

EXHIBIT 6

Immediate Response Action Plan

Tank #1 Tightness Test Failure

DEP Release Tracking Number: 3-20984

Pennoni Associates

October 3, 2001



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM
Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

3 - 20984

A. RELEASE OR THREAT OF RELEASE LOCATION:

Release Name: (optional) Medfield State Hospital

Street: 45 Hospital Road Location Aid: Power Plant Facility

City/Town: Medfield ZIP Code: 02052

- Check here if a Tier Classification Submittal has been provided to DEP for this Release Tracking Number.
- Check here if this location is Adequately Regulated, pursuant to 310 CMR 40.010-0114.
- Specify Program: CERCLA HSWA Corrective Action Solid Waste Management RCRA State Program (21C Facilities)
- Related Release Tracking Numbers That This IRA Addresses: RTN 3-20799

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

- Submit an IRA Plan (complete Sections A, B, C, D, E, H, I, J and K).
 Check here if this IRA Plan is an update or modification of a previously approved written IRA Plan. Date Submitted: _____
- Submit an Imminent Hazard Evaluation (complete Sections A, B, C, F, H, I, J and K).
- Submit an IRA Status Report (complete Sections A, B, C, E, H, I, J and K).
- Submit a Request to Terminate an Active Remedial System and/or Terminate a Continuing Response Action(s) Taken to Address an Imminent Hazard (complete Sections A, B, C, D, E, H, I, J and K).
- Submit an IRA Completion Statement (complete Sections A, B, C, D, E, G, H, I, J and K).

You must attach all supporting documentation required for each use of form indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.

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

Identify Media and Receptors Affected: (check all that apply) Air Groundwater Surface Water Sediments Soil

Wetland Storm Drain Paved Surface Private Well Public Water Supply Zone 2 Residence

School Unknown Other Specify: _____

Identify Conditions That Require IRA, Pursuant to 310 CMR 40.0412: (check all that apply) 2 Hour Reporting Condition(s)

72 Hour Reporting Condition(s) Substantial Release Migration Other Condition(s)

Describe: Failed tank tightness test. Possible release to soil/groundwater.

Identify Oils and Hazardous Materials Released: (check all that apply) Oils Chlorinated Solvents Heavy Metals

Others Specify: _____

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply)

- | | |
|---|---|
| <input checked="" type="checkbox"/> Assessment and/or Monitoring Only | <input type="checkbox"/> Deployment of Absorbent or Containment Materials |
| <input type="checkbox"/> Excavation of Contaminated Soils | <input type="checkbox"/> Temporary Covers or Caps |
| <input type="checkbox"/> Re-use, Recycling or Treatment | <input type="checkbox"/> Bioremediation |
| ○ On Site ○ Off Site Est. Vol.: _____ cubic yards | <input type="checkbox"/> Soil Vapor Extraction |
| Describe: _____ | <input type="checkbox"/> Structure Venting System |
| <input type="checkbox"/> Store ○ On Site ○ Off Site Est. Vol.: _____ cubic yards | <input type="checkbox"/> Product or NAPL Recovery |
| <input type="checkbox"/> Landfill ○ Cover ○ Disposal Est. Vol.: _____ cubic yards | <input type="checkbox"/> Groundwater Treatment Systems |
| <input type="checkbox"/> Removal of Drums, Tanks or Containers | <input type="checkbox"/> Air Sparging |
| Describe: _____ | <input type="checkbox"/> Temporary Water Supplies |

SECTION D IS CONTINUED ON THE NEXT PAGE.



IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM
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Release Tracking Number

3 - 20984

D. DESCRIPTION OF RESPONSE ACTIONS (continued):

- Removal of Other Contaminated Media
Specify Type and Volume: _____
- Temporary Evacuation or Relocation of Residents
- Fencing and Sign Posting
- Other Response Actions Describe: Decommission of UST
- Check here if this IRA involves the use of Innovative Technologies (DEP is interested in using this information to aid in creating an Innovative Technologies Clearinghouse).
Describe Technologies: _____

E. TRANSPORT OF REMEDIATION WASTE: (if Remediation Waste has been sent to an off-site facility, answer the following questions)

Name of Facility: _____

Town and State: _____

Quantity of Remediation Waste Transported to Date: _____

F. IMMINENT HAZARD EVALUATION SUMMARY: (check one of the following)

- Based upon an evaluation, an Imminent Hazard exists in connection with this Release or Threat of Release.
- Based upon an evaluation, an Imminent Hazard does not exist in connection with this Release or Threat of Release.
- Based upon an evaluation, it is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release, and further assessment activities will be undertaken.
- Based upon an evaluation, it is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release. However, response actions will address those conditions that could pose an Imminent Hazard.

G. IRA COMPLETION STATEMENT:

- Check here if future response actions addressing this Release or Threat of Release will be conducted as part of the Response Actions planned for a Site that has already been Tier Classified under a different Release Tracking Number, or a Site that is identified on the Transition List as described in 310 CMR 40.0600 (i. e., a Transition Site, which includes Sites with approved Waivers). These additional response actions must occur according to the deadlines applicable to the earlier Release Tracking Number (i. e., Site ID Number).
State Release Tracking Number (i. e., Site ID Number) of Tier Classified Site or Transition Site: _____

If any Remediation Waste will be stored, treated, managed, recycled or reused at the site following submission of the IRA Completion Statement, you must submit either a Release Abatement Measure (RAM) Plan or a Phase IV Remedy Implementation Plan, along with the appropriate transmittal form, as an attachment to the IRA Completion Statement.

H. LSP OPINION:

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 (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief.

> if Section B of this form indicates that an Immediate Response Action 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) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that an Imminent Hazard Evaluation is being submitted, this Imminent Hazard Evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and the assessment activity(ies) undertaken to support this Imminent Hazard Evaluation complies(y) with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;

> if Section B of this form indicates that an Immediate Response Status 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) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that an Immediate Response Action Completion Statement or a Request to Terminate an Active Remedial System and/or Terminate a Continuing Response Action(s) Taken to Address an Imminent Hazard 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) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal.

SECTION H IS CONTINUED ON THE NEXT PAGE.



IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM
Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

3 - 20984

H. LSP Opinion (continued):

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.

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 of the order(s), permit(s) and/or approval(s).

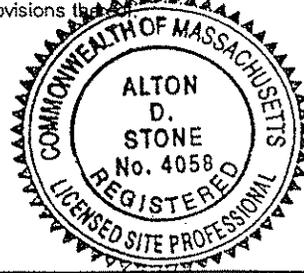
LSP Name: Alton Day Stone LSP #: 4058 Stamp: _____

Telephone: 603-226-1950 Ext.: _____

FAX: (optional) _____

Signature: *Alton Day Stone*

Date: 10/3/01



I. PERSON UNDERTAKING IRA:

Name of Organization: Department of Mental Health

Name of Contact: William Corliss Title: Director of Facilities Management

Street: 25 Staniford Street

City/Town: Boston State: MA ZIP Code: 02114

Telephone: 617-626-8049 Ext.: _____ FAX: (optional) _____

Check here if there has been a change in the person undertaking the IRA.

J. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING IRA: (check one)

RP or PRP Specify: Owner Operator Generator Transporter Other RP or PRP: _____

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

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

Any Other Person Undertaking IRA Specify Relationship: _____

K. CERTIFICATION OF PERSON UNDERTAKING IRA:

I, William Corliss, 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.

By: *William Corliss* Title: Director of Facilities Management

(signature)

For: William Corliss Date: 10/4/01

(print name of person or entity recorded in Section I)

Enter address of the person providing certification, if different from address recorded in Section I:

Street: _____

City/Town: _____ State: _____ ZIP Code: _____

Telephone: _____ Ext.: _____ FAX: (optional) _____

YOU MUST 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.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-103

Release Tracking Number

RELEASE NOTIFICATION & NOTIFICATION RETRACTION FORM Pursuant to 310 CMR 40.0335 and 310 CMR 40.0371 (Subpart C)

3 - 20984
If assigned by DEP

A. RELEASE OR THREAT OF RELEASE LOCATION:

Street: 45 Hospital Road Location Aid: Power Plant Facility
City/Town: Medfield ZIP Code: 02052

B. THIS FORM IS BEING USED TO: (check one)

- Submit a **Release Notification** (complete all sections of this form).
- Submit a **Retraction of a Previously Reported Notification** of a Release or Threat of Release (complete Sections A, B, E, F and G of this form). You **MUST** attach the supporting documentation required by 310 CMR 40.0335.

C. INFORMATION DESCRIBING THE RELEASE OR THREAT OF RELEASE (TOR):

Date and time you obtained knowledge of the Release or TOR. Date: 8/6/2001 Time: 12:00 Specify: AM PM

The date you obtained knowledge is always required. The time you obtained knowledge is not required if reporting only 120 Day Conditions.

IF KNOWN, record date and time release or TOR occurred. Date: _____ Time: _____ Specify: AM PM

- Check here if you previously provided an Oral Notification to DEP (2 Hour and 2 Hour Reporting Conditions only).

Provide date and time of Oral Notification. Date: 8/8/2001 Time: 2:45 Specify: AM PM

Check all Notification Thresholds that apply to the Release or Threat of Release: (for more information see 310 CMR 40.0310 - 40.0315)

2 HOUR REPORTING CONDITIONS

- Sudden Release
 Threat of Sudden Release
 Oil Sheen on Surface Water
 Poses Imminent Hazard
 Could Pose Imminent Hazard
 Release Detected in Private Well
 Release to Storm Drain
 Sanitary Sewer Release (Imminent Hazard Only)

72 HOUR REPORTING CONDITIONS

- Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/2 Inch
 Underground Storage Tank (UST) Release
 Threat of UST Release
 Release to Groundwater near Water Supply
 Release to Groundwater near School or Residence

120 DAY REPORTING CONDITIONS

- Release of Hazardous Material(s) to Soil or Groundwater Exceeding Reportable Concentration(s)
 Release of Oil to Soil Exceeding Reportable Concentration(s) and Affecting More than 2 Cubic Yards
 Release of Oil to Groundwater Exceeding Reportable Concentration(s)
 Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/8 Inch and Less than 1/2 Inch

List below the Oils or Hazardous Materials that exceed their Reportable Concentration or Reportable Quantity by the greatest amount. If necessary, attach a list of additional Oil and Hazardous Material substances subject to reporting.

Name and Quantities of Oils (O) and Hazardous Materials (HM) Released:

O or HM Released	O HM (check one)	CAS # (if known)	Amount or Concentration	Units	Reportable Concentrations Exceeded, if Applicable (RCS-1, RCS-2, RCGW-1, RCGW-2)
_____	<input type="checkbox"/> <input type="checkbox"/>	_____	_____	_____	_____
_____	<input type="checkbox"/> <input type="checkbox"/>	_____	_____	_____	_____
_____	<input type="checkbox"/> <input type="checkbox"/>	_____	_____	_____	_____

D. ADDITIONAL INVOLVED PARTIES:

- Check here if attaching names and addresses of owners of properties affected by the Release or Threat of Release, other than an owner who is submitting this Release Notification (required).
- Check here if attaching Licensed Site Professional (LSP) name and address (optional).

You may write in names and addresses on the bottom of the second page of this form.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-103

Release Tracking Number

RELEASE NOTIFICATION & NOTIFICATION RETRACTION
FORM Pursuant to 310 CMR 40.0335 and 310 CMR 40.0371 (Subpart C)

3 - 20984
If assigned by DEP

E. PERSON REQUIRED TO NOTIFY:

Name of Organization: Department of Mental Health, Medfield State Hospital
Name of Contact: William Corliss Title: Director of Facilities Management
Street: 25 Staniford Street
City/Town: Boston State: MA ZIP Code: 02114
Telephone: 617-626-8049 Ext.: FAX: (optional)

F. RELATIONSHIP OF PERSON REQUIRED TO NOTIFY TO RELEASE OR THREAT OF RELEASE: (check one)

- RP or PRP Specify: Owner Operator Generator Transporter Other RP or PRP:
- Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G. c. 21E, s. 2)
- Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5)
- Any Person Otherwise Required to Notify Specify Relationship:

G. CERTIFICATION OF PERSON REQUIRED TO NOTIFY:

I, William Corliss, 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 is/are aware that there are significant penalties, including, but not limited to possible fines or imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: William Corliss Title: Director of Facilities Management
(signature)
For: William Corliss Date: 10/4/01
(print name of person or entity recorded in Section E)

Enter address of the person providing certification, if different from address recorded in Section E:
Street:
City/Town: State: ZIP Code:
Telephone: Ext.: FAX: (optional)

YOU MUST 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.



PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

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IMMEDIATE RESPONSE ACTION PLAN

TANK #1 TIGHTNESS TEST FAILURE

DEP RELEASE TRACKING NUMBER: 3-20984

MEDFIELD STATE HOSPITAL
45 HOSPITAL ROAD
MEDFIELD, MASSACHUSETTS

Project No. DOMH0101

Prepared For:

The Commonwealth of Massachusetts
Department of Mental Health
25 Staniford Street
Boston, MA 02114

Prepared By:

Pennoni Associates Inc.
The Concord Center, Suite 434
10 Ferry Street, Unit 6
Concord, NH 03301

October 3, 2001


Jeff A. McCullough, P.E.
Project Manager

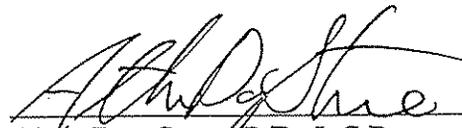

Alton Day Stone, P.E., L.S.P.
Senior Engineer

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Immediate Response Action (IRA) Transmittal Form, BWSC-105

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Figure 1 – Disposal Site Location Map

Figure 2 – Disposal Site Plan

Figure 3 - MassGIS Scoring Map

Figure 4 – Piezometric Head Elevation Plan

Appendices

Appendix A – Laboratory Reports

1.0 INTRODUCTION

This Immediate Response Action (IRA) Plan has been prepared in response to a failed tank tightness test of a 30,000-gallon underground storage tank (UST) (Tank #1) situated at the Power Plant facility of the Medfield State Hospital, located in Medfield, Massachusetts (the property). The location of the property is shown on Figure 1, Site Location Map. The threat of release requires notification to the Massachusetts Department of Environmental Protection (DEP) within 72 hours. Notification was made and Release Tracking Number (RTN) 3-20984 was assigned.

