCP Method 1 Standard *				Sampling Locations and Date																					
						UST #1			UST #2			UST #3			UST #4				UST #5					UST #6			
		S-1/GW-2	S-1/GW-3	S-3/GW-2	S-3/GW-3	South Side Wall 1/4/08	West Side Wall 1/4/08	Pit Bottom 1/7/08	East Side Wall 1/8/08	North Side Wall 1/8/08	Pit Bottom 1/8/08	South Side Wall 1/30/08	East Side Wall 1/30/08	Pit Bottom 1/30/08	West Side Wall 1/30/08	East Side Wall 2/4/08	North Side Wall 1/30/08	Pit Bottom 1/30/08	West Side Wall 2/13/08	East Side Wall 2/13/08	Pit Bottom 2/13/08	DUP-1 (UST #5 Pit Bottom)	West Side Wall 2/4/08	East Side Wall 2/4/08	North Side Wall 2/4/08	Pit Bottom 2/4/08
EPH (Method MADEP-EPH-04-1)																											
C_9-C_{18} Aliphatics	mg/kg	1,000	1,000	5,000	5,000	<32.0	<34.3	**1,580**	<31.8	<34.2	**7,120**	<32.7	321	147	<33.5	<32.4	<34.0	<33.2	<32.8	<34.4	<36.9	<36.5	<33.4	<31.4	<40.3	<33.5
C_{19}-C_{36} Aliphatics	mg/kg	2,500	2,500	5,000	5,000	<32.0	<34.3	**220**	46.0	<34.2	**976**	57.4	159	482	<33.5	<32.4	<34.0	34.6	<32.8	<34.4	64.8	<36.5	<33.4	<31.4	<40.3	<33.5
C_{11}-C_{22} Aromatics	mg/kg	800	800	5,000	5,000	<32.0	<34.3	**275**	<31.8	<34.2	**1,010**	<32.7	185	281	<33.5	<32.4	37.1	38.8	<32.8	<34.4	42.5	<36.5	<33.4	<31.4	<40.3	<33.5
Acenaphthene	mg/kg	1,000	1,000	5,000	4,000	<0.2	<0.2	**0.4**	<0.2	<0.2	**1.9**	<0.2	<0.2	**0.3**	<0.2	<0.2	**0.5**	<0.2	**0.3**	<0.2	**0.6**	**0.4**	<0.2	<0.2	<0.2	<0.2
Acenaphthylene	mg/kg	100	100	2,500	1,000	<0.2	<0.2	**1.3**	<0.2	<0.2	**4.4**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Anthracene	mg/kg	1,000	1,000	5,000	5,000	<0.2	<0.2	**0.4**	<0.2	<0.2	**1.7**	<0.2	<0.2	**0.8**	**0.3**	<0.2	**0.8**	<0.2	**0.4**	<0.2	**1.1**	**0.5**	<0.2	<0.2	<0.2	<0.2
Benzo(a)anthracene	mg/kg	7	7	300	300	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**1.5**	**0.5**	<0.2	**1.6**	<0.2	**0.8**	<0.2	**2.5**	**1.4**	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	2	2	30	30	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**1.6**	**0.6**	<0.2	**1.7**	<0.2	**0.7**	<0.2	**2.2**	**1.3**	<0.2	<0.2	<0.2	<0.2
Benzo(b)fluoranthene	mg/kg	7	7	300	300	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**2.4**	**0.8**	<0.2	**2.3**	<0.2	**1.0**	<0.2	**3.2**	**1.8**	<0.2	<0.2	<0.2	<0.2
Benzo(k)fluoranthene	mg/kg	70	70	3,000	3,000	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.9**	**0.4**	<0.2	**1.0**	<0.2	**0.4**	<0.2	**1.2**	**0.8**	<0.2	<0.2	<0.2	<0.2
Benzo(g,h,i)perylene	mg/kg	1,000	1,000	2,500	2,500	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.8**	**0.4**	<0.2	**0.9**	<0.2	<0.2	<0.2	**1.1**	**0.7**	<0.2	<0.2	<0.2	<0.2
Chrysene	mg/kg	7	7	40	40	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**1.7**	**0.6**	<0.2	**1.7**	<0.2	**0.9**	<0.2	**2.9**	**1.7**	<0.2	<0.2	<0.2	<0.2
Dibenzo(a,h)anthracene	mg/kg	0.7	0.7	30	30	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.2**	<0.2	<0.2	**0.4**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fluoranthene	mg/kg	1,000	1,000	5,000	5,000	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**4.6**	**1.6**	<0.2	**4.5**	**0.2**	**1.9**	<0.2	**6.1**	**3.6**	<0.2	<0.2	<0.2	<0.2
Fluorene	mg/kg	1,000	1,000	5,000	4,000	<0.2	<0.2	**1.7**	<0.2	<0.2	**6.1**	<0.2	<0.2	**0.5**	<0.2	<0.2	**0.3**	<0.2	**0.2**	<0.2	**0.5**	**0.3**	<0.2	<0.2	<0.2	<0.2
Indeno(1,2,3-cd)pyrene	mg/kg	7	7	300	300	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.9**	**0.4**	<0.2	**1.0**	<0.2	<0.2	<0.2	**1.3**	**0.7**	<0.2	<0.2	<0.2	<0.2
2-Methylnaphthalene	mg/kg	500	500	2,000	1,000	<0.2	<0.2	**1.3**	<0.2	<0.2	**11.8**	<0.2	<0.2	**0.5**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	mg/kg	40	500	40	3,000	<0.2	<0.2	**1.4**	<0.2	<0.2	**3.5**	<0.2	<0.2	**0.3**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phenanthrene	mg/kg	1,000	100	2,500	100	<0.2	<0.2	**0.8**	<0.2	<0.2	**3.7**	<0.2	<0.2	**3.8**	**1.4**	<0.2	**3.6**	<0.2	**1.9**	<0.2	**5.1**	**3.1**	<0.2	<0.2	<0.2	<0.2
Pyrene	mg/kg	1,000	1,000	5,000	5,000	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**4.2**	**1.5**	<0.2	**4.3**	<0.2	**1.8**	<0.2	**5.7**	**3.4**	<0.2	<0.2	<0.2	<0.2
VPH (Method MADEP-VPH-04-1.1)																											
C_5-C_8 Aliphatics	mg/kg	100	100	500	500	<17.8	<20.0	**42.9**	<12.8	<15.3	**48.2**	<18.6	<18.6	<20.5	<20.2	<18.7	<19.5	<18.7	<18.7	<19.8	<22.3	<22.0	<18.8	<18.5	<26.5	<19.7
C_9-C_{12} Aliphatics	mg/kg	1,000	1,000	5,000	5,000	<11.9	<13.3	**45.9**	<8.47	<10.2	**73.8**	<12.4	<12.4	**16.8**	<13.5	<12.5	<13.0	<12.5	<12.5	<13.2	<14.9	<14.7	<12.5	<12.4	<17.7	<13.2
C_9-C_{10} Aromatics	mg/kg	100	100	500	500	<11.9	<13.3	**242**	<8.47	<10.2	**352**	<12.4	<12.4	<13.7	<13.5	<12.5	<13.0	<12.5	<12.5	<13.2	<14.9	<14.7	<12.5	<12.4	<17.7	<13.2
Benzene	mg/kg	30	30	700	900	<0.060	<0.067	<0.064	<0.043	<0.051	<0.102	<0.062	<0.062	<0.069	<0.068	<0.063	<0.065	<0.063	<0.063	<0.066	<0.075	<0.074	<0.063	<0.062	<0.089	<0.066
Ethylbenzene	mg/kg	500	500	2,500	500	<0.060	<0.067	**0.380**	<0.043	<0.051	**0.571**	<0.062	<0.062	<0.069	<0.068	<0.063	<0.065	<0.063	<0.063	<0.066	<0.075	<0.074	<0.063	<0.062	<0.089	<0.066
MTBE	mg/kg	100	100	100	500	<0.060	<0.067	<0.064	<0.043	<0.051	<0.102	<0.062	<0.062	<0.069	<0.068	<0.063	<0.065	<0.063	<0.063	<0.066	<0.075	<0.074	<0.063	<0.062	<0.089	<0.066
Naphthalene	mg/kg	40	500	40	3,000	<0.592	<0.665	**3.79**	<0.424	<0.509	**8.04**	<0.619	<0.619	<0.681	<0.673	<0.621	<0.650	<0.622	<0.621	<0.658	<0.741	<0.733	<0.624	<0.616	<0.882	<0.657
Toluene	mg/kg	300	500	300	1,000	<0.060	<0.067	<0.064	<0.043	<0.051	<0.102	<0.062	<0.062	<0.069	<0.068	<0.063	<0.065	<0.063	<0.063	<0.066	<0.075	<0.074	<0.063	<0.062	<0.089	<0.066
Total Xylenes	mg/kg	300	300	300	300	<0.179	<0.200	**0.920**	<0.128	<0.153	**1.43**	<0.186	<0.186	0.095	<0.203	<0.188	<0.195	<0.188	<0.188	<0.198	<0.224	<0.221	<0.188	<0.186	<0.266	<0.198