This report documents IRA activities, which are ongoing at the UST location pursuant to the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000, Sections 40.0410 through 40.0429. The IRA Plan is for assessment, which includes the installation of test borings and monitoring wells for the assessment of soil and groundwater conditions at the UST location, and for decommissioning of the UST.

The Department of Mental Health is assuming responsibility for the IRA. Mr. William Corliss, Director of Facilities Management, 25 Staniford Street, Boston, Massachusetts 02114 (617-626-8049), is the contact person for the Department of Mental Health.

2.0 RELEASE AND DISPOSAL SITE DESCRIPTION

The Department of Mental Health operates the Medfield State Hospital for psychiatric care. The hospital facilities occupy approximately 400 acres and are located 2 miles north of Medfield. The developed land is about 75 acres in size and is improved by 42 brick buildings and associated roadways, paved parking and landscaped areas.

The Power Plant is a two-story brick building which houses oil-fired boilers that formerly produced steam pressure. A temporary boiler is situated over the UST pad area. The steam is used to heat the facilities on the property. The UST system consisted of three 30,000-gallon capacity tanks. Two tanks are out of service, although they remain in-place. The tanks are double-walled steel and were installed in 1990. The existing USTs replaced three 30,000 gallon USTs which were in service since the early 1960s. The USTs were always historically used for the storage of No. 6 fuel oil. In July 2001, Medfield State Hospital converted over to the use of No. 2 fuel oil, which was stored in Tank #1. It is believed that there is a concrete ballast pad below the USTs, at a depth of approximately 14 feet.

In the immediate area of the USTs, the surface is covered with an 8-inch thick concrete pad. A temporary boiler is located on the concrete pad. The adjacent driveway and parking lot is paved with asphalt. Surface topography slopes from the east to west. Two catch basins, to the north and east of the UST pad area, collect surface water and discharge to an outfall structure. The outfall structure is located approximately 55 feet north of the UST pad area. Surface waters discharge onto the ground surface at the outfall structure. Beyond the asphalt area, to the north and west, is undeveloped woodlands. The Charles River is located approximately 500 feet north of the UST pad area.

As noted above, the existing USTs were installed in 1990. At that time, the three former USTs were

removed. During removal activities, a release of approximately 2,000 gallons of No.6 fuel oil was identified and Site No. 3-1684 was assigned to the release on January 15, 1990. Remedial response was conducted in March 1997. Corporate Environmental Engineering of Worcester, MA performed a Phase I Site Investigation and Tier Classification for Site No. 3-1684. As part of the Phase I work, a total of six monitoring wells were installed on the property (see Figure 2). On December 28, 1998, Camp Dresser & McKee Inc. submitted a Response Action Outcome Statement for Site No. 3-1684.

On October 27, 1999, Pennoni Associates (Pennoni) performed tightness testing on Tank #2 and Tank #3. Both tanks failed the tests. An investigation determined that the failure of the tightness tests was a result of extensive corrosion and holes in the vicinity of the manways for the two tanks. Verbal notifications were made to both the Medfield Fire Department and to the DEP on October 28, 1999 and November 2, 1999 (DEP contact was Brad Stewart). A release tracking number was not assigned to the release at that time by the DEP. A Notice of Intent (NOI) was submitted to the Medfield Conservation Commission in December 1999 for the UST investigation and repair, and an Order of Conditions was issued.

In late May 2001, the closure of Tank #2 and Tank #3 was conducted under the oversight of Pennoni. The original scope of work included removal of tank sludges, triple-rinsing the tank interiors, and filling the tanks with concrete slurry. During UST closure activities, soil samples were collected on June 1, 2001 from the pea gravel beneath Tank#2 and Tank#3 and analyzed for volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH) by DEP method. Analytical results indicate that aliphatics, aromatics, 2-methylnaphthalene, and naphthalene in soil samples collected beneath the tanks exceeded DEP Reportable Concentrations. Table 1 presents a summary of the soil analytical results. A written notification was provided to DEP on October 3, 2001.

A total of eight 4-inch diameter slotted polyvinyl chloride (PVC) observation wells are located along the perimeter of the USTs. On June 15, 2001, Pennoni gauged all eight wells with a bailer. Inspection of the observation well located at the west end of Tank #2 indicated the presence of non-aqueous phase liquid (NAPL) (i.e. No.6 fuel oil), approximately 14 inches in thickness at a depth of about 11 feet. No other wells indicated the presence of free product. Two other wells had 3 to 4 inches of water. In accordance with the MCP, verbal notification of the release was submitted to Chris Bresnahan of the DEP at 12:08 p.m. on June 15, 2001. At that time, Release Tracking Number 3-20799 was assigned to the release. The time of the release and the quantity of the release are not known. On July 24, 2001, the DMH decided to complete the closure of Tank #2 and Tank #3, pursuant to 527 CMR 9.00 *Tanks and Containers*. Both tanks were filled in-place with concrete slurry. Closure activities were completed on August 3, 2001. An IRA Plan, dated August 13, 2001, was submitted to the DEP for assessment actions to be completed around Tanks #2 and #3.

On August 6, 2001, Pennoni performed a tank tightness test on Tank #1. This tank failed the tightness test. The cause of the failed tightness test is believed to be extensive corrosion and holes near the manways, similar to the condition of Tanks #2 and #3. In accordance with the MCP, verbal notification of the threat of release was submitted to Brad Stewart of the DEP at 2:45 p.m. on August 8, 2001. At that time, Release Tracking Number 3-20984 was assigned to the tank tightness test failure.

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The scope of the IRA activities is designed to evaluate, to the extent feasible, the vertical and horizontal extent of potential contamination in the vicinity of Tank #1. Given the evidence of three possible separate release/threat of release events have occurred for three USTs that are in very close proximity, the scope of IRA activities will be broad enough to allow assessment of this potential threat of release, the NAPL release (RTN 3-20799) and the hydrocarbon detection in soil under Tank #3 in a single investigation. IRA activities are discussed further in Section 5.0. Groundwater samples were collected from the disposal site and are discussed in Section 5.0.

The disposal site is expected to include the location of the three USTs and any soil and groundwater in the vicinity of the USTs to which petroleum-related OHM have been located. The locations of the power plant building and the UST system are illustrated on Figure 2, Disposal Site Plan.

3.0 SENSITIVE RECEPTORS

Medfield personnel are typically on the property between 8:00 AM and 5:00 PM Monday through Friday, and have an 8-hour workday, 5 days per week. Facility personnel would also be considered frequent visitors to the disposal site. The hospital patients are not located within 500 feet of the disposal site.

According to the July 17, 2001 MassGIS Site Scoring Map, (Figure 3) the nearest surface water body is the Charles River located approximately 500 feet north of the disposal site. The surrounding area is a wetland area that is located approximately 200 feet north and west of the disposal site.

According to the MassGIS Site Scoring Map, the disposal site is not located within an Interim Wellhead Protection Area or within an Approved Zone 2. The disposal site is located in a Protected Open Space known as an Area of Critical Environmental Concern (ACEC). Potential receptors in the ACEC would be flora and fauna; however, groundwater is not directly accessible for these receptors.

The surface water of the Charles River is a potential receptor for the groundwater at the disposal site. This would include wildlife use of the waters. Human contact with the surface waters could potentially occur in the form of swimming.

The potential for human exposure to OHM via dermal contact or ingestion is low, given that a majority of the accessible portions of the disposal site are either covered with asphalt pavement or a concrete slab. No private potable water supply wells are known to be located in the vicinity of the disposal site. The potential exposure to OHM via inhalation, due to vapor migration into the power plant building, is low.

Groundwater on the disposal site was encountered at a depth of approximately 16 feet below ground surface and, therefore, groundwater is not considered to be a potential source of vapor migration into the building.

4.0 REASON FOR IRA

A tightness test failure of an UST was identified during a site inspection conducted by Pennoni, which required notification to the DEP within 72 hours. Pursuant to the MCP Section 40.0412(2), an IRA is required for all sites where a tightness test failure requiring notification within 72 hours has been identified.

5.0 IRA OBJECTIVES AND SCOPE OF WORK

The objectives of the IRA are to assess whether a release of oil to soil or groundwater has occurred and, if so, assess the potential for migration of petroleum-related OHM across the disposal site and to decommission the UST. The potential release of No. 6 fuel oil can possibly affect the nearby Charles River and associated wetlands, and the Area of Critical Environmental Concern. As mentioned previously, the assessment for this potential threat of release (Tank #1) will be conducted concurrently with the investigation of the release of NAPL under RTN 3-20799 (nearby Tank #2) and the release of oil to soil at nearby Tank #3. The scope of work includes the following tasks.

5.1 Subsurface Investigation and Soil Sample Analysis

Pennoni will conduct an investigation of the soil conditions beneath and in the vicinity of the existing USTs. Pennoni will supervise the advancement of up to six vertical test borings and up to three angle borings. Test borings will be advanced by a Massachusetts-licensed driller. During test boring advancement, split-spoon soil samples will be collected and field-screened for the presence of volatile vapors using a photoionization detector (PID). Selected soil samples collected from the test borings will be submitted for laboratory analysis of VPH and EPH by the DEP methods.

5.2 Monitoring Well Installation, Survey, and Groundwater Sample Analysis

A minimum of two monitoring wells will be installed in selected test borings to provide additional information to evaluate the potential vertical and horizontal extent of contamination downgradient from the potential source (note: six monitoring wells are currently in place). All wells will be constructed of 2-inch diameter, thread-coupled Schedule 40 PVC piping. A 10-foot length of machine-slotted, 0.020-inch slot well screen will be placed across the water table in each well. The well annulus around each screen will be packed with clean silica sand to a height of one foot above the top of the well screen. The PVC well casings will extend to the surface. A 2-foot thick bentonite seal will be placed in the annular space above the sandpack. The remaining boring annulus will be backfilled to within two feet of the ground surface with soil cuttings. Cement/bentonite grout will be placed in the open borings. Each well will be finished at grade with an aluminum road box cemented flush with the surface, equipped with a locking cap. All monitoring wells will be developed using pumping and surging methods.

The elevation of the top of the PVC casing for each monitoring well will be surveyed using standard leveling and stadia techniques, relative to an arbitrary datum of 100.00 feet situated at the northwest corner of the retaining wall adjacent to the power plant building.

All monitoring wells will be gauged for depth to water using a Solinst depth to water probe. The probe is capable of measuring depth to water to the nearest 0.01 foot. Investigation of possible NAPL will be conducted by inserting a clean, clear bailer into the well approximately half the volume of the bailer and recording any NAPL layer thickness upon the initial purge. Groundwater samples will be collected from the new monitoring wells and submitted for laboratory analysis of VPH and EPH.

On June 21, 2001, groundwater samples were collected from the six existing monitoring wells located in the vicinity of the UST tank area and submitted for laboratory analysis of VPH and EPH. Aliphatic, aromatics and ethylbenzene were detected in the groundwater sample collected from monitoring well MW-2 at concentrations well below their respective GW-2 and GW-3 standards. Groundwater analytical results are summarized in Table 2 and a copy of the laboratory report is provided in Appendix A.

On August 28, 2001, all six monitoring wells and eight observation wells, in the vicinity of the three USTs, were gauged for the presence of NAPL and depth to the water table. NAPL was detected only in observation well #2, next to the west end of Tank #2. Table 3 and Figure 4 present the well gauging data.

5.3 UST Decommissioning

Presently, Tank #1 is the only fuel storage system at the disposal site for generating steam at the temporary boiler. A new boiler system is to be installed in Fall 2001, which will utilize natural gas as a fuel source. The DMH is scheduled to install a temporary aboveground storage tank (AST) to replace Tank #1 as soon as practical, which will be a backup system for the new boilers. Once the AST is in place, Tank #1 will be taken out of service.

6.0 PERMITS

An extension to an existing Order of Conditions was filed and approved by the Medfield Conservation Commission on May 17, 2001 and is effective until May 31, 2002. No other permits, other than DEP approval of the IRA Plan, are applicable to the investigation phase of the IRA. The Medfield Fire Department has been appraised of the site conditions. All necessary permits will be obtained from the Medfield Fire Department for any new tank installations.

7.0 SCHEDULE

IRA activities have been ongoing at the disposal site since August 8, 2001, immediately following verbal IRA approval from the DEP. The subsurface investigation will be conducted in the vicinity of the UST in 2001 to evaluate the vertical and horizontal extent of contamination. Closure of Tank #1 and replacement with a temporary AST will be conducted as soon as practical.

Any remediation action, if required, will be described in an addendum to this IRA Plan, or will be conducted as a Release Abatement Measure or Comprehensive Response Action. As required by DEP, an IRA Completion Report, for the assessment or for the addendum for remedial action, will

be submitted within 10 months of the release notification (August 8, 2001).

8.0 REMEDIATION WASTE

Any remediation waste generated during IRA activities will be disposed of at an off-site licensed facility in accordance with all federal, state and local regulations. Remediation waste has not been generated as of the date of this IRA Plan.

9.0 LIMITATIONS

All documents prepared by Pennoni Associates Inc. are instruments of service in respect of the project. They are not intended or represented to be suitable for the reuse by owner or others on extensions of the project or on any other project. Any reuse without written verification or adaptation by Pennoni Associates Inc. for the specific purpose intended will be at the owner's sole risk and without liability or legal exposure to Pennoni Associates Inc.; and owner shall indemnify and hold harmless Pennoni Associates Inc. from all claims, damages, losses and expenses arising out of or resulting therefrom.

TABLE 1
Soil Samples - Summary of Analytical Results
Medfield State Hospital
45 Hospital Road, Medfield, MA

Sample Identification	Sample Date Sample Depth	Units 22 West (1/01) (see note 1)	Units 43 West (1/01) (see note 1)	Units 45 East (1/01) (see note 1)	Reportable Concentration		Method 1 Risk Characterization Standards Category 1-5/PAV-2	Method 2 Risk Characterization Standards Category 1-5/PAV-2
					RCS-1	RCS-2		
Extractable Petroleum Hydrocarbons (EPH) by EPA Method								
C9-C13 Aliphatics	ND	ND	425	1370	1,000	1	1,000	1,000
C19-C36 Aliphatics	1510	1990	1990	3490	2,500	20	2,500	2,500
C11-C22 Aromatics	1790	2320	2320	2390	200	30	800	800
Acenaphthene	ND	ND	ND	ND	20	5	1,000	1,000
Acenaphthylene	ND	ND	ND	ND	100	3	100	100
Anthracene	ND	ND	ND	ND	1,000	0.6	1,000	1,000
Benzo(a)anthracene	ND	ND	ND	ND	0.7	3	0.7	0.7
Benzo(a)pyrene	ND	ND	ND	ND	0.7	3	0.7	0.7
Benzo(b)fluoranthene	ND	ND	ND	ND	0.7	3	0.7	0.7
Benzo(g,h,i)perylene	ND	ND	ND	ND	1,000	3	1,000	1,000
Benzo(k)fluoranthene	ND	ND	ND	ND	7	3	7	7
Chrysene	ND	ND	ND	ND	7	3	7	7
Dibenz(a,h)anthracene	ND	ND	ND	ND	0.7	3	0.7	0.7
Fluoranthene	ND	ND	ND	ND	1,000	0.2	1,000	1,000
Fluorene	ND	ND	ND	ND	400	3	1,000	1,000
Indeno(1,2,3-cd)pyrene	ND	ND	173	333	0.7	3	0.7	0.7
2-Methylnaphthalene	ND	ND	ND	ND	4	3	500	500
Naphthalene	ND	ND	10.6	30.6	4	6	100	100
Phenanthrene	ND	ND	ND	ND	100	0.05	1,000	100
Pyrene	ND	ND	ND	ND	700	3	700	700
Volatile Petroleum Hydrocarbons (VPH) by EPA Method								
C5-C8 Aliphatics	ND	ND	ND	62	100	1	100	100
C9-C12 Aliphatics	159	160	160	334	1,000	1	1,000	1,000
C9-C10 Aromatics	79.7	106	106	208	100	4	100	100
Benzene	ND	ND	ND	ND	10	2	40	40
Toluene	ND	ND	ND	ND	90	6	500	500
Ethylbenzene	0.11	0.31	0.31	1.0	80	4	500	500
Total Xylenes	1.06	2.51	2.51	8.1	500	6	500	500
Methyl Tertiary Butyl Ether (MTBE)	ND	ND	ND	ND	0.3	50	100	100
Naphthalene	1.25	653	653	333	4	6	100	100

All results are in milligrams per kilogram (mg/kg).
 ND Not detected above laboratory detection limit.
 Not analyzed.
 Exceeds RCS-1 Reportable Concentration.

1 - Samples collected from soil beneath specified underground storage tank.

TABLE 2
Groundwater Samples - Summary of Analytical Results
Medfield State Hospital
45 Hospital Road, Medfield, MA

Sample Identification Sample Date	MW-1 6/21/01	MW-2 6/21/01	MW-3 6/21/01	MW-4 6/21/01	MW-5 6/21/01	MW-6 6/21/01	Reportable Concentration RC(GW-3)	Method 1 Risk Characterization Standards Category: GW-3	
								Category: GW-2	Category: GW-1
Volatile Petroleum Hydrocarbons (VPH)									
by DEP Method									
C9-C18 Aliphatics	ND	154	ND	ND	ND	ND	1000	1,000	20,000
C19-C36 Aliphatics	ND	548	99	128	99	ND	20,000	NS	20,000
C11-C22 Aromatics	ND	574	86.4	61.4	86.4	ND	30,000	50,000	30,000
Acenaphthene	ND	ND	ND	ND	ND	ND	3,000	NS	5,000
Acenaphthylene	ND	ND	ND	ND	ND	ND	3,000	NS	3,000
Anthracene	ND	ND	ND	ND	ND	ND	600	NS	3,000
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	30,000	NS	3,000
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	30,000	NS	3,000
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	30,000	NS	3,000
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	30,000	NS	3,000
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	30,000	NS	3,000
Chrysene	ND	ND	ND	ND	ND	ND	30,000	NS	3,000
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	0.5	NS	3,000
Fluoranthene	ND	ND	ND	ND	ND	ND	200	NS	200
Fluorene	ND	ND	ND	ND	ND	ND	30,000	NS	3,000
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	30,000	NS	3,000
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	30,000	10,000	3,000
Naphthalene	ND	ND	ND	ND	ND	ND	6,000	6,000	6,000
Phenanthrene	ND	ND	ND	ND	ND	ND	30	NS	30
Pyrene	ND	ND	ND	ND	ND	ND	3,000	NS	3,000
Volatile Petroleum Hydrocarbons (VPH) by EPA Method									
C8-C9 Aliphatics	ND	340	ND	ND	ND	ND	1,000	1,000	4,000
C9-C12 Aliphatics	ND	371	340	ND	340	ND	1,000	1,000	2,000
C9-C10 Aromatics	ND	340	ND	ND	ND	ND	4,000	5,000	4,000
Benzene	ND	340	ND	ND	ND	ND	2,000	2,000	7,000
Toluene	ND	ND	ND	ND	ND	ND	6,000	6,000	30,000
Ethylbenzene	ND	3.5	ND	ND	ND	ND	40,000	30,000	4,000
Total Xylenes	ND	ND	ND	ND	ND	ND	60,000	6,000	30,000
Methyl Tertiary Butyl Ether (MTBE)	ND	ND	ND	ND	ND	ND	50,000	50,000	50,000
Naphthalene	ND	ND	ND	ND	ND	ND	6,000	6,000	6,000

All results are in micrograms per liter (ug/L).
ND Not detected above laboratory detection limit.
Exceeds Method 1 - Risk Characterization Category GW-2.

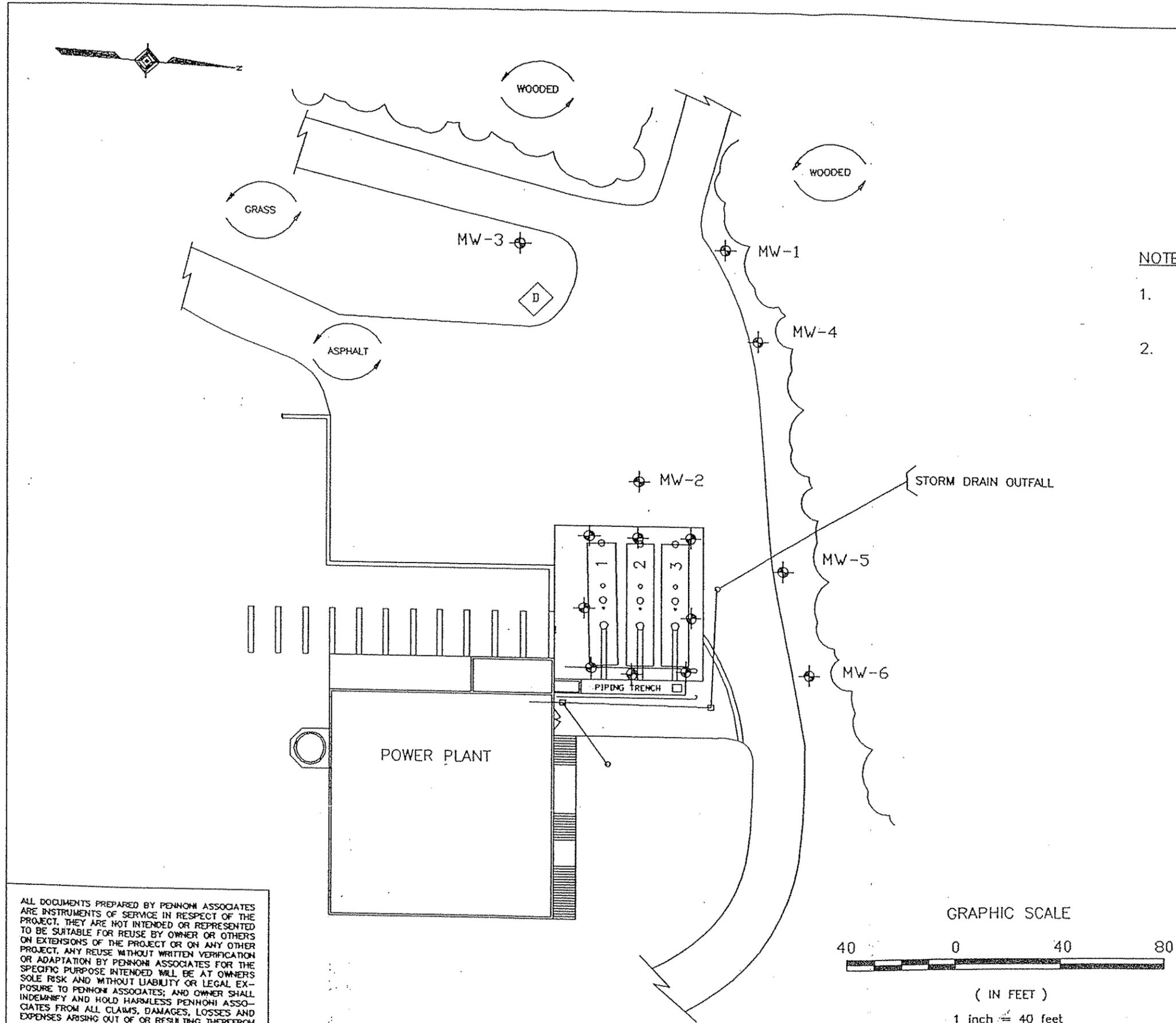
TABLE 3

Well Gauging and Piezometric Head Elevation Data
 Medfield State Hospital Power Facility
 45 Hospital Road, Medfield, Massachusetts

WELL ID	DATE	WELL ELEVATION	DEPTH TO NAPL	DEPTH TO WATER	NAPL THICKNESS	PIEZOMETRIC HEAD ELEVATION
MW-1	6/21/01	90.56	NE	13.79	0.00	76.77
	8/28/01	90.56	NE	> 15.07	0.00	Dry
MW-2	6/21/01	95.46	NE	16.28	0.00	79.18
	8/28/01	95.46	NE	17.29	0.00	78.17
MW-3	6/21/01	92.14	NE	9.88	0.00	82.26
	8/28/01	92.14	NE	11.21	0.00	80.93
MW-4	6/21/01	92.16	NE	15.38	0.00	76.78
	8/28/01	92.16	NE	17.83	0.00	74.33
MW-5	6/21/01	95.99	NE	19.23	0.00	76.76
	8/28/01	95.99	NE	19.99	0.00	76.00
MW-6	6/21/01	98.07	NE	19.81	0.00	78.26
	8/28/01	98.07	NE	20.40	0.00	77.67
OW-1	6/21/01	96.68	NE	13.2	0.00	83.5
	8/28/01	96.68	NE	12.09	0.00	84.59
OW-2	6/21/01	96.52	11.00	NA	1.2	85.52
	8/28/01	96.52	11.95	NA	1.75	84.57
OW-3	8/28/01	96.26	NE	11.69	0.00	84.57
OW-4	8/28/01	96.95	NE	> 12.32	0.00	Dry
OW-5	6/21/01	97.45	NE	13.7	0.00	83.8
	8/28/01	97.45	NE	12.86	0.00	84.59
OW-6	8/28/01	97.37	NE	> 12.11	0.00	Dry
OW-7	8/28/01	97.33	NE	12.79	0.00	84.54
OW-8	8/28/01	97.17	NE	12.61	0.00	84.56

- Note 1. All measurements are in feet. Elevations are relative to an arbitrary datum of 100.00' defined on top of a bolt set in the concrete at the northwest corner of the retaining wall which abuts the UST pad to the south
 2. NAPL depth measurement is not corrected for its' specific gravity.