QC by LVR 2/29/08

NOTES:

EPH = extractable petroleum hydrocarbons
VPH = volatile petroleum hydrocarbons

Bold = exceeds laboratory method detection limit
Bold = exceeds S-1/GW-2 or S-1/GW-3 standard
Bold = exceeds S-3/GW-2 or S-3/GW-3 standard

mg/kg = milligrams per kilogram
ND = not detected
NS = no standard

< = parameter not detected above laboratory method detection limit, given.
* Standards from the Massachusetts Contingency Plan, 310 CMR 40.0000, revised April 2006.

Table 3
Concrete Subfloor Vault/Raceway in Boiler Room Analytical Results
Chapman Valve Facility
Springfield MA
January through March, 2008

Parameter	Units	MCP Method 1 Standard *			Sampling Location and Date			
					Concrete Subfloor Vault		Raceway in Boiler Room	
		GW-1	GW-2	GW-3	1/8/08	3/1/08	1/8/08	3/1/08
PCBs (Method 8082)								
PCB 1016	ug/l	NS	NS	NS	<0.20	NA	<0.20	NA
PCB-1221	ug/l	NS	NS	NS	<0.20	NA	<0.20	NA
PCB-1232	ug/l	NS	NS	NS	<0.20	NA	<0.20	NA
PCB-1242	ug/l	NS	NS	NS	<0.20	NA	<0.20	NA
PCB-1248	ug/l	NS	NS	NS	<0.20	NA	<0.20	NA
PCB-1254	ug/l	NS	NS	NS	<0.20	NA	<0.20	NA
PCB 1262	ug/l	NS	NS	NS	<0.20	NA	<0.20	NA
PCB 1268	ug/l	NS	NS	NS	<0.20	NA	<0.20	NA
Total PCBs:	ug/l	0.5	5	10	ND	NA	ND	NA
VOCs (Method 8260)								
Acetone	ug/l	6,300	50,000	50,000	<50.0	NA	**138**	NA
EPH (Method MADEP-EPH-04-1)								
C_9-C_{18} Aliphatics	ug/l	700	5,000	50,000	<150	NA	**301**	NA
C_{19}-C_{36} Aliphatics	ug/l	14,000	NS	50,000	**3,810**	NA	**580**	NA
C_{11}-C_{22} Aromatics	ug/l	200	50,000	5,000	**270**	NA	**412**	NA
Acenaphthene	ug/l	20	NS	6,000	<2.0	NA	<2.0	NA
Acenapthylene	ug/l	30	10,000	40	<2.0	NA	<2.0	NA
Anthracene	ug/l	60	NS	30	<2.0	NA	<2.0	NA
Benzo(a)anthracene	ug/l	1	NS	1,000	<2.0	NA	<2.0	NA
Benzo(a)pyrene	ug/l	0.2	NS	500	<2.0	NA	<2.0	NA
Benzo(b)fluoranthene	ug/l	1	NS	400	<2.0	NA	<2.0	NA
Benzo(g,h,i)perylene	ug/l	50	NS	20	<2.0	NA	<2.0	NA
Chrysene	ug/l	2	NS	70	<2.0	NA	<2.0	NA
Dibenzo(a,h)anthracene	ug/l	0.5	NS	40	<2.0	NA	<2.0	NA
Fluoranthene	ug/l	90	NS	200	<2.0	NA	<2.0	NA
Fluorene	ug/l	30	NS	40	<2.0	NA	<2.0	NA
Indeno(1,2,3-cd)pyrene	ug/l	0.5	NS	100	<2.0	NA	<2.0	NA
2-Methylnaphthalene	ug/l	10	2,000	20,000	<2.0	NA	<2.0	NA
Naphthalene	ug/l	140	1,000	20,000	<2.0	NA	<2.0	NA
Phenanthrene	ug/l	40	NS	10,000	<2.0	NA	<2.0	NA
Pyrene	ug/l	80	NS	20	<2.0	NA	<2.0	NA
Metals								
Arsenic	mg/l	0.01	NS	0.9	<0.050	NA	<0.050	NA
Barium	mg/l	2	NS	50	**0.0542**	NA	**0.0452**	NA
Cadmium	mg/l	0.005	NS	0.004	**0.0012**	NA	**0.0034**	NA
Chromium	mg/l	0.1	NS	0.3	**0.004**	NA	**0.067**	NA
Copper	mg/l	NS	NS	NS	NA	**0.0206**	NA	**0.316**
Lead	mg/l	0.015	NS	0.01	**0.0249**	NA	**0.372**	NA
Mercury	mg/l	0.002	NS	0.02	**0.00006**	NA	**0.00014**	NA
Nickel	mg/l	0.1	NS	0.2	NA	<0.003	NA	**0.086**
Selenium	mg/l	0.05	NS	0.1	<0.05	NA	<0.05	NA
Silver	mg/l	0.1	NS	0.007	<0.005	NA	<0.005	NA
Zinc	mg/l	5	NS	0.9	NA	**0.097**	NA	**0.942**
VPH (Method MADEP-VPH-04-1.1)								
C_5-C_8 Aliphatics	ug/l	300	3,000	50,000	<100	NA	<100	NA
C_9-C_{12} Aliphatics	ug/l	700	5,000	50,000	<100	NA	<100	NA
C_9-C_{10} Aromatics	ug/l	200	7,000	50,000	<100	NA	<100	NA
Benzene	ug/l	5	2,000	10,000	<1.0	NA	<1.0	NA
Ethylbenzene	ug/l	700	20,000	5,000	<1.0	NA	<1.0	NA
MTBE	ug/l	70	50,000	50,000	<1.0	NA	<1.0	NA
Naphthalene	ug/l	140	1,000	20,000	<10.0	NA	<10.0	NA
Toluene	ug/l	1,000	50,000	40,000	<1.0	NA	<1.0	NA
Total Xylenes	ug/l	10,000	9,000	5,000	<3.0	NA	<3.0	NA
Oil and Grease	mg/l	NS	NS	NS	NA	<2.8	NA	**280**
pH	unitless	NS	NS	NS	NA	**7.58**	NA	**7.47**

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NOTES:

PCBs = polychlorinated biphenyls
VOCs = volatile petroleum hydrocarbons
EPH = extractable petroleum hydrocarbons
VPH = volatile petroleum hydrocarbons
ug/l = micrograms per liter
mg/l = milligrams per liter

ND = not detected
NS = no standard
Bold = exceeds laboratory method detection limit
Bold = exceeds GW-1 standard
Bold = exceeds GW-2 and/or GW-3 standard
<= parameter not detected above laboratory method detection limit, given.