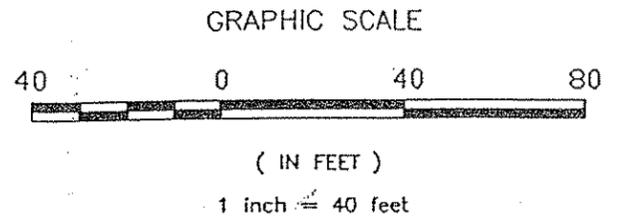
NAPL Non Aqueous Phase Liquid
 NE NAPL was not encountered in the well on this date
 NA Not Available
 > Well dry at measured depth



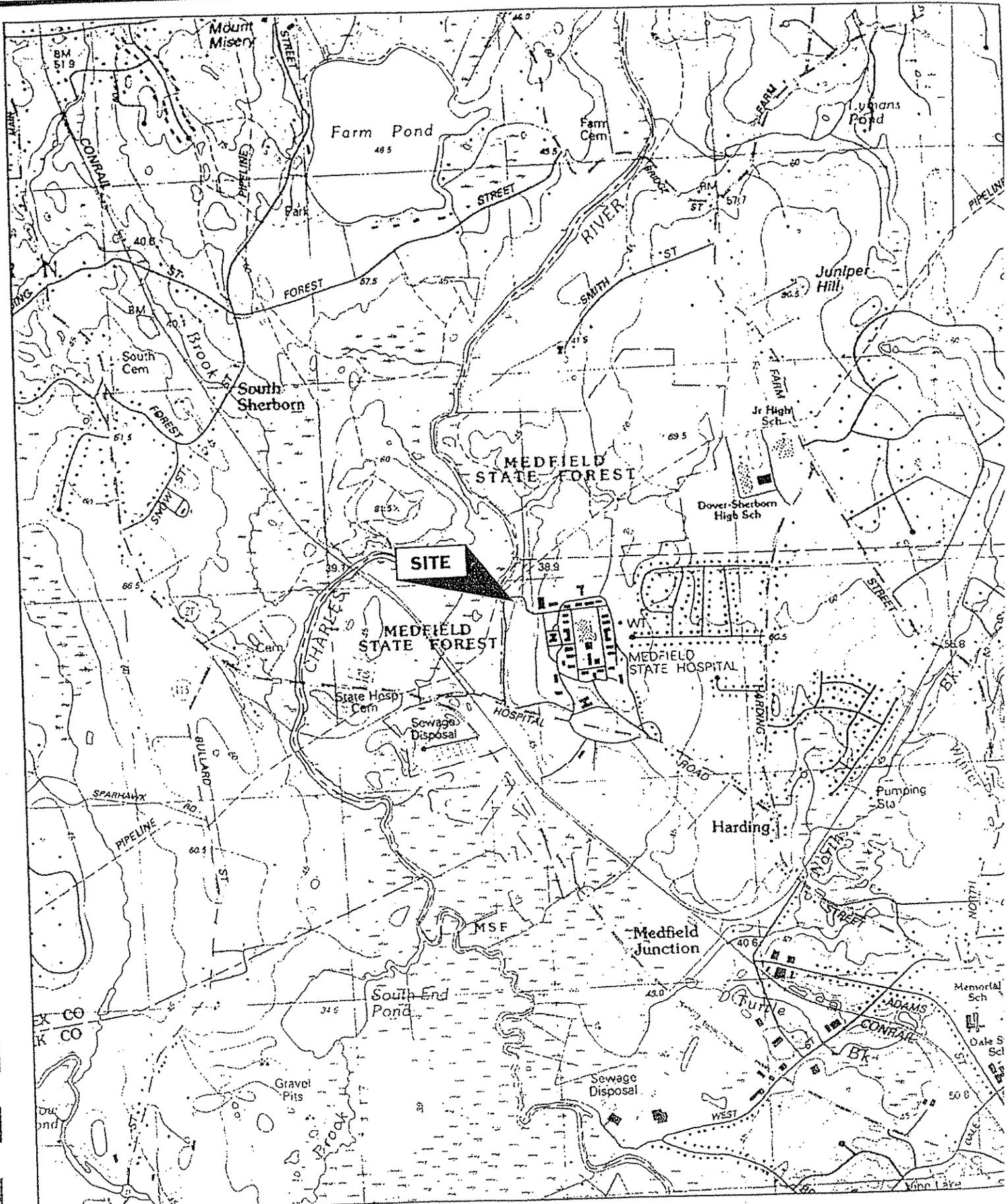
- LEGEND:
- OBSERVATION WELL
 - MONITORING WELL
 - DUMPSTER
 - CATCH BASIN

- NOTES:
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
 2. THREE 30,000-GALLON DOUBLE-WALLED STEEL USTS WERE INSTALLED IN 1990

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DISPOSAL SITE PLAN			
LOCATION 45 HOSPITAL ROAD, MEDFIELD, MA			
CLIENT MASSACHUSETTS DEPARTMENT OF MENTAL HEALTH			
SCALE 1" = 40'	SHEET 1/1	PAJ PROJECT NO. DOMHO101.11	FIGURE 2
DRAWN BY PWL	APPROVED BY JMCC	DATE 10/01/01	DRAW NO. SITEPLAN.DWG
PENNONI ASSOCIATES INC. THE CONCORD CENTER, SUITE 434, 10 FERRY ST. UNIT 6, CONCORD, NH 03301			



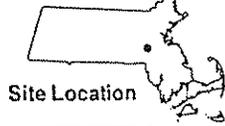
Name: MEDFIELD
 Date: 10/3/2001
 Scale: 1 inch equals 2000 feet

Location: 042° 12' 47.1" N 071° 20' 20.5" W
 Caption: Figure 1 - Disposal Site Location Map
 Medfield State Hospital
 45 Hospital Rd., Medfield, MA

MA DEP - Bureau of Waste Site Cleanup

Site Scoring Map: 500 feet & 0.5 Mile Radii

SITE NAME:
 Medfield State Hospital
 45 Hospital Road
 Medfield, MA
 421247n 712022ew



The information shown on this map is the best available at the date of printing. Please refer to the data source descriptions document.

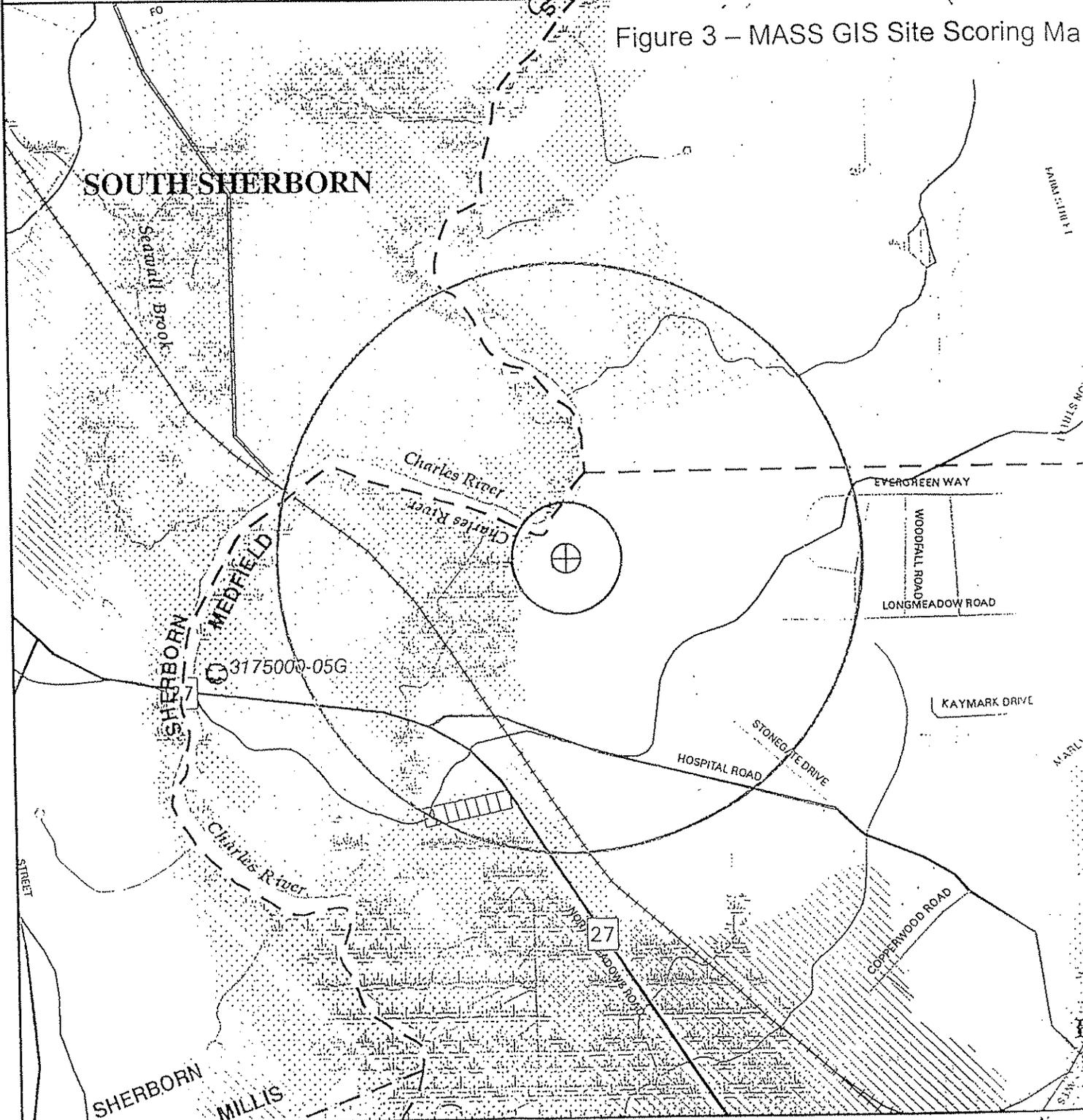


Massachusetts
 Geographic
 Information
 System



Massachusetts Executive Office of Environmental Affairs - 2001

Figure 3 – MASS GIS Site Scoring Map



Roads: Limited Access, Divided, Major Road, Connector, Street, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, Sub; Streams: Perennial, Intermittent, Man Made Shore, Dams

Potentially Productive Aquifers: Medium, High Yield

Non-Potential Drinking Water Source Area: Medium, High Yield

EPA Sole Source Aquifer; FEMA 100-year floodplain

Public Water Supplies: Ground, Surface, Non Community

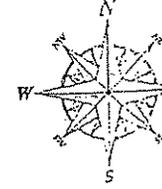
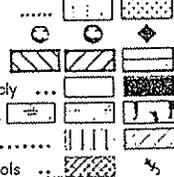
Approved Zone 2; NWPA; Surface Water Supply Zone A

Hydrography: Water Features, Public Surface Water Supply

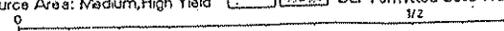
Wetlands: Fresh, Salt, NHESP Wetlands Habitat

Protected Open Space: ACEC

DEP Permitted Solid Waste Facilities; Certified Vernal Pools



SCALE 1:15000



July 17,

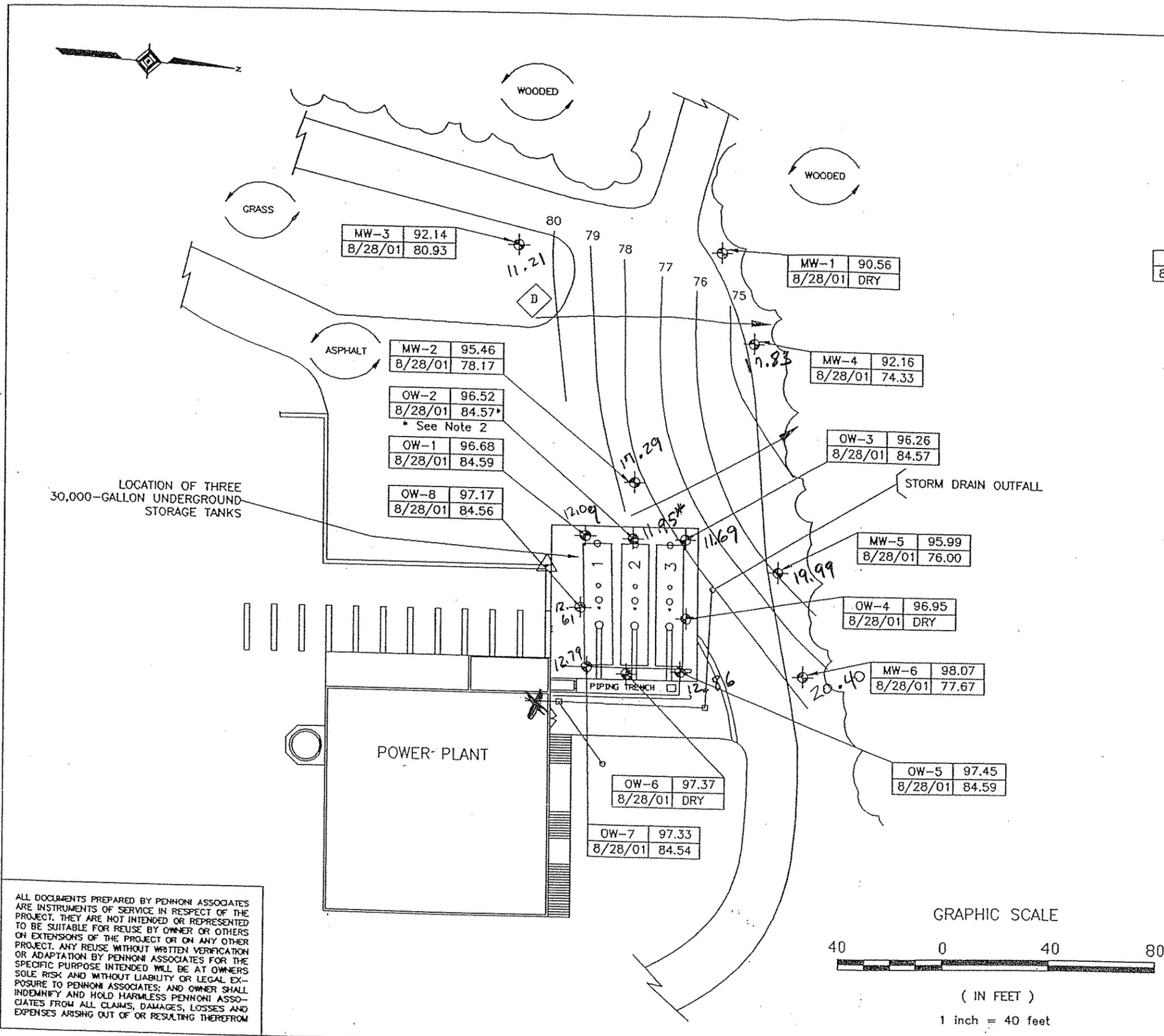


LEGEND:

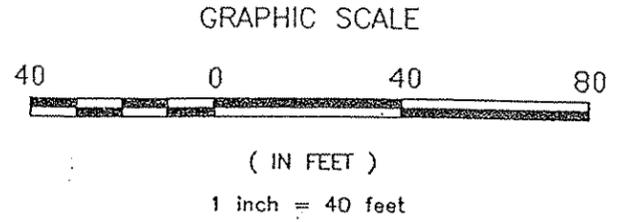
- OBSERVATION WELL
- MONITORING WELL
- DUMPSTER
- CATCH BASIN

- WELL IDENTIFICATION
 - TOP OF CASING ELEVATION (FEET)
(SURVEYED BY PENNONI ON 8/28/2001)
 - GROUND WATER SURFACE ELEVATION (FEET)
 - DATE OF MEASUREMENT
 - INFERRED GROUND WATER FLOW DIRECTION
 - EQUIPOTENTIAL LINE WITH ELEVATION IN FEET
 - BENCH MARK
- ALL ELEVATIONS ON THIS PLAN ARE RELATIVE TO AN ASSUMED ELEVATION OF 100.00 FEET MEASURED AT THE TOP OF A BOLT SET INTO THE TOP OF THE CONCRETE RETAINING WALL AT THE LOCATION SHOWN

- NOTES: 1. ALL LOCATIONS ARE APPROXIMATE.
 2. THE ELEVATION PRESENTED AT OW-2 IS AT THE TOP OF A LAYER OF NON-AQUEOUS PHASE LIQUID (NAPL) WITH A MEASURED THICKNESS OF 1.75 FEET.
 3. THE GROUND WATER SURFACE ELEVATIONS MEASURED IN THE OBSERVATIONS WELLS INDICATE A PERCHED WATER TABLE THAT IS NOT CONNECTED TO THE WATER TABLE. THESE ELEVATIONS ARE NOT INCORPORATED INTO THE PIEZOMETRIC HEAD ELEVATION PLAN



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PIEZOMETRIC HEAD ELEVATION PLAN
AUGUST 28, 2001

LOCATION
45 HOSPITAL ROAD, MEDFIELD, MA

CLIENT
MASSACHUSETTS DEPARTMENT OF MENTAL HEALTH

SCALE 1" = 40'	SHEET 1/1	PAJ PROJECT NO. DOMH0101.11	FIGURE 4
DRAWN BY PWL	APPROVED BY JMCC	DATE 10/01/01	DRAW NO. SITEPLAN.DWG

PENNONI ASSOCIATES INC.
THE CONCORD CENTER, SUITE 434, 10 FERRY ST.
UNIT 6, CONCORD, NH 03301



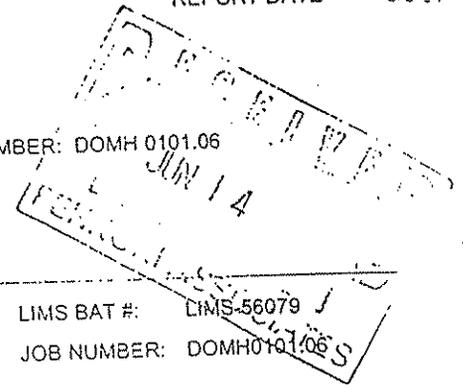
con-test[®]
ANALYTICAL LABORATORY

39 Spruce Street * 2nd Floor * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

REPORT DATE 6/6 07

PENNONI ASSOCIATES
THE CONCORD CTR, STE 311, 10 FERRY ST.#6
CONCORD, NH 03301
ATTN: JEFF MCCULLOUGH

CONTRACT NUMBER:
PURCHASE ORDER NUMBER: DOMH 0101.06
PROJECT NUMBER:



ANALYTICAL SUMMARY

LIMS BAT #: LIMS-56079
JOB NUMBER: DOMH0101.06S

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

PROJECT LOCATION: MEDFIELD STATE HOSPITAL

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION:	TEST
*T-2W	01B15119	SOIL	TANK 2 WEST END	eph - solid
*T-2W	01B15119	SOIL	TANK 2 WEST END	solids eph/vph
*T-2W	01B15119	SOIL	TANK 2 WEST END	vph - solid
T-3E	01B15120	SOIL	TANK 3 EAST	eph - solid
T-3E	01B15120	SOIL	TANK 3 EAST	solids eph/vph
T-3E	01B15120	SOIL	TANK 3 EAST	vph - solid
T-3W	01B15121	SOIL	TANK 3 WEST	eph - solid
T-3W	01B15121	SOIL	TANK 3 WEST	solids eph/vph
T-3W	01B15121	SOIL	TANK 3 WEST	vph - solid

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations :

AIHA 100033	AIHA ELLAP (LEAD) 100033
MASSACHUSETTS MA0100	NEW HAMPSHIRE 2516
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036
NEW YORK ELAP 10899	RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Edward Denson 6/6/07
SIGNATURE DATE

Tod Kopyscinski
Director of Operations

Edward Denson
Technical Director

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



39 Spruce Street * 2nd Floor * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

JEFF MCCULLOUGH
PENNONI ASSOCIATES
THE CONCORD CTR, STE 311, 10 FERRY ST.#6
CONCORD, NH 03301

6/6/01
Page 2 of 11

Purchase Order No.: DOMH 0101.06

Project Location: MEDFIELD STATE HOSPITAL
Date Received: 6/1/01
Field Sample #: T-2W

LIMS-BAT #: LIMS-56079
Job Number: DOMH0101.06

Analytical Method:

MADEP-EPH-98-1 REVISION 0

SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE, EXCHANGED INTO HEXANE AND CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION. PAH AND C10-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. SUMMED RANGES ARE CORRECTED FOR LABORATORY METHOD BLANK.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED ACCORDING TO THE METHOD.

SIGNIFICANT MODIFICATIONS ARE LIMITED TO THE SUBTRACTION OF METHOD BLANK CONTRIBUTION FROM THE SUMMED RANGES AND EXTRACTION BY PRESSURIZED FLUID EXTRACTION (SW846 3545) (ASE).

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

YES NO

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

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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

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



JEFF MCCULLOUGH
PENNONI ASSOCIATES
THE CONCORD CTR, STE 311, 10 FERRY ST.#6
CONCORD, NH 03301

Purchase Order No.: DOMH 0101.06

6/6/01

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Project Location: MEDFIELD STATE HOSPITAL
Date Received: 6/1/01
Field Sample #: T-3E

LIMS-BAT #: LIMS-56079
Job Number: DOMH0101.06

Analytical Method:

MADEP-EPH-98-1 REVISION 0

SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE, EXCHANGED INTO HEXANE AND CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION. PAH AND C10-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. SUMMED RANGES ARE CORRECTED FOR LABORATORY METHOD BLANK.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED ACCORDING TO THE METHOD.

SIGNIFICANT MODIFICATIONS ARE LIMITED TO THE SUBTRACTION OF METHOD BLANK CONTRIBUTION FROM THE SUMMED RANGES AND EXTRACTION BY PRESSURIZED FLUID EXTRACTION (SW846 3545) (ASE).

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

YES NO

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

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



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Purchase Order No.: DOMH 0101.06

6/6/01
 Page 5 of 11

Project Location: MEDFIELD STATE HOSPITAL
 Date Received: 6/1/01
 Field Sample #: T-3W

LIMS-BAT #: LIMS-56079
 Job Number: DOMH0101.06

Sample ID: 01B15121

Sampled: 6/1/01
 TANK 3 WEST

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C9-C18 Aliphatics	mg/kg dry wt.	416.	05/05/01	KKP	369.			
C19-C36 Aliphatics	mg/kg dry wt.	2090.	05/05/01	KKP	39.1			
C11-C22 Aromatics	mg/kg dry wt.	2300.	05/05/01	KKP	205.			
Acenaphthene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Acenaphthylene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Anthracene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Benzo(a)anthracene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Benzo(a)pyrene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Benzo(b)fluoranthene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Benzo(g,h,i)perylene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Benzo(k)fluoranthene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Chrysene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Dibenzo(a,h)anthracene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Fluoranthene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Fluorene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Indeno(1,2,3-cd)pyrene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
2-Methylnaphthalene	mg/kg dry wt.	18.8	06/05/01	KKP	10.2			
Naphthalene	mg/kg dry wt.	ND	05/05/01	KKP	10.2			
Phenanthrene	mg/kg dry wt.	ND	05/05/01	KKP	10.2			
Pyrene	mg/kg dry wt.	ND	06/05/01	KKP	10.2			
Date Extracted EPH Solid		6/4/2001	05/05/01	KKP				

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6/6/01
Page 6 of 11

Purchase Order No.: DOMH 0101.06

Project Location: MEDFIELD STATE HOSPITAL
Date Received: 6/1/01
Field Sample #: T-3W

LIMS-BAT #: LIMS-56079
Job Number: DOMH0101.06

Analytical Method:

MADEP-EPH-98-1 REVISION 0

SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE, EXCHANGED INTO HEXANE AND CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION. PAH AND C10-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. SUMMED RANGES ARE CORRECTED FOR LABORATORY METHOD BLANK.

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WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

YES NO

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

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6/6/01
Page 8 of 11

Purchase Order No.: DOMH 0101.06

Project Location: MEDFIELD STATE HOSPITAL
Date Received: 6/1/01
Field Sample #: T-2W

LIMS-BAT #: LIMS-56079
Job Number: DOMH0101.06

Sample ID: 01B15119
Sampled: 6/1/01
TANK 2 WEST END

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/F
C5-C8 Aliphatics	ug/kg dry wt.	ND	06/05/01	KKP	61300.		
C9-C12 Aliphatics	ug/kg dry wt.	159000.	06/05/01	KKP	22000.		
C9-C10 Aromatics	ug/kg dry wt.	79700.	06/05/01	KKP	18700.		
Benzene	ug/kg dry wt.	ND	06/05/01	KKP	110.		
Ethylbenzene	ug/kg dry wt.	110.	06/05/01	KKP	110.		
MTBE	ug/kg dry wt.	ND	06/05/01	KKP	270.		
Naphthalene	ug/kg dry wt.	1250.	06/05/01	KKP	108.		
Toluene	ug/kg dry wt.	ND	06/05/01	KKP	330.		
m/p-Xylene	ug/kg dry wt.	650.	06/05/01	KKP	380.		
o-Xylene	ug/kg dry wt.	410.	06/05/01	KKP	220.		

Analytical Method:

MADEP-VPH-98-1 REVISION 0

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 AND CORRECTED FOR LABORATORY METHOD BLANK. C9-C12 ALIPHATIC HYDROCARBONS EXCLUDE THE CONCENTRATION OF C9-C10 AROMATIC HYDROCARBONS.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED ACCORDING TO THE METHOD.

NO SIGNIFICANT MODIFICATIONS WERE MADE TO THE METHOD.

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

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WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

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Purchase Order No.: DOMH 0101.06

6/6/01
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Project Location: MEDFIELD STATE HOSPITAL
Date Received: 6/1/01
Field Sample #: T-3E

LIMS-BAT #: LIMS-56079
Job Number: DOMH0101.06

Sample ID: 01B15120
Sampled: 6/1/01
TANK 3 EAST

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C5-C8 Aliphatics	ug/kg dry wt.	62000.	06/05/01	KKP	61000.			
C9-C12 Aliphatics	ug/kg dry wt.	334000.	06/05/01	KKP	21800.			
C9-C10 Aromatics	ug/kg dry wt.	240000.	06/05/01	KKP	18600.			
Benzene	ug/kg dry wt.	ND	06/05/01	KKP	110.			
Ethylbenzene	ug/kg dry wt.	1000.	06/05/01	KKP	110.			
MTBE	ug/kg dry wt.	ND	06/05/01	KKP	270.			
Naphthalene	ug/kg dry wt.	20800.	06/05/01	KKP	108.			
Toluene	ug/kg dry wt.	ND	06/05/01	KKP	320.			
m/p-Xylene	ug/kg dry wt.	5000.	06/05/01	KKP	380.			
o-Xylene	ug/kg dry wt.	3100.	06/05/01	KKP	220.			

Analytical Method:

MADEP-VPH-98-1 REVISION 0

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 AND CORRECTED FOR LABORATORY METHOD BLANK. C9-C12 ALIPHATIC HYDROCARBONS EXCLUDE THE CONCENTRATION OF C9-C10 AROMATIC HYDROCARBONS.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED ACCORDING TO THE METHOD.

NO SIGNIFICANT MODIFICATIONS WERE MADE TO THE METHOD.