* Standards from the Massachusetts Contingency Plan, 310 CMR 40.0000, revised December 14, 2007.

Table 4
Concrete Subfloor Vault in Foundry
Chapman Valve Facility
Springfield MA
May 2008

Parameter	Units	LIMITATION (1)	Sampling Location and Date Concrete Subfloor Vault in Foundry 5/23/08
PCBs (Method 8082)			
PCB 1016	ug/l	NS	<0.20
PCB-1221	ug/l	NS	<0.20
PCB-1232	ug/l	NS	<0.20
PCB-1242	ug/l	NS	<0.20
PCB-1248	ug/l	NS	<0.20
PCB-1254	ug/l	NS	<0.20
PCB 1262	ug/l	NS	<0.20
PCB 1268	ug/l	NS	<0.20
Total PCBs:	ug/l	NS	ND
VOCs (Method 8260)			
Acetone	ug/l	NS	<50.0
Chloroform	ug/l	NS	**10.8**
Total VOCs:	ug/l	500	**10.8**
EPH (Method MADEP-EPH-04-1)			
C_9-C_{18} Aliphatics	ug/l	NS	<150
C_{19}-C_{36} Aliphatics	ug/l	NS	<150
C_{11}-C_{22} Aromatics	ug/l	NS	<100
Acenaphthene	ug/l	NS	<2.0
Acenapthylene	ug/l	NS	<2.0
Anthracene	ug/l	NS	<2.0
Benzo(a)anthracene	ug/l	NS	<2.0
Benzo(a)pyrene	ug/l	NS	<2.0
Benzo(b)fluoranthene	ug/l	NS	<2.0
Benzo(g,h,i)perylene	ug/l	NS	<2.0
Chrysene	ug/l	NS	<2.0
Dibenzo(a,h)anthracene	ug/l	NS	<2.0
Fluoranthene	ug/l	NS	<2.0
Fluorene	ug/l	NS	<2.0
Indeno(1,2,3-cd)pyrene	ug/l	NS	<2.0
2-Methylnaphthalene	ug/l	NS	<2.0
Naphthalene	ug/l	NS	<2.0
Phenanthrene	ug/l	NS	<2.0
Pyrene	ug/l	NS	<2.0
Total Metals (Method SW846 6020, 7041, 7060, 6010, 7470, 7841)			
Antimony	mg/l	NS	**0.00157**
Arsenic	mg/l	NS	<0.0010
Barium	mg/l	NS	NA
Beryllium	mg/l	NS	<0.0040
Cadmium	mg/l	0.69	<0.0050
Chromium	mg/l	1.7	<0.010
Copper	mg/l	2.1	<0.0100
Lead	mg/l	0.43	<0.0150
Mercury	mg/l	NS	<0.00010
Nickel	mg/l	1.02	<0.010
Selenium	mg/l	NS	<0.10
Silver	mg/l	0.24	<0.005
Thallium	mg/l	NS	<0.0010
Zinc	mg/l	1.48	**0.102**
VPH (Method MADEP-VPH-04-1.1)			
C_5-C_8 Aliphatics	ug/l	NS	<100
C_9-C_{12} Aliphatics	ug/l	NS	<100
C_9-C_{10} Aromatics	ug/l	NS	<100
Benzene	ug/l	NS	<1.0
Ethylbenzene	ug/l	NS	<1.0
MTBE	ug/l	NS	<1.0
Naphthalene	ug/l	NS	<10.0
Toluene	ug/l	NS	<1.0
Total Xylenes	ug/l	NS	<3.0
Oils and Grease (Method EPA 1664)	mg/l	100	<1.6
pH (Method EPA 15.01/SM 4500-H-B)	unitless	5.5 - 9.0	**7.41**

O:\Springfield MA\Chapman\Tables\[GW - Boiler Rm&Bsmt 0508.xls]GW

NOTES:

PCBs = polychlorinated biphenyls
VOCs = volatile petroleum hydrocarbons
EPH = extractable petroleum hydrocarbons
VPH = volatile petroleum hydrocarbons
ug/l = micrograms per liter
mg/l = milligrams per liter

ND = not detected
NS = no standard
Bold = exceeds laboratory method detection limit
< = parameter not detected above laboratory method detection limit, given.

(1) Allowable discharge limitations from Water and Sewer Commission Rules and Regulations 1.5.5(2) Industrial Wastewaters -- Containing Metals.

10
Soil

APPENDIX A

BWSC Transmittal Form

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

Release Tracking Number
1 - 00616

A. SITE LOCATION:

1. Site Name/Location Aid: Former Chapman Valve Manufacturing Facility

2. Street Address: 225 Goodwin Street

3. City/Town: Springfield 4. ZIP Code: 01150-0000

5. UTM Coordinates: a. UTM N: 4,669,460M b. UTM E: 706,640M

☐ 6. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.
☐ a. Tier IA ☐ b. Tier IB ☐ c. Tier IC ☑ d. Tier II

7. If a Tier I Permit has been issued, provide Permit Number: _____

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of Initial RAM Plan (if previously submitted): _____ (mm/dd/yyyy)

☐ 2. Submit an **Initial Release Abatement Measure (RAM) Plan**.

☐ a. Check here if the RAM is being conducted as part of the construction of a permanent structure. If checked, you must specify what type of permanent structure is to be erected in or in the immediate vicinity of the area where the RAM is to be conducted.

b. Specify type of permanent structure: (check all that apply) ☐ i. School ☐ ii. Residential ☐ iii. Commercial

☐ iv. Industrial ☐ v. Other Specify: _____

☐ 3. Submit a **Modified RAM Plan** of a previously submitted RAM Plan.

☐ 4. Submit a **RAM Status Report**.

☐ 5. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP, concurrent with a RAM Status Report.)

a. Type of Report: (check one) ☐ i. Initial Report ☐ ii. Interim Report ☐ iii. Final Report

b. Number of Remedial Systems and/or Monitoring Programs: _____

A separate BWSC106A, RAM Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☑ 6. Submit a **RAM Completion Statement**.

☐ 7. Submit a **Revised RAM Completion Statement**.