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

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6/6/01
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Purchase Order No.: DOMH 0101.06

Project Location: MEDFIELD STATE HOSPITAL
 Date Received: 6/1/01
 Field Sample #: T-3W
 Sample ID: 01B15121

LIMS-BAT #: LIMS-56079
 Job Number: DOMH0101.06

Sampled: 6/1/01
 TANK 3 WEST

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C5-C8 Aliphatics	ug/kg dry wt.	ND	06/05/01	KKP	60800.			
C9-C12 Aliphatics	ug/kg dry wt.	160000.	06/05/01	KKP	21800.			
C9-C10 Aromatics	ug/kg dry wt.	106000.	06/05/01	KKP	18600.			
Benzene	ug/kg dry wt.	ND	06/05/01	KKP	110.			
Ethylbenzene	ug/kg dry wt.	310.	06/05/01	KKP	110.			
MTBE	ug/kg dry wt.	ND	06/05/01	KKP	270.			
Naphthalene	ug/kg dry wt.	6830.	06/05/01	KKP	108.			
Toluene	ug/kg dry wt.	ND	06/05/01	KKP	320.			
m/p-Xylene	ug/kg dry wt.	1600.	06/05/01	KKP	380.			
o-Xylene	ug/kg dry wt.	910.	06/05/01	KKP	220.			

Analytical Method:

MADEP-VPH-98-1 REVISION 0

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 AND CORRECTED FOR LABORATORY METHOD BLANK. C9-C12 ALIPHATIC HYDROCARBONS EXCLUDE THE CONCENTRATION OF C9-C10 AROMATIC HYDROCARBONS.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED ACCORDING TO THE METHOD.

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WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

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WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

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con-test*
ANALYTICAL LABORATORY

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CONCORD, NH 03301

Purchase Order No.: DOMH 0101.06

6/6/01
Page 11 of 11

Project Location: MEDFIELD STATE HOSPITAL
Date Received: 6/1/01

LIMS-BAT #: LIMS-56079
Job Number: DOMH0101.06

The following notes were attached to the reported analysis :

Sample ID: * 01B15119 - 01B15121
Analysis: eph - solid

Required QC not performed for all EPH samples.

** END OF REPORT **

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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: 6/6/01 Lims Bat #: LIMS-56079 Page 1 of 4

QC Batch Number: GC/FID-5195

Sample Id	Analysis	QC Analysis	Values	Units	Limits
01B15119	2,5-Dibromotoluene (FID)	Sur. Recovery (FID)	97.9	%	70-130
01B15120	2,5-Dibromotoluene (FID)	Sur. Recovery (FID)	80.0	%	70-130
01B15121	2,5-Dibromotoluene (FID)	Sur. Recovery (FID)	110.0	%	70-130
BLANK-33864	C5-C8 Aliphatics	Blank	<6020.	ug/kg dry wt.	
	C9-C12 Aliphatics	Blank	<2160.	ug/kg dry wt.	



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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: 6/6/01

Lims Bat # : LIMS-56079

Page 2 of 4

QC Batch Number: GC/FID-5198

Sample Id	Analysis	QC Analysis	Values	Units	Limits
01B15119	2-Fluorobiphenyl	Surrogate Recovery	79.2	%	40-140
	2-Bromonaphthalene	Surrogate Recovery	80.4	%	40-140
	Chlorooctadecane	Sur. Recovery	72.0	%	40-140
	Terphenyl	Sur. Recovery	90.0	%	40-140
01B15120	2-Fluorobiphenyl	Surrogate Recovery	91.4	%	40-140
	2-Bromonaphthalene	Surrogate Recovery	92.2	%	40-140
	Chlorooctadecane	Sur. Recovery	80.0	%	40-140
	Terphenyl	Sur. Recovery	82.5	%	40-140
01B15121	2-Fluorobiphenyl	Surrogate Recovery	41.8	%	40-140
	2-Bromonaphthalene	Surrogate Recovery	90.0	%	40-140
	Chlorooctadecane	Sur. Recovery	100.0	%	40-140
	Terphenyl	Sur. Recovery	100.0	%	40-140
BLANK-33876	Naphthalene	Blank	<0.5	mg/kg dry wt.	
	Acenaphthene	Blank	<0.5	mg/kg dry wt.	
	Acenaphthylene	Blank	<0.5	mg/kg dry wt.	
	Anthracene	Blank	<0.5	mg/kg dry wt.	
	Benzo(a)anthracene	Blank	<0.5	mg/kg dry wt.	
	Benzo(a)pyrene	Blank	<0.5	mg/kg dry wt.	
	Benzo(b)fluoranthene	Blank	<0.5	mg/kg dry wt.	
	Benzo(g,h,i)perylene	Blank	<0.5	mg/kg dry wt.	
	Chrysene	Blank	<0.5	mg/kg dry wt.	
	Dibenzo(a,h)anthracene	Blank	<0.5	mg/kg dry wt.	
	Fluoranthene	Blank	<0.5	mg/kg dry wt.	
	Fluorene	Blank	<0.5	mg/kg dry wt.	
	Indeno(1,2,3-cd)pyrene	Blank	<0.5	mg/kg dry wt.	
	2-Methylnaphthalene	Blank	<0.5	mg/kg dry wt.	
	Phenanthrene	Blank	<0.5	mg/kg dry wt.	
	Pyrene	Blank	<0.5	mg/kg dry wt.	
	Benzo(k)fluoranthene	Blank	<0.5	mg/kg dry wt.	
C9-C18 Aliphatics	Blank	<18.1	mg/kg dry wt.		
C19-C36 Aliphatics	Blank	6.9	mg/kg dry wt.		
C11-C22 Aromatics	Blank	<10.2	mg/kg dry wt.		



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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: 6/6/01 Lims Bat #: LIMS-56079 Page 3 of 4
QC Batch Number: GC/PID-4379

Sample Id	Analysis	QC Analysis	Values	Units	Limits
01B15119	2,5-Dibromotoluene (PID)	Sur. Recovery (PID)	113.3	%	70-130
01B15120	2,5-Dibromotoluene (PID)	Sur. Recovery (PID)	90.0	%	70-130
01B15121	2,5-Dibromotoluene (PID)	Sur. Recovery (PID)	104.2	%	70-130
BLANK-33863	Benzene	Blank	<11.	ug/kg dry wt.	
	Ethylbenzene	Blank	<11.	ug/kg dry wt.	
	Naphthalene	Blank	<10.7	ug/kg dry wt.	
	Toluene	Blank	<32.	ug/kg dry wt.	
	o-Xylene	Blank	<21.	ug/kg dry wt.	
	m/p-Xylene	Blank	<37.	ug/kg dry wt.	
	C9-C10 Aromatics	Blank	<1840.	ug/kg dry wt.	
	MTBE	Blank	<27.	ug/kg dry wt.	
LFBLANK-16298	Benzene	Lab Fort Blank Amt.	3333.3	ug/kg dry wt.	
		Lab Fort Blk. Found	3707.5	ug/kg dry wt.	
		Lab Fort Blk. % Rec.	111.2	%	70-130
	Ethylbenzene	Lab Fort Blank Amt.	3333.3	ug/kg dry wt.	
		Lab Fort Blk. Found	3259.6	ug/kg dry wt.	
		Lab Fort Blk. % Rec.	97.6	%	70-130
	Naphthalene	Lab Fort Blank Amt.	3333.3	ug/kg dry wt.	
		Lab Fort Blk. Found	3106.6	ug/kg dry wt.	
		Lab Fort Blk. % Rec.	93.2	%	70-130
	Toluene	Lab Fort Blank Amt.	3333.3	ug/kg dry wt.	
		Lab Fort Blk. Found	3588.4	ug/kg dry wt.	
		Lab Fort Blk. % Rec.	107.7	%	70-130
	o-Xylene	Lab Fort Blank Amt.	3333.3	ug/kg dry wt.	
		Lab Fort Blk. Found	3509.1	ug/kg dry wt.	
		Lab Fort Blk. % Rec.	105.3	%	70-130
	m/p-Xylene	Lab Fort Blank Amt.	6589.3	ug/kg dry wt.	
		Lab Fort Blk. Found	6519.3	ug/kg dry wt.	
		Lab Fort Blk. % Rec.	97.5	%	70-130
	MTBE	Lab Fort Blank Amt.	3333.3	ug/kg dry wt.	
		Lab Fort Blk. Found	3713.2	ug/kg dry wt.	
		Lab Fort Blk. % Rec.	111.4	%	70-130



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: 6/6/01 Lims Bat #: LIMS-56079 Page 4 of 4

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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FAX (413) 525-6405

CHAIN OF CUSTODY RECORD

39 SPRUCE ST. • 2ND FLOOR • EAST LONGMEADOW, MA 01028

Client Name: Pennoni Associates Inc Telephone: 603 226 1950 Batch #: _____
 Attn: Jeff McCullough
 Address: Le Concord Center, Suite 434 Project #: DOMH 0101.06
10 Ferry St. Unit 6 Client P.O. #: DOMH 0101.06
 Site Location: Medfield State Hospital
 Sampled By: Philip LaMoreaux Fax #: 603 226 3235
 Call Results: Yes No _____
 Fax Results: Yes No _____

LIMS # 56079
Analysis Required

Field Sample I.D.	Sample Description	Lab #	DATE SAMPLED		Composite	Grab	MATRIX					Preservative (Use Code)	Container (Use Code)	
			Date Time	Time			WASTE WATER	GROUND WATER	DKG WATER	Soil	Air			Other
T-2W	Tank - 2 West End	01B15119	6/1/01	1040		X			X				V	EPH
T-3E	Tank - 3 East	15720	6/1/01	1415		X			X				V	EPH
T-3W	Tank - 3 West	15721	6/1/01	1445		X			X				V	EPH

CONTAINER CODE: _____ PRESERVATIVE CODE: Agf/000
 I = ICED N = HNO₃ H = HCl S = NaOH T = Na₂S₂O₃ O = OTHER _____
 P: PLASTIC (____ Size) V = 40 ml vial G = Glass (____ size) A = 1000 ml Amber 0 = Other _____
 Turnaround Requested: _____ 24-Hour _____ 48-Hour _____ Normal _____
 Relinquished by: (Signature) Philip LaMoreaux Date Time: 6/1/01 1730
 Received by: (Signature) _____ Date Time: _____
 Relinquished by: (Signature) _____ Date Time: _____
 Received by: (Signature) _____ Date Time: _____
 Remarks/Comments: Please call for results ASAP.
Also notified client (PHU) that we can EAT water returned
PHU notified client (PHU) that we can EAT water returned
PHU notified client (PHU) that we can EAT water returned



39 Spruce Street * 2nd Floor * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

REPORT DATE 6/15/07

PENNONI ASSOCIATES
THE CONCORD CTR, STE 311, 10 FERRY ST.#6
CONCORD, NH 03301
ATTN: JEFF MCCULLOUGH

CONTRACT NUMBER:
PURCHASE ORDER NUMBER: DOMH 0101.06

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS.BAT # - LIMS:56155
JOB NUMBER: DOMH 0101.06

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

PROJECT LOCATION: MEDFIELD STATE HOSPITAL

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
T-2W	01B15513	SOIL	TANK 2 WEST END	eph - solid
T-3E	01B15514	SOIL	TANK 3 EAST	eph - solid
T-3W	01B15515	SOIL	TANK 3 WEST	eph - solid

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations :

AIHA 100033	AIHA ELLAP (LEAD) 100033
MASSACHUSETTS MA0100	NEW HAMPSHIRE 2516
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036
NEW YORK ELAP 10899	RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Edward Denson 6/15/07

SIGNATURE

DATE

Tod Kopyscinski
Director of Operations

Edward Denson
Technical Director



39 Spruce Street * 2nd Floor * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

JEFF MCCULLOUGH
 PENNONI ASSOCIATES
 THE CONCORD CTR, STE 311, 10 FERRY ST.#6
 CONCORD, NH 03301

Purchase Order No.: DOMH 0101.06

6/15/01
 Page 1 of 7

Project Location: MEDFIELD STATE HOSPITAL
 Date Received: 6/6/01
 Field Sample #: T-2W
 Sample ID: 01B15513

Sampled: 6/1/01
 TANK 2 WEST END

LIMS-BAT #: LIMS-56155
 Job Number: DOMH 0101.06

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/F
C9-C18 Aliphatics	mg/kg dry wt.	ND	06/14/01	KKP	372.		
C19-C36 Aliphatics	mg/kg dry wt.	1510.	06/14/01	KKP	39.5		
C11-C22 Aromatics	mg/kg dry wt.	1730.	06/14/01	KKP	210.		
Acenaphthene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Acenaphthylene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Anthracene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Benzo(a)anthracene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Benzo(a)pyrene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Benzo(b)fluoranthene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Benzo(g,h,i)perylene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Benzo(k)fluoranthene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Chrysene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Dibenzo(a,h)anthracene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Fluoranthene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Fluorene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Indeno(1,2,3-cd)pyrene	mg/kg dry wt.	ND	05/14/01	KKP	10.3		
2-Methylnaphthalene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Naphthalene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Phenanthrene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Pyrene	mg/kg dry wt.	ND	06/14/01	KKP	10.3		
Date Extracted EPH Solid		6/7/2001	06/14/01	KKP			

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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

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



JEFF MCCULLOUGH
PENNONI ASSOCIATES
THE CONCORD CTR, STE 311, 10 FERRY ST.#6
CONCORD, NH 03301

6/15/01
Page 2 of 7

Purchase Order No.: DOMH 0101.06

Project Location: MEDFIELD STATE HOSPITAL
Date Received: 6/6/01
Field Sample #: T-2W

LIMS-BAT #: LIMS-56155
Job Number: DOMH 0101.06

Analytical Method:

MADEP-EPH-98-1 REVISION 0

SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE, EXCHANGED INTO HEXANE AND CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION. PAH AND C10-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. SUMMED RANGES ARE CORRECTED FOR LABORATORY METHOD BLANK.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED ACCORDING TO THE METHOD.