8. Provide Additional RTNs:

☐ a. Check here if this RAM Submittal covers additional Release Tracking Numbers (RTNs). RTNs that have been previously linked to a Primary Tier Classified RTN do not need to be listed here. This section is intended to allow a RAM to cover more than one unclassified RTN and not show permanent linkage to a Primary Tier Classified RTN.

b. Provide the additional Release Tracking Number(s) covered by this RAM Submittal. ☐ - ☐ ☐ - ☐

(All sections of this transmittal form must be filled out unless otherwise noted above)

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM) TRANSMITTAL FORM

Release Tracking Number
1 - 00616

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT RAM:

1. Identify Media Impacted and Receptors Affected: (check all that apply)

☐ a. Air ☑ b. Basement ☐ c. Critical Exposure Pathway ☑ d. Groundwater ☐ e. Residence
☐ f. Paved Surface ☐ g. Private Well ☐ h. Public Water Supply ☐ i. School ☐ j. Sediments
☑ k. Soil ☐ l. Storm Drain ☐ m. Surface Water ☐ n. Unknown ☐ o. Wetland ☐ p. Zone 2
☐ q. Others Specify: _____

2. Identify all sources of the Release or Threat of Release, if known: (check all that apply)

☐ a. Above-ground Storage Tank (AST) ☐ b. Boat/Vessel ☐ c. Drums ☐ d. Fuel Tank
☐ e. Pipe/Hose/Line ☐ f. Tanker Truck ☐ g. Transformer ☑ h. Under-ground Storage Tank (UST)
☐ i. Vehicle ☐ j. Others Specify: _____

3. Identify Oils and Hazardous Materials Released: (check all that apply)

☑ a. Oils ☐ b. Chlorinated Solvents ☐ c. Heavy Metals
☐ d. Others Specify: _____

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply, for volumes list cumulative amounts)

☐ 1. Assessment and/or Monitoring Only
☐ 2. Temporary Covers or Caps
☐ 3. Deployment of Absorbent or Containment Materials
☐ 4. Temporary Water Supplies
☐ 5. Structure Venting System
☐ 6. Temporary Evacuation or Relocation of Residents
☐ 7. Product or NAPL Recovery
☐ 8. Fencing and Sign Posting
☐ 9. Groundwater Treatment Systems
☐ 10. Soil Vapor Extraction
☐ 11. Bioremediation
☐ 12. Air Sparging

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM) TRANSMITTAL FORM

Release Tracking Number
1 - 00616

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

D. DESCRIPTION OF RESPONSE ACTIONS (cont.): (check all that apply, for volumes list cumulative amounts)

☑ 13. Excavation of Contaminated Soils

☐ a. Re-use, Recycling or Treatment ☐ i. On Site Estimated volume in cubic yards _____

☑ ii. Off Site Estimated volume in cubic yards 180

iia. Receiving Facility: Ted Ondrick Company Town: Chicopee State: MA

iib. Receiving Facility: _____ Town: _____ State: _____

iii. Describe: Contaminated soil from UST graves

☐ b. Store ☐ i. On Site Estimated volume in cubic yards _____

☐ ii. Off Site Estimated volume in cubic yards _____

iia. Receiving Facility: _____ Town: _____ State: _____

iib. Receiving Facility: _____ Town: _____ State: _____

☐ c. Landfill

☐ i. Cover Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ ii. Disposal Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ 14. Removal of Drums, Tanks or Containers:

a. Describe Quantity and Amount: ~~Removal of six 15,000 gallon underground storage tanks~~
Removal of one 25 gallon drum

b. Receiving Facility: Mass Tank Disposal Town: Chicopee State: MA

c. Receiving Facility: CWM-Chemical Services, LLC Town: Model City State: NY

☑ 15. Removal of Other Contaminated Media:

a. Specify Type and Volume: ~~Removal of 50 cubic yards of contaminated ash fill / foundry sand~~

b. Receiving Facility: Chicopee Landfill Town: Chicopee Landfill State: MA

c. Receiving Facility: _____ Town: _____ State: _____

☐ 16. Other Response Actions:

Describe: _____

☐ 17. Use of Innovative Technologies:

Describe: _____

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM) TRANSMITTAL FORM

Release Tracking Number
1 - 00616

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

E. LSP SIGNATURE AND STAMP :

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> *if Section B of this form indicates that a **Release Abatement Measure Plan** is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B of this form indicates that a **Release Abatement Measure Status Report** and/or **Remedial Monitoring Report** is being submitted*, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B of this form indicates that a **Release Abatement Measure Completion Statement** is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal:

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 6524

2. First Name: George 3. Last Name: Naslas

4. Telephone: (978) 532-1900 5. Ext.: 2279 6. FAX: (978) 977-0100

7. Signature: _____

8. Date: 1 (mm/dd/yyyy)

9. LSP Stamp:

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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

Release Tracking Number
1 - 00616

RELEASE ABATEMENT MEASURE (RAM) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

F. PERSON UNDERTAKING RAM:

1. Check all that apply: ☑ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: City of Springfield

3. Contact First Name: Christopher 4. Last Name: Moskal

5. Street: 70 Tapley Street 6. Title: Planning & Economic Development

7. City/Town: Springfield 8. State: MA 9. ZIP Code: 01104-0000

10. Telephone: (413) 787-6020 11. Ext.: 12. FAX: (413) 787-6524

G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING RAM:

☐ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☐ e. Other RP or PRP Specify:

☑ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking RAM Specify Relationship:

H. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if any Remediation Waste, generated as a result of this RAM, will be stored, treated, managed, recycled or reused at the site following submission of the RAM Completion Statement. You must submit a Phase IV Remedy Implementation Plan along with the appropriate transmittal form (BWSC108).

☐ 2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☐ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the implementation of a Release Abatement Measure.

☐ 4. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to the DEP Regional Office.

☐ 5. If a RAM Compliance Fee is required for this RAM, check here to certify that a RAM Compliance Fee was submitted to DEP, P. O. Box 4062, Boston, MA 02211.

☑ 6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM) TRANSMITTAL FORM

Release Tracking Number
1 - 00616

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

I. CERTIFICATION OF PERSON UNDERTAKING RAM:

1. I, Christopher Moskal, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: _____ 3. Title: Planning & Economic Devel

Signature

4. For: City of Springfield 5. Date: _____

(Name of person or entity recorded in Section F) (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section F.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

e filed

APPENDIX B

Laboratory Analytical Results

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

REPORT DATE 1/8/2008

ASSOCIATED BUILDING WRECKERS
352 ALBANY STREET
SPRINGFIELD, MA 01106
ATTN: FRED VANDERHOOF

CONTRACT NUMBER:
PURCHASE ORDER NUMBER: 2070222

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMT-12549
JOB NUMBER: 2070222A

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

Comments :

LIMS BATCH NO. : LIMT-12549

CASE NARRATIVE SUMMARY

THERE ARE NO ANALYTICAL ISSUES THAT AFFECT THE USABILITY OF THE DATA

DETAILED CASE NARRATIVE

VOLATILE PETROLEUM HYDROCARBONS (VPH) MADEP-VPH-04-1.1

RECOMMENDED SAMPLE HOLDING TIMES WERE NOT EXCEEDED FOR ALL SAMPLES ANALYZED BY THE VPH METHOD UNLESS LISTED BELOW: NONE EXCEEDED

ALL VPH SAMPLES WERE RECEIVED PRESERVED PROPERLY (WATER SAMPLES pH <2; SOIL SAMPLES IN METHANOL WITH A SOIL/METHANOL RATIO OF 1:1 +/- 25% COMPLETELY COVERED BY METHANOL) IN THE PROPER CONTAINERS AT 4° C. +/- 2° AS SPECIFIED ON THE CHAIN-OF-CUSTODY FORM UNLESS SPECIFIED BELOW: ALL PROPERLY PRESERVED

THE VPH METHOD BLANK WAS FOUND NOT TO BE CONTAMINATED WITH TARGET ANALYTES AT LEVELS ABOVE THE REPORTING LIMIT EXCEPT WHERE LISTED BELOW: NO CONTAMINATION NOTED

ALL VPH SAMPLES WERE ANALYZED UNDILUTED UNLESS SPECIFIED BELOW:
NO DILUTIONS WERE PERFORMED

INITIAL AND CONTINUING CALIBRATIONS MET ALL REQUIRED PERFORMANCE STANDARDS FOR THE VPH METHOD EXCEPT AS LISTED BELOW: ALL STANDARDS MET

LABORATORY CONTROL SAMPLE RECOVERIES, LABORATORY CONTROL SAMPLE DUPLICATE RECOVERIES, AND LCS DUPLICATE RPDs FOR ALL VPH COMPONENT STANDARD COMPOUNDS WERE WITHIN CONTROL LIMITS SPECIFIED BY THE METHOD UNLESS LISTED BELOW: LABORATORY FORTIFIED BLANK AND LABORATORY FORTIFIED BLANK DUPLICATE RECOVERIES WERE OUTSIDE OF CONTROL LIMITS FOR MTBE. DATA VALIDATION IS NOT AFFECTED SINCE ALL RESULTS ARE "NOT DETECTED" FOR ALL SAMPLES IN THIS BATCH FOR THIS COMPOUND AND BIAS IS ON THE HIGH SIDE.