SIGNIFICANT MODIFICATIONS ARE LIMITED TO THE SUBTRACTION OF METHOD BLANK CONTRIBUTION FROM THE SUMMED RANGES AND EXTRACTION BY PRESSURIZED FLUID EXTRACTION (SW846 3545) (ASE).

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

YES NO

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

RL = Reporting Limit

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



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THE CONCORD CTR, STE 311, 10 FERRY ST.#6
CONCORD, NH 03301

6/15/01
Page 4 of 7

Purchase Order No.: DOMH 0101.06

Project Location: MEDFIELD STATE HOSPITAL
Date Received: 6/6/01
Field Sample #: T-3E

LIMS-BAT #: LIMS-56155
Job Number: DOMH 0101.06

Analytical Method:

MADEP-EPH-98-1 REVISION 0

SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE, EXCHANGED INTO HEXANE AND CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION. PAH AND C10-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. SUMMED RANGES ARE CORRECTED FOR LABORATORY METHOD BLANK.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED ACCORDING TO THE METHOD.

SIGNIFICANT MODIFICATIONS ARE LIMITED TO THE SUBTRACTION OF METHOD BLANK CONTRIBUTION FROM THE SUMMED RANGES AND EXTRACTION BY PRESSURIZED FLUID EXTRACTION (SW846 3545) (ASE).

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

YES NO

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

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



JEFF MCCULLOUGH
PENNONI ASSOCIATES
THE CONCORD CTR, STE 311, 10 FERRY ST.#6
CONCORD, NH 03301

6/15/01
Page 6 of 7

Purchase Order No.: DOMH 0101.06

Project Location: MEDFIELD STATE HOSPITAL
Date Received: 6/6/01
Field Sample #: T-3W

LIMS-BAT #: LIMS-56155
Job Number: DOMH 0101.06

Analytical Method:

MADEP-EPH-98-1 REVISION 0

SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE, EXCHANGED INTO HEXANE AND CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION. PAH AND C10-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. SUMMED RANGES ARE CORRECTED FOR LABORATORY METHOD BLANK.

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WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

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JEFF MCCULLOUGH
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CONCORD, NH 03301

Purchase Order No.: DOMH 0101.06

Project Location: MEDFIELD STATE HOSPITAL
Date Received: 6/6/01

6/15/01
Page 7 of 7

LIMS-BAT #: LIMS-56155
Job Number: DOMH 0101.06

** END OF REPORT **

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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



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:	6/15/01	Lims Bat #:	LIMS-56155	Page 1 of 4	
QC Batch Number:	GC/FID-5248				
Sample Id	Analysis	QC Analysis	Values	Units	Limits
01B15513	2-Fluorobiphenyl	Surrogate Recovery	100.0	%	40-140
	2-Bromonaphthalene	Surrogate Recovery	81.6	%	40-140
	Chlorooctadecane	Sur. Recovery	78.0	%	40-140
	Terphenyl	Sur. Recovery	100.0	%	40-140
01B15514	2-Fluorobiphenyl	Surrogate Recovery	99.6	%	40-140
	2-Bromonaphthalene	Surrogate Recovery	72.0	%	40-140
	Chlorooctadecane	Sur. Recovery	0.0	%	40-140
	Terphenyl	Sur. Recovery	0.0	%	40-140
01B15515	2-Fluorobiphenyl	Surrogate Recovery	99.6	%	40-140
	2-Bromonaphthalene	Surrogate Recovery	81.6	%	40-140
	Chlorooctadecane	Sur. Recovery	64.0	%	40-140
	Terphenyl	Sur. Recovery	99.0	%	40-140
BLANK-34071	Naphthalene	Blank	<0.5	mg/kg dry wt.	
	Acenaphthene	Blank	<0.5	mg/kg dry wt.	
	Acenaphthylene	Blank	<0.5	mg/kg dry wt.	
	Anthracene	Blank	<0.5	mg/kg dry wt.	
	Benzo(a)anthracene	Blank	<0.5	mg/kg dry wt.	
	Benzo(a)pyrene	Blank	<0.5	mg/kg dry wt.	
	Benzo(b)fluoranthene	Blank	<0.5	mg/kg dry wt.	
	Benzo(g,h,i)perylene	Blank	<0.5	mg/kg dry wt.	
	Chrysene	Blank	<0.5	mg/kg dry wt.	
	Dibenzo(a,h)anthracene	Blank	<0.5	mg/kg dry wt.	
	Fluoranthene	Blank	<0.5	mg/kg dry wt.	
	Fluorene	Blank	<0.5	mg/kg dry wt.	
	Indeno(1,2,3-cd)pyrene	Blank	<0.5	mg/kg dry wt.	
	2-Methylnaphthalene	Blank	<0.5	mg/kg dry wt.	
	Phenanthrene	Blank	<0.5	mg/kg dry wt.	
	Pyrene	Blank	<0.5	mg/kg dry wt.	
	Benzo(k)fluoranthene	Blank	<0.5	mg/kg dry wt.	
	C9-C18 Aliphatics	Blank	<18.1	mg/kg dry wt.	
	C19-C36 Aliphatics	Blank	7.0	mg/kg dry wt.	
	C11-C22 Aromatics	Blank	<10.2	mg/kg dry wt.	
LFBLANK-16429	Naphthalene	Lab Fort Blank Amt.	2.5	mg/kg dry wt.	
		Lab Fort Blk. Found	1.8	mg/kg dry wt.	
		Lab Fort Blk. % Rec.	70.8	%	40-140
	Acenaphthene	Lab Fort Blank Amt.	2.5	mg/kg dry wt.	
		Lab Fort Blk. Found	2.1	mg/kg dry wt.	
		Lab Fort Blk. % Rec.	84.8	%	40-140
	Anthracene	Lab Fort Blank Amt.	2.5	mg/kg dry wt.	



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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: 6/15/01

Lims Bat #: LIMS-56155

Page 2 of 4

QC Batch Number: GC/FID-5248

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-16429	Anthracene	Lab Fort Blk. Found	2.5	mg/kg dry wt.	40-140
		Lab Fort Blk. % Rec.	101.6	%	
	Chrysene	Lab Fort Blank Amt.	2.5	mg/kg dry wt.	40-140
		Lab Fort Blk. Found	2.4	mg/kg dry wt.	
	Pyrene	Lab Fort Blk. % Rec.	97.2	%	40-140
		Lab Fort Blank Amt.	2.5	mg/kg dry wt.	
		Lab Fort Blk. Found	2.5	mg/kg dry wt.	40-140
		Lab Fort Blk. % Rec.	98.4	%	



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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: 6/15/01

Lims Bat #: LIMS-56155

Page 3 of 4

NOTES:

QC Batch No. : GC/FID-5248
Sample ID : 01B15514
Analysis : Chlorooctadecane

SURROGATE CONCENTRATION BELOW DETECTION LIMIT DUE TO DILUTION REQUIRED FOR SAMPLE ANALYSIS.

QC Batch No. : GC/FID-5248
Sample ID : 01B15514
Analysis : Terphenyl

SURROGATE CONCENTRATION BELOW DETECTION LIMIT DUE TO DILUTION REQUIRED FOR SAMPLE ANALYSIS.



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: 6/15/01

Lims Bat #: LIMS-56155

Page 4 of 4

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



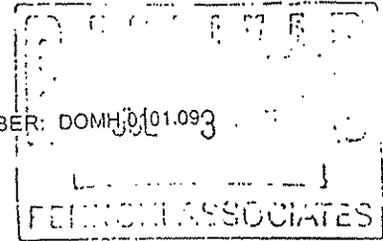
39 Spruce Street * 2nd Floor * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

REPORT DATE 6/28/01

PENNONI ASSOCIATES
THE CONCORD CTR, STE 311, 10 FERRY ST.#6
CONCORD, NH 03301
ATTN: JEFF MCCULLOUGH

CONTRACT NUMBER:
PURCHASE ORDER NUMBER: DOMH0101.093

PROJECT NUMBER:



ANALYTICAL SUMMARY

LIMS BAT #: LIMS-56545
JOB NUMBER: DOMH 0101.09

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

PROJECT LOCATION: MEDFIELD STATE HOSPITAL POWER PLANT

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
MW-01	01B17120	GRND WATER	NOT SPECIFIED	eph - water
MW-01	01B17120	GRND WATER	NOT SPECIFIED	vph - water
MW-02	01B17121	GRND WATER	NOT SPECIFIED	eph - water
MW-02	01B17121	GRND WATER	NOT SPECIFIED	vph - water
MW-03	01B17122	GRND WATER	NOT SPECIFIED	eph - water
MW-03	01B17122	GRND WATER	NOT SPECIFIED	vph - water
MW-04	01B17123	GRND WATER	NOT SPECIFIED	eph - water
MW-04	01B17123	GRND WATER	NOT SPECIFIED	vph - water
MW-05	01B17124	GRND WATER	NOT SPECIFIED	eph - water
MW-05	01B17124	GRND WATER	NOT SPECIFIED	vph - water
MW-06	01B17125	GRND WATER	NOT SPECIFIED	eph - water
MW-06	01B17125	GRND WATER	NOT SPECIFIED	vph - water

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations :

- AIHA 100033
- MASSACHUSETTS MA0100
- CONNECTICUT PH-0567
- NEW YORK ELAP 10899
- AIHA ELLAP (LEAD) 100033
- NEW HAMPSHIRE 2516
- VERMONT DOH (LEAD) No. LL015036
- RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Edward Denson 6/28/01

SIGNATURE

DATE

Tod Kopyscinski
Director of Operations

Edward Denson
Technical Director



39 Spruce Street * 2nd Floor * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

JEFF MCCULLOUGH
 PENNONI ASSOCIATES
 THE CONCORD CTR, STE 311, 10 FERRY ST.#6
 CONCORD, NH 03301

6/28/01
 Page 1 of 19

Purchase Order No.: DOMH 0101.09

Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
 Date Received: 6/21/01
 Field Sample #: MW-01
 Sample ID: 01B17120

LIMS-BAT #: LIMS-56545
 Job Number: DOMH 0101.09

Sampled: 6/21/01
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C9-C18 Aliphatics	ug/l	ND	06/27/01	KKP	144.			
C19-C38 Aliphatics	ug/l	ND	06/27/01	KKP	84.0			
C11-C22 Aromatics	ug/l	ND	06/27/01	KKP	48.0			
Acenaphthene	ug/l	ND	06/27/01	KKP	5.0			
Acenaphthylene	ug/l	ND	06/27/01	KKP	5.0			
Anthracene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(a)anthracene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(a)pyrene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(b)fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(g,h,i)perylene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(k)fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Chrysene	ug/l	ND	06/27/01	KKP	10.8			
Dibenzo(a,h)anthracene	ug/l	ND	06/27/01	KKP	5.0			
Fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Fluorene	ug/l	ND	06/27/01	KKP	5.0			
Indeno(1,2,3-cd)pyrene	ug/l	ND	06/27/01	KKP	5.0			
2-Methylnaphthalene	ug/l	ND	06/27/01	KKP	5.0			
Naphthalene	ug/l	ND	06/27/01	KKP	5.0			
Phenanthrene	ug/l	ND	06/27/01	KKP	5.0			
Pyrene	ug/l	ND	06/27/01	KKP	5.0			
Date Extracted EPH Water		6/25/2001	06/27/01	KKP				

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



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Purchase Order No.: DOMH 0101.09

Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
Date Received: 6/21/01
Field Sample #: MW-01

LIMS-BAT #: LIMS-56545
Job Number: DOMH 0101.09

Analytical Method:

MADEP-EPH-98-1 REVISION 0

SAMPLES ARE PRESERVED TO pH < 2.0 WITH HYDROCHLORIC ACID (HCL).
SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE, EXCHANGED INTO HEXANE AND
CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS
BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION. PAH AND C10-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. SUMMED RANGES
ARE CORRECTED FOR LABORATORY METHOD BLANK.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED
ACCORDING TO THE METHOD.

SIGNIFICANT MODIFICATIONS ARE LIMITED TO THE SUBTRACTION OF METHOD BLANK
FROM THE SUMMED RANGES.

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES
ACHIEVED?

YES NO

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

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determine PASS (P) or FAIL (F) condition of results.