ALL VPH SURROGATE STANDARD RECOVERIES WERE WITHIN CONTROL LIMITS SPECIFIED BY THE METHOD UNLESS LISTED BELOW: NONE OUTSIDE OF CONTROL LIMITS

VPH MATRIX SPIKE AND MATRIX SPIKE DUPLICATE RECOVERIES, SAMPLE DUPLICATE RPDs AND MSDRPD, IF REQUESTED IN THIS BATCH WERE ALL WITHIN CONTROL LIMITS SPECIFIED BY THE METHOD UNLESS LISTED BELOW: NONE REQUESTED

RESULTS FOR ALL ANALYTE-LIST COMPOUNDS WERE REPORTED FOR VPH UNLESS LISTED BELOW:
ALL REPORTED

EXTRACTABLE PETROLEUM HYDROCARBONS (EPH) MADEP-EPH-04-1.1

RECOMMENDED SAMPLE HOLDING TIMES WERE NOT EXCEEDED FOR ALL SAMPLES ANALYZED BY THE EPH METHOD UNLESS LISTED BELOW: NONE EXCEEDED

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REPORT DATE 1/8/2008

ASSOCIATED BUILDING WRECKERS
352 ALBANY STREET
SPRINGFIELD, MA 01106
ATTN: FRED VANDERHOOF

CONTRACT NUMBER:
PURCHASE ORDER NUMBER: 2070222

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMT-12549
JOB NUMBER: 2070222A

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

* See end of data tabulation for notes and comments pertaining to this sample

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FRED VANDERHOOF
ASSOCIATED BUILDING WRECKERS
352 ALBANY STREET
SPRINGFIELD, MA 01106

1/8/2008

Purchase Order No.: 2070222

Project Location: CHAPMAN VALVE, SPRINGFIELD MA
Date Received: 1/4/2008
Field Sample # : SOUTH SIDE WALL

LIMS-BAT #: LIMT-12549
Job Number: 2070222A

Analytical Method:
MADEP-EPH-04-1

SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE AND ACETONE BY PRESSURIZED FLUID EXTRACTION (SW846 3545) OR MICROWAVE (SW846 3546), EXCHANGED INTO HEXANE AND CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION. PAH AND C11-C22 AROMATICS ARE DETERMINED IN THE METHYLENE CHLORIDE FRACTION. C9-C18 AND C19-C36 ALIPHATICS ARE DETERMINED IN THE HEXANE FRACTION. TARGET COMPOUND CONTRIBUTIONS ARE SUBTRACTED FROM THE SUMMED AROMATIC RANGE, BUT NOT FROM THE UNADJUSTED C11-C22 AROMATIC RANGE.

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
NM = Not Measured
* = See end of report for comments and notes applying to this sample

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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FRED VANDERHOOF
ASSOCIATED BUILDING WRECKERS
352 ALBANY STREET
SPRINGFIELD, MA 01106

1/8/2008

Purchase Order No.: 2070222

Project Location: CHAPMAN VALVE, SPRINGFIELD MA
Date Received: 1/4/2008
Field Sample # : WEST SIDE WALL

LIMS-BAT #: LIMT-12549
Job Number: 2070222A

Analytical Method:
MADEP-EPH-04-1

SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE AND ACETONE BY PRESSURIZED FLUID EXTRACTION (SW846 3545) OR MICROWAVE (SW846 3546), EXCHANGED INTO HEXANE AND CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION. PAH AND C11-C22 AROMATICS ARE DETERMINED IN THE METHYLENE CHLORIDE FRACTION. C9-C18 AND C19-C36 ALIPHATICS ARE DETERMINED IN THE HEXANE FRACTION. TARGET COMPOUND CONTRIBUTIONS ARE SUBTRACTED FROM THE SUMMED AROMATIC RANGE, BUT NOT FROM THE UNADJUSTED C11-C22 AROMATIC RANGE.

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
NM = Not Measured
* = See end of report for comments and notes applying to this sample

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

con-test ANALYTICAL LABORATORY
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FRED VANDERHOOF
ASSOCIATED BUILDING WRECKERS
352 ALBANY STREET
SPRINGFIELD, MA 01106

1/8/2008

Purchase Order No.: 2070222

Project Location: CHAPMAN VALVE, SPRINGFIELD MA
Date Received: 1/4/2008
Field Sample # : SOUTH SIDE WALL
Sample ID : 08B00393

LIMS-BAT #: LIMT-12549
Job Number: 2070222A

Sampled : 1/4/2008
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Unadjusted C5-C8 Aliphatics	mg/kg dry wt	ND	01/07/08	EH	17.8			
C5-C8 Aliphatics	mg/kg dry wt	ND	01/07/08	EH	17.8			
Unadjusted C9-C12 Aliphatics	mg/kg dry wt	ND	01/07/08	EH	11.9			
C9-C12 Aliphatics	mg/kg dry wt	ND	01/07/08	EH	11.9			
C9-C10 Aromatics	mg/kg dry wt	ND	01/07/08	EH	11.9			
Benzene	mg/kg dry wt	ND	01/07/08	EH	0.060			
Ethylbenzene	mg/kg dry wt	ND	01/07/08	EH	0.060			
MTBE	mg/kg dry wt	ND	01/07/08	EH	0.060			
Naphthalene	mg/kg dry wt	ND	01/07/08	EH	0.592			
Toluene	mg/kg dry wt	ND	01/07/08	EH	0.060			
m/p-Xylene	mg/kg dry wt	ND	01/07/08	EH	0.119			
o-Xylene	mg/kg dry wt	ND	01/07/08	EH	0.060			

Analytical Method:
MADEP-VPH-04-1.1
SAMPLES ARE PRESERVED WITH METHANOL AND CONCENTRATED BY PURGE AND TRAP, FOLLOWED BY GAS CHROMATOGRAPHY ANALYSIS WITH PID/FID DETECTION. SUMMED RANGES ARE REPORTED WITH TARGET COMPOUND CONTRIBUTIONS SUBTRACTED. C9-C12 ALIPHATIC HYDROCARBONS EXCLUDE THE CONCENTRATION OF C9-C10 AROMATIC HYDROCARBONS.

NO SIGNIFICANT MODIFICATIONS WERE MADE TO THE METHOD.

DETAILS OF ANY NON-CONFORMANCE WITH QA/QC REQUIREMENTS, PERFORMANCE, OR ACCEPTANCE CRITERIA ARE LISTED IN THE NOTES SECTION OF THIS REPORT.

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
NM = Not Measured
* = See end of report for comments and notes applying to this sample

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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ANALYTICAL LABORATORY
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FRED VANDERHOOF
ASSOCIATED BUILDING WRECKERS
352 ALBANY STREET
SPRINGFIELD, MA 01106

1/8/2008

Purchase Order No.: 2070222

Project Location: CHAPMAN VALVE, SPRINGFIELD MA
Date Received: 1/4/2008

LIMS-BAT #: LIMT-12549
Job Number: 2070222A

** END OF REPORT **

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 1/8/2008 Lims Bat # : LIMT-12549

QC Batch Number: GC/FID-20013

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-73339					
	2,2,4-Trimethylpentane	Lab Fort Bl. Av. Rec	70.550	%	
		LFB Duplicate RPD	0.840	%	0-25
	n-Decane	Lab Fort Blank Amt.	6.704	mg/kg dry wt	
		Lab Fort Blk. Found	4.931	mg/kg dry wt	
		Lab Fort Blk. % Rec.	73.559	%	70-130
		Dup Lab Fort Bl Amt.	6.704	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	4.715	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	70.338	%	70-130
		Lab Fort Blank Range	3.220	units	
		Lab Fort Bl. Av. Rec	71.949	%	
		LFB Duplicate RPD	4.475	%	0-25
	n-Butylcyclohexane	Lab Fort Blank Amt.	6.704	mg/kg dry wt	
		Lab Fort Blk. Found	4.732	mg/kg dry wt	
		Lab Fort Blk. % Rec.	70.593	%	70-130
		Dup Lab Fort Bl Amt.	6.704	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	4.767	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	71.101	%	70-130
		Lab Fort Blank Range	0.508	units	
		Lab Fort Bl. Av. Rec	70.847	%	
		LFB Duplicate RPD	0.717	%	0-25

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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 1/8/2008 Lims Bat # : LIMT-12549

QC Batch Number: GC/FID-20016

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-73337					
	Naphthalene	LFB Duplicate RPD	15.8	%	0-25
	Acenaphthene	Lab Fort Blank Amt.	5.0	mg/kg dry wt	
		Lab Fort Blk. Found	4.5	mg/kg dry wt	
		Lab Fort Blk. % Rec.	90.5	%	40-140
		Dup Lab Fort Bl Amt.	5.0	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	5.2	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	104.8	%	40-140
		Lab Fort Blank Range	14.3	units	
		Lab Fort Bl. Av. Rec	97.7	%	
		LFB Duplicate RPD	14.6	%	0-25
	Acenaphthylene	Lab Fort Blank Amt.	5.0	mg/kg dry wt	
		Lab Fort Blk. Found	4.1	mg/kg dry wt	
		Lab Fort Blk. % Rec.	83.6	%	40-140
		Dup Lab Fort Bl Amt.	5.0	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	4.8	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	97.8	%	40-140
		Lab Fort Blank Range	14.1	units	
		Lab Fort Bl. Av. Rec	90.7	%	
		LFB Duplicate RPD	15.5	%	0-25
	Anthracene	Lab Fort Blank Amt.	5.0	mg/kg dry wt	
		Lab Fort Blk. Found	4.5	mg/kg dry wt	
		Lab Fort Blk. % Rec.	91.5	%	40-140
		Dup Lab Fort Bl Amt.	5.0	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	5.3	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	106.9	%	40-140
		Lab Fort Blank Range	15.3	units	
		Lab Fort Bl. Av. Rec	99.2	%	
		LFB Duplicate RPD	15.4	%	0-25
	Benzo(a)anthracene	Lab Fort Blank Amt.	5.0	mg/kg dry wt	
		Lab Fort Blk. Found	4.6	mg/kg dry wt	
		Lab Fort Blk. % Rec.	93.1	%	40-140
		Dup Lab Fort Bl Amt.	5.0	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	5.4	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	108.2	%	40-140
		Lab Fort Blank Range	15.1	units	
		Lab Fort Bl. Av. Rec	100.6	%	
		LFB Duplicate RPD	15.0	%	0-25
	Benzo(a)pyrene	Lab Fort Blank Amt.	5.0	mg/kg dry wt	
		Lab Fort Blk. Found	4.7	mg/kg dry wt	
		Lab Fort Blk. % Rec.	94.1	%	40-140
		Dup Lab Fort Bl Amt.	5.0	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	5.4	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	108.7	%	40-140

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QC SUMMARY REPORT

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BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 1/8/2008 Lims Bat # : LIMT-12549

QC Batch Number: GC/FID-20016

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-73337					
	Fluoranthene	Dup Lab Fort Bl. Fnd	5.3	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	107.6	%	40-140
		Lab Fort Blank Range	15.3	units	
		Lab Fort Bl. Av. Rec	99.9	%	
		LFB Duplicate RPD	15.3	%	0-25
	Fluorene	Lab Fort Blank Amt.	5.0	mg/kg dry wt	
		Lab Fort Blk. Found	4.3	mg/kg dry wt	
		Lab Fort Blk. % Rec.	87.3	%	40-140
		Dup Lab Fort Bl Amt.	5.0	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	5.1	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	102.2	%	40-140
		Lab Fort Blank Range	14.8	units	
		Lab Fort Bl. Av. Rec	94.7	%	
		LFB Duplicate RPD	15.6	%	0-25
	Indeno(1,2,3-cd)pyrene	Lab Fort Blank Amt.	5.0	mg/kg dry wt	
		Lab Fort Blk. Found	4.3	mg/kg dry wt	
		Lab Fort Blk. % Rec.	87.8	%	40-140
		Dup Lab Fort Bl Amt.	5.0	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	5.0	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	101.3	%	40-140
		Lab Fort Blank Range	13.5	units	
		Lab Fort Bl. Av. Rec	94.5	%	
		LFB Duplicate RPD	14.3	%	0-25
	2-Methylnaphthalene	Lab Fort Blank Amt.	5.0	mg/kg dry wt	
		Lab Fort Blk. Found	3.8	mg/kg dry wt	
		Lab Fort Blk. % Rec.	77.2	%	40-140
		Dup Lab Fort Bl Amt.	5.0	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	4.5	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	90.5	%	40-140
		Lab Fort Blank Range	13.2	units	
		Lab Fort Bl. Av. Rec	83.9	%	
		LFB Duplicate RPD	15.8	%	0-25
	Phenanthrene	Lab Fort Blank Amt.	5.0	mg/kg dry wt	
		Lab Fort Blk. Found	4.4	mg/kg dry wt	
		Lab Fort Blk. % Rec.	89.5	%	40-140
		Dup Lab Fort Bl Amt.	5.0	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	5.2	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	104.7	%	40-140
		Lab Fort Blank Range	15.1	units	
		Lab Fort Bl. Av. Rec	97.1	%	
		LFB Duplicate RPD	15.5	%	0-25
	Pyrene	Lab Fort Blank Amt.	5.0	mg/kg dry wt	
		Lab Fort Blk. Found	4.7	mg/kg dry wt	

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QC SUMMARY REPORT

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BATCH QC: Lab fortified Blanks and Duplicates
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Method Blanks

Report Date: 1/8/2008 Lims Bat # : LIMT-12549

QC Batch Number: GC/FID-20016

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-73337					
	Unadjusted C11-C22 Aromatics	Lab Fort Blk. % Rec.	84.1	%	40-140
		Dup Lab Fort Bl Amt.	85.0	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	82.8	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	97.4	%	40-140
		Lab Fort Blank Range	13.3	units	
		Lab Fort Bl. Av. Rec	90.8	%	
		LFB Duplicate RPD	14.6	%	0-25
	C9-C18 Aliphatics	Lab Fort Blank Amt.	30.0	mg/kg dry wt	
		Lab Fort Blk. Found	23.7	mg/kg dry wt	
		Lab Fort Blk. % Rec.	79.1	%	40-140
		Dup Lab Fort Bl Amt.	30.0	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	27.3	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	91.0	%	40-140
		Lab Fort Blank Range	11.9	units	
		Lab Fort Bl. Av. Rec	85.0	%	
		LFB Duplicate RPD	13.9	%	0-25
	C19-C36 Aliphatics	Lab Fort Blank Amt.	40.0	mg/kg dry wt	
		Lab Fort Blk. Found	36.5	mg/kg dry wt	
		Lab Fort Blk. % Rec.	91.3	%	40-140
		Dup Lab Fort Bl Amt.	40.0	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	42.9	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	107.3	%	40-140
		Lab Fort Blank Range	16.0	units	
		Lab Fort Bl. Av. Rec	99.3	%	
		LFB Duplicate RPD	16.1	%	0-25

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Report Date: 1/8/2008 Lims Bat # : LIMT-12549

QC Batch Number: GC/PID-8447

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-73336					
	Toluene	Dup Lab Fort Bl Amt.	6.704	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	5.909	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	88.135	%	70-130
		Lab Fort Blank Range	0.847	units	
		Lab Fort Bl. Av. Rec	87.711	%	
		LFB Duplicate RPD	0.966	%	0-25
	o-Xylene	Lab Fort Blank Amt.	6.704	mg/kg dry wt	
		Lab Fort Blk. Found	6.306	mg/kg dry wt	
		Lab Fort Blk. % Rec.	94.067	%	70-130
		Dup Lab Fort Bl Amt.	6.704	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	6.193	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	92.372	%	70-130
		Lab Fort Blank Range	1.694	units	
		Lab Fort Bl. Av. Rec	93.220	%	
		LFB Duplicate RPD	1.818	%	0-25
	m/p-Xylene	Lab Fort Blank Amt.	13.409	mg/kg dry wt	
		Lab Fort Blk. Found	12.215	mg/kg dry wt	
		Lab Fort Blk. % Rec.	91.101	%	70-130
		Dup Lab Fort Bl Amt.	13.409	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	12.159	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	90.677	%	70-130
		Lab Fort Blank Range	0.423	units	
		Lab Fort Bl. Av. Rec	90.889	%	
		LFB Duplicate RPD	0.466	%	0-25
	MTBE	Lab Fort Blank Amt.	6.704	mg/kg dry wt	
		Lab Fort Blk. Found	9.375	mg/kg dry wt	
		Lab Fort Blk. % Rec.	139.830	%	70-130
		Dup Lab Fort Bl Amt.	6.704	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	9.431	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	140.677	%	70-130
		Lab Fort Blank Range	0.847	units	
		Lab Fort Bl. Av. Rec	140.254	%	
		LFB Duplicate RPD	0.604	%	0-25
	1,2,4-TrimethylBenzene	Lab Fort Blank Amt.	6.704	mg/kg dry wt	
		Lab Fort Blk. Found	5.585	mg/kg dry wt	
		Lab Fort Blk. % Rec.	83.305	%	70-130
		Dup Lab Fort Bl Amt.	6.704	mg/kg dry wt	
		Dup Lab Fort Bl. Fnd	5.607	mg/kg dry wt	
		Dup Lab Fort Bl %Rec	83.644	%	70-130
		Lab Fort Blank Range	0.338	units	
		Lab Fort Bl. Av. Rec	83.474	%	
		LFB Duplicate RPD	0.406	%	0-25

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QUALITY CONTROL DEFINITIONS AND ABBREVIATIONS

QC BATCH NUMBER	This is the number assigned to all samples analyzed together that would be subject to comparison with a particular set of Quality Control Data.
LIMITS	Upper and Lower Control Limits for the QC ANALYSIS Reported. All values normally would fall within these statistically determined limits, unless there is an unusual circumstance that would be documented in a NOTE appearing on the last page of the QC SUMMARY REPORT. Not all QC results will have Limits defined.
Sample Amount	Amount of analyte found in a sample.
Blank	Method Blank that has been taken though all the steps of the analysis.
LFBLANK	Laboratory Fortified Blank (a control sample)
STDADD	Standard Added (a laboratory control sample)
Matrix Spk Amt Added	Amount of analyte spiked into a sample
MS Amt Measured	Amount of analyte found including amount that was spiked
Matrix Spike % Rec.	% Recovery of spiked amount in sample.
Duplicate Value	The result from the Duplicate analysis of the sample.
Duplicate RPD	The Relative Percent Difference between two Duplicate Analyses.
Surrogate Recovery	The % Recovery for non-environmental compounds (surrogates) spiked into samples to determine the performance of the analytical methods.
Sur. Recovery (ELCD)	Surrogate Recovery on the Electrolytic Conductivity Detector.
Sur. Recovery (PID)	Surrogate Recovery on the Photoionization Detector.
Standard Measured	Amount measured for a laboratory control sample
Standard Amt Added	Known value for a laboratory control sample
Standard % Recovery	% recovered for a laboratory control sample with a known value.
Lab Fort Blank Amt	Laboratory Fortified Blank Amount Added
Lab Fort Blk. Found	Laboratory Fortified Blank Amount Found
Lab Fort Blk % Rec	Laboratory Fortified Blank % Recovered
Dup Lab Fort Bl Amt	Duplicate Laboratory Fortified Blank Amount Added
Dup Lab Fort Bl Fnd	Duplicate Laboratory Fortified Blank Amount Found
Dup Lab Fort Bl % Rec	Duplicate Laboratory Fortified Blank % Recovery
Lab Fort Blank Range	Laboratory Fortified Blank Range (Absolute value of difference between recoveries for Lab Fortified Blank and Lab Fortified Blank Duplicate).
Lab Fort Bl. Av. Rec.	Laboratory Fortified Blank Average Recovery
Duplicate Sample Amt	Sample Value for Duplicate used with Matrix Spike Duplicate
MSD Amount Added	Matrix Spike Duplicate Amount Added (Spiked)
MSD Amt Measured	Matrix Spike Duplicate Amount Measured
MSD % Recovery	Matrix Spike Duplicate % Recovery
MSD Range	Absolute difference between Matrix Spike and Matrix Spike Duplicate Recoveries

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Frac. Check Gilson Fractionator (FCS)

Silica Lot:	***S212-29***	Vendor:	**PHENOMENEX**
Frac Check Lot:	82007PG	Amount of DCM collected:	5000 ul
Hexane Lot:	47155	Amount of Hexane collected:	1500 ul
DCM Lot:	47025		
Acetone Lot:	47142	Data File:	82007 EPH058.D

Compound	Conc.(ppm)	1500ul	% REC	Limits
Naphthalene	50	43.449	87%	40-140
2-Methylnaphthalene	50	46.821	94%	40-140
Acenaphthalene	50	47.143	94%	40-140
Acenaphthene	50	47.628	95%	40-140
Fluorene	50	48.063	96%	40-140
Phenanthrene	50	49.109	98%	40-140
Anthracene	50	51.258	103%	40-140
o-Terphenyl (surr)	50	48.719	97%	40-140
Fluoranthene	50	50.222	100%	40-140
Pyrene	50	51.906	104%	40-140
Benzo(a)anthracene	50	50.812	102%	40-140
Chrysene	50	52.201	104%	40-140
Benzo(b)fluoranthene	50	50.798	102%	40-140
Benzo(k)fluoranthene	50	50.848	102%	40-140
Benzo(a)pyrene	50	51.114	102%	40-140
Indeno(123cd)pyrene	50	46.926	94%	40-140
Dibenzo(ah)anthracene	50	50.068	100%	40-140
Benzo(ghi)perylene	50	50.088	100%	40-140
C9	50	35.40	71%	30-140
C10	50	40.19	80%	40-140
C12	50	45.59	91%	40-140
C14	50	46.64	93%	40-140
C16	50	49.91	100%	40-140
C18	50	51.20	102%	40-140
C19	50	51.11	102%	40-140
C20	50	52.33	105%	40-140
1-Chloro-octadecane (surr)	50	42.55	85%	40-140
C22	50	50.86	102%	40-140
C24	50	54.35	109%	40-140
C26	50	51.52	103%	40-140
C28	50	49.87	100%	40-140
C30	50	50.21	100%	40-140
C36	50	53.89	108%	40-140
Fractionation Surrogates				
2-Flourobiphenyl	50	49.126	98%	40-140
2-Bromonaphthalene	50	49.763	100%	40-140
Aliphatic Bleed thru			% (<5%)	
Naphthalene	0		0.000	
2-Methylnaphthalene	0		0.000	

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SAMPLE RECEIPT CHECKLIST

CLIENT NAME: Associated building wreckers

RECEIVED BY: CEC DATE: 1/4/07

Was chain of custody relinquished and signed? YES NO

2. Does Chain agree with samples? YES NO

If not, explain:

. All Samples in good condition? YES NO

If not, explain:

Were samples received in compliance with Temperature 0-6 degrees C? YES NO

Degrees by temp blank 3.0c

Are there any dissolved samples for the lab to filter? YES NO

Degrees by temp gun

Who was notified? Date: Time:

6. Are there any on hold samples? YES NO STORED WHERE:

Are there any short holding time samples and who was notified? Date: Time

8 Location where samples are stored: 1B

CONTAINERS SENT IN TO CON-TEST	# of container
1 liter amber	
500 ml amber	
250 ml amber (8oz. Amber)	3
1 liter plastic	
500 ml plastic	
250 ml plastic	
40 ml vial—which kind—list below	3
Colisure bottle	
Dissolved oxygen bottle	
Flashpoint bottle	

CONTAINERS SENT TO CON-TEST	# of containers
Air Cassettes	
8 oz clear jar	
4 oz clear jar	
2 oz clear jar	
Plastic bag	
Encore	
Brass Sleeves	
Tubes	
Summa cans	
Other	

Laboratory comments:

# of HCL Vial ____ # of Methanol vials 3 # of Sodium Bisulfate vials ____

# of DI water(to be frozen) vials ____ Time and Date when frozen ____

Do all the samples have the correct pH levels? YES NO If no, please explain above

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REPORT DATE 1/10/2008

ASSOCIATED BUILDING WRECKERS
352 ALBANY STREET
SPRINGFIELD, MA 01106
ATTN: FRED VANDERHOOF

CONTRACT NUMBER:
PURCHASE ORDER NUMBER: 2070222

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMT-12597
JOB NUMBER: 2070222A

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: CHAPMAN VALVE

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
*EAST SIDE WALL	08B00684	SOIL	NOT SPECIFIED	eph - solid 04
*EAST SIDE WALL	08B00684	SOIL	NOT SPECIFIED	solids eph/vph
*EAST SIDE WALL	08B00684	SOIL	NOT SPECIFIED	vph - solid 04
END UST PIT BOTT	08B00682	SOIL	NOT SPECIFIED	eph - solid 04
END UST PIT BOTT	08B00682	SOIL	NOT SPECIFIED	solids eph/vph
END UST PIT BOTT	08B00682	SOIL	NOT SPECIFIED	vph - solid 04
*LEFT UST PIT BOT	08B00685	SOIL	NOT SPECIFIED	eph - solid 04
*LEFT UST PIT BOT	08B00685	SOIL	NOT SPECIFIED	solids eph/vph
*LEFT UST PIT BOT	08B00685	SOIL	NOT SPECIFIED	vph - solid 04
*NORTH SIDE WAL	08B00683	SOIL	NOT SPECIFIED	eph - solid 04
*NORTH SIDE WAL	08B00683	SOIL	NOT SPECIFIED	solids eph/vph
*NORTH SIDE WAL	08B00683	SOIL	NOT SPECIFIED	vph - solid 04

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REPORT DATE 1/10/2008

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ALL REPORTED

EXTRACTABLE PETROLEUM HYDROCARBONS (EPH) MADEP-EPH-04-1.1

RECOMMENDED SAMPLE HOLDING TIMES WERE NOT EXCEEDED FOR ALL SAMPLES ANALYZED BY THE EPH METHOD UNLESS LISTED BELOW: NONE EXCEEDED

ALL EPH SAMPLES WERE RECEIVED PRESERVED PROPERLY (WATER SAMPLES pH <2) IN THE PROPER CONTAINERS AT 4° C. +/- 2° AS SPECIFIED ON THE CHAIN-OF-CUSTODY FORM UNLESS SPECIFIED BELOW: ALL PROPERLY PRESERVED

SOLID SAMPLES, IF ANY, IN THE BATCH WERE EXTRACTED BY THE FOLLOWING METHOD: MICROWAVE: SW846 3546

SPE CARTRIDGE CONTAMINATION WITH NON-PETROLEUM COMPOUNDS, IF PRESENT, IS VERIFIED BY GC/MS IN EACH METHOD BLANK PER EXTRACTION BATCH AND EXCLUDED FROM C11-C22 AROMATIC RANGE FRACTION IN ALL SAMPLES IN THE BATCH. THE EPH METHOD BLANK WAS FOUND NOT TO BE CONTAMINATED WITH TARGET ANALYTES AT LEVELS ABOVE THE REPORTING LIMITS EXCEPT WHERE LISTED BELOW: NO CONTAMINATION NOTED

ALL EPH SAMPLES WERE ANALYZED UNDILUTED UNLESS SPECIFIED BELOW:

SAMPLE	DILUTION(S)
08B00682	X20, X10, AND UNDILUTE
08B00685	X80, X40, AND UNDILUTE

INITIAL AND CONTINUING CALIBRATIONS MET ALL REQUIRED PERFORMANCE STANDARDS FOR EPH METHOD EXCEPT AS LISTED BELOW: ALL STANDARDS MET

LABORATORY CONTROL SAMPLE RECOVERIES, LABORATORY CONTROL SAMPLE DUPLICATE RECOVERIES, AND LCS DUPLICATE RPDs FOR ALL EPH TARGET COMPOUNDS AND RANGES, INCLUDING NAPHTHALENE AND 2-METHYLNAPHTHALENE BREAKTHROUGH INTO THE ALIPHATIC FRACTION WERE WITHIN CONTROL LIMITS SPECIFIED BY THE METHOD UNLESS LISTED BELOW: NONE OUTSIDE OF CONTROL LIMITS

ALL EPH SURROGATE STANDARD RECOVERIES WERE WITHIN CONTROL LIMITS SPECIFIED BY THE METHOD UNLESS LISTED BELOW: NONE OUTSIDE OF CONTROL LIMITS

EPH MATRIX SPIKE AND MATRIX SPIKE DUPLICATE RECOVERIES, SAMPLE DUPLICATE RPDs AND MSDRPD, IF REQUESTED IN THIS BATCH WERE ALL WITHIN CONTROL LIMITS SPECIFIED BY THE METHOD UNLESS LISTED BELOW: NONE REQUESTED

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations. AIHA accreditations only apply to NIOSH methods and Environmental Lead Analyses.

AIHA 100033	AIHA ELLAP (LEAD) 100033	NORTH CAROLINA CERT. # 652
MASSACHUSETTS MA0100	NEW HAMPSHIRE NELAP 2516	NEW JERSEY NELAP NJ MA007 (AIR)
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036	FLORIDA DOH E871027 (AIR)
NEW YORK ELAP/NELAP 10899	RHODE ISLAND (LIC. No. 112)	