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



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 CONCORD, NH 03301

Purchase Order No.: DOMH 0101.09

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Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
 Date Received: 6/21/01
 Field Sample #: MW-02
 Sample ID: 01B17121

LIMS-BAT #: LIMS-56545
 Job Number: DOMH 0101.09

Sampled: 6/21/01
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C9-C18 Aliphatics	ug/l	154.	06/27/01	KKP	144.			
C19-C36 Aliphatics	ug/l	548.	06/27/01	KKP	84.0			
C11-C22 Aromatics	ug/l	574.	06/27/01	KKP	48.0			
Acenaphthene	ug/l	ND	06/27/01	KKP	5.0			
Acenaphthylene	ug/l	ND	06/27/01	KKP	5.0			
Anthracene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(a)anthracene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(a)pyrene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(b)fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(g,h,i)perylene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(k)fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Chrysene	ug/l	ND	06/27/01	KKP	10.8			
Dibenzo(a,h)anthracene	ug/l	ND	06/27/01	KKP	5.0			
Fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Fluorene	ug/l	ND	06/27/01	KKP	5.0			
Indeno(1,2,3-cd)pyrene	ug/l	ND	06/27/01	KKP	5.0			
2-Methylnaphthalene	ug/l	ND	06/27/01	KKP	5.0			
Naphthalene	ug/l	ND	06/27/01	KKP	5.0			
Phenanthrene	ug/l	ND	06/27/01	KKP	5.0			
Pyrene	ug/l	ND	06/27/01	KKP	5.0			
Date Extracted EPH Water		6/25/2001	06/27/01	KKP				

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Purchase Order No.: DOMH 0101.09

Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
Date Received: 6/21/01
Field Sample #: MW-02

LIMS-BAT #: LIMS-56545
Job Number: DOMH 0101.09

Analytical Method:

MADEP-EPH-98-1 REVISION 0

SAMPLES ARE PRESERVED TO pH < 2.0 WITH HYDROCHLORIC ACID (HCL).
SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE, EXCHANGED INTO HEXANE AND
CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS
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C19-C36 ALIPHATICS ARE DETERMINED IN THE HEXANE FRACTION. TARGET COMPOUND
CONTRIBUTIONS ARE SUBTRACTED FROM THE SUMMED AROMATIC RANGE. SUMMED RANGES
ARE CORRECTED FOR LABORATORY METHOD BLANK.

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ACCORDING TO THE METHOD.

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WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES
ACHIEVED?

YES NO

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

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Purchase Order No.: DOMH 0101.09

Project Location: MEDFIELD STATE HOSPITAL POWER PLANT

LIMS-BAT #: LIMS-56545
 Job Number: DOMH 0101.09

Date Received: 6/21/01

Field Sample #: MW-03

Sample ID: 01B17122

Sampled: 6/21/01
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C9-C18 Aliphatics	ug/l	ND	06/27/01	KKP	144.			
C19-C36 Aliphatics	ug/l	99.0	06/27/01	KKP	84.0			
C11-C22 Aromatics	ug/l	86.4	06/27/01	KKP	48.0			
Acenaphthene	ug/l	ND	06/27/01	KKP	5.0			
Acenaphthylene	ug/l	ND	06/27/01	KKP	5.0			
Anthracene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(a)anthracene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(a)pyrene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(b)fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(g,h,i)perylene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(k)fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Chrysene	ug/l	ND	06/27/01	KKP	10.8			
Dibenzo(a,h)anthracene	ug/l	ND	06/27/01	KKP	5.0			
Fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Fluorene	ug/l	ND	06/27/01	KKP	5.0			
Indeno(1,2,3-cd)pyrene	ug/l	ND	06/27/01	KKP	5.0			
2-Methylnaphthalene	ug/l	ND	06/27/01	KKP	5.0			
Naphthalene	ug/l	ND	06/27/01	KKP	5.0			
Phenanthrene	ug/l	ND	06/27/01	KKP	5.0			
Pyrene	ug/l	ND	06/27/01	KKP	5.0			
Date Extracted EPH Water		6/25/2001	06/27/01	KKP				

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Purchase Order No.: DOMH 0101.09

Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
Date Received: 6/21/01
Field Sample #: MW-03

LIMS-BAT #: LIMS-56545
Job Number: DOMH 0101.09

Analytical Method:

MADEP-EPH-98-1 REVISION 0

SAMPLES ARE PRESERVED TO pH < 2.0 WITH HYDROCHLORIC ACID (HCL).
SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE, EXCHANGED INTO HEXANE AND
CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS
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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. SUMMED RANGES
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ACCORDING TO THE METHOD.

SIGNIFICANT MODIFICATIONS ARE LIMITED TO THE SUBTRACTION OF METHOD BLANK
FROM THE SUMMED RANGES.

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES
ACHIEVED?

YES NO

DETAILS OF ANY NON-CONFORMANCE WITH QA/QC REQUIREMENTS, PERFORMANCE, OR
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Purchase Order No.: DOMH 0101.09

Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
 Date Received: 6/21/01
 Field Sample #: MW-04
 Sample ID: 01B17123

LIMS-BAT #: LIMS-56545
 Job Number: DOMH 0101.09

Sampled: 6/21/01
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C9-C18 Aliphatics	ug/l	ND	05/27/01	KKP	144.			
C19-C36 Aliphatics	ug/l	128.	06/27/01	KKP	84.0			
C11-C22 Aromatics	ug/l	61.4	06/27/01	KKP	48.0			
Acenaphthene	ug/l	ND	06/27/01	KKP	5.0			
Acenaphthylene	ug/l	ND	06/27/01	KKP	5.0			
Anthracene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(a)anthracene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(a)pyrene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(b)fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(g,h,i)perylene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(k)fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Chrysene	ug/l	ND	06/27/01	KKP	10.8			
Dibenzo(a,h)anthracene	ug/l	ND	06/27/01	KKP	5.0			
Fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Fluorene	ug/l	ND	06/27/01	KKP	5.0			
Indeno(1,2,3-cd)pyrene	ug/l	ND	06/27/01	KKP	5.0			
2-Methylnaphthalene	ug/l	ND	06/27/01	KKP	5.0			
Naphthalene	ug/l	ND	06/27/01	KKP	5.0			
Phenanthrene	ug/l	ND	06/27/01	KKP	5.0			
Pyrene	ug/l	ND	06/27/01	KKP	5.0			
Date Extracted EPH Water		6/25/2001	06/27/01	KKP				

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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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Purchase Order No.: DOMH 0101.09

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Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
Date Received: 6/21/01
Field Sample #: MW-04

LIMS-BAT #: LIMS-56545
Job Number: DOMH 0101.09

Analytical Method:

MADEP-EPH-98-1 REVISION 0

SAMPLES ARE PRESERVED TO pH < 2.0 WITH HYDROCHLORIC ACID (HCL).
SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE, EXCHANGED INTO HEXANE AND
CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS
BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION. PAH AND C10-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. SUMMED RANGES
ARE CORRECTED FOR LABORATORY METHOD BLANK.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED
ACCORDING TO THE METHOD.

SIGNIFICANT MODIFICATIONS ARE LIMITED TO THE SUBTRACTION OF METHOD BLANK
FROM THE SUMMED RANGES.

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES
ACHIEVED?

YES NO

DETAILS OF ANY NON-CONFORMANCE WITH QA/QC REQUIREMENTS, PERFORMANCE, OR
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Purchase Order No.: DOMH 0101.09

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Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
 Date Received: 6/21/01
 Field Sample #: MW-05
 Sample ID: 01B17124
 Sample Matrix: GRND WATER

LIMS-BAT #: LIMS-56545
 Job Number: DOMH 0101.09

Sampled: 6/21/01
 NOT SPECIFIED

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C9-C18 Aliphatics	ug/l	ND	06/27/01	KKP	144.			
C19-C36 Aliphatics	ug/l	ND	06/27/01	KKP	84.0			
C11-C22 Aromatics	ug/l	ND	06/27/01	KKP	48.0			
Acenaphthene	ug/l	ND	06/27/01	KKP	5.0			
Acenaphthylene	ug/l	ND	06/27/01	KKP	5.0			
Anthracene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(a)anthracene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(a)pyrene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(b)fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(g,h,i)perylene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(k)fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Chrysene	ug/l	ND	06/27/01	KKP	10.8			
Dibenzo(a,h)anthracene	ug/l	ND	06/27/01	KKP	5.0			
Fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Fluorene	ug/l	ND	06/27/01	KKP	5.0			
Indeno(1,2,3-cd)pyrene	ug/l	ND	06/27/01	KKP	5.0			
2-Methylnaphthalene	ug/l	ND	06/27/01	KKP	5.0			
Naphthalene	ug/l	ND	06/27/01	KKP	5.0			
Phenanthrene	ug/l	ND	06/27/01	KKP	5.0			
Pyrene	ug/l	ND	06/27/01	KKP	5.0			
Date Extracted EPH Water		6/25/2001	06/27/01	KKP				

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



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CONCORD, NH 03301

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Purchase Order No.: DOMH 0101.09

Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
Date Received: 6/21/01
Field Sample #: MW-05

LIMS-BAT #: LIMS-56545
Job Number: DOMH 0101.09

Analytical Method:

MADEP-EPH-98-1 REVISION 0

SAMPLES ARE PRESERVED TO pH < 2.0 WITH HYDROCHLORIC ACID (HCL).
SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE, EXCHANGED INTO HEXANE AND
CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS
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WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES
ACHIEVED?

YES NO

DETAILS OF ANY NON-CONFORMANCE WITH QA/QC REQUIREMENTS, PERFORMANCE, OR
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Purchase Order No.: DOMH 0101.09

Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
 Date Received: 6/21/01
 Field Sample #: MW-06
 Sample ID: 01B17125

LIMS-BAT #: LIMS-56545
 Job Number: DOMH 0101.09

Sampled: 6/21/01
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C9-C18 Aliphatics	ug/l	ND	06/27/01	KKP	144.			
C19-C36 Aliphatics	ug/l	ND	06/27/01	KKP	84.0			
C11-C22 Aromatics	ug/l	ND	06/27/01	KKP	48.0			
Acenaphthene	ug/l	ND	06/27/01	KKP	5.0			
Acenaphthylene	ug/l	ND	06/27/01	KKP	5.0			
Anthracene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(a)anthracene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(a)pyrene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(b)fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(g,h,i)perylene	ug/l	ND	06/27/01	KKP	5.0			
Benzo(k)fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Chrysene	ug/l	ND	06/27/01	KKP	10.8			
Dibenzo(a,h)anthracene	ug/l	ND	06/27/01	KKP	5.0			
Fluoranthene	ug/l	ND	06/27/01	KKP	5.0			
Fluorene	ug/l	ND	06/27/01	KKP	5.0			
Indeno(1,2,3-cd)pyrene	ug/l	ND	06/27/01	KKP	5.0			
2-Methylnaphthalene	ug/l	ND	06/27/01	KKP	5.0			
Naphthalene	ug/l	ND	06/27/01	KKP	5.0			
Phenanthrene	ug/l	ND	06/27/01	KKP	5.0			
Pyrene	ug/l	ND	06/27/01	KKP	5.0			
Date Extracted EPH Water		6/25/2001	06/27/01	KKP				

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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Purchase Order No.: DOMH 0101.09

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Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
Date Received: 6/21/01
Field Sample #: MW-06

LIMS-BAT #: LIMS-56545
Job Number: DOMH 0101.09

Analytical Method:

MADEP-EPH-98-1 REVISION 0

SAMPLES ARE PRESERVED TO pH < 2.0 WITH HYDROCHLORIC ACID (HCL).
SAMPLES ARE EXTRACTED WITH METHYLENE CHLORIDE, EXCHANGED INTO HEXANE AND
CONCENTRATED. ALIPHATIC AND AROMATIC FRACTIONS ARE SEPARATED. ANALYSIS IS
BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION. PAH AND C10-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. SUMMED RANGES
ARE CORRECTED FOR LABORATORY METHOD BLANK.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED
ACCORDING TO THE METHOD.

SIGNIFICANT MODIFICATIONS ARE LIMITED TO THE SUBTRACTION OF METHOD BLANK
FROM THE SUMMED RANGES.

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES
ACHIEVED?

YES NO

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

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Purchase Order No.: DOMH 0101.09

Project Location: MEDFIELD STATE HOSPITAL POWER PLANT

LIMS-BAT #: LIMS-56545
 Job Number: DOMH 0101.09

Date Received: 6/21/01

Field Sample #: MW-01

Sample ID: 01B17120

Sampled: 6/21/01
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
C5-C8 Aliphatics	ug/l	ND	06/27/01	KKP	69.0			
C9-C12 Aliphatics	ug/l	ND	06/27/01	KKP	34.0			
C9-C10 Aromatics	ug/l	ND	06/27/01	KKP	20.0			
Benzene	ug/l	ND	06/27/01	KKP	0.3			
Ethyl Benzene	ug/l	ND	06/27/01	KKP	0.4			
MTBE	ug/l	ND	06/27/01	KKP	2.1			
Naphthalene	ug/l	ND	06/27/01	KKP	3.2			
Toluene	ug/l	ND	06/27/01	KKP	1.9			
m/p-Xylene	ug/l	ND	06/27/01	KKP	2.7			
o-Xylene	ug/l	ND	06/27/01	KKP	1.0			

Analytical Method:

MADEP-VPH-98-1 REVISION 0

SAMPLES ARE CONCENTRATED BY PURGE AND TRAP, FOLLOWED BY GAS CHROMATOGRAPHY ANALYSIS WITH PID/FID DETECTION. SUMMED RANGES ARE REPORTED WITH TARGET COMPOUND CONTRIBUTIONS SUBTRACTED AND CORRECTED FOR LABORATORY METHOD BLANK. C9-C12 ALIPHATIC HYDROCARBONS EXCLUDE THE CONCENTRATION OF C9-C10 AROMATIC HYDROCARBONS.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED ACCORDING TO THE METHOD.

NO SIGNIFICANT MODIFICATIONS WERE MADE TO THE METHOD.

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

YES NO

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

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Purchase Order No.: DOMH 0101.09

LIMS-BAT #: LIMS-56545
Job Number: DOMH 0101.09

Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
Date Received: 6/21/01
Field Sample #: MW-03

Sample ID: 01B17122
Sampled: 6/21/01
NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C5-C8 Aliphatics	ug/l	ND	06/27/01	KKP	69.0			
C9-C12 Aliphatics	ug/l	ND	06/27/01	KKP	34.0			
C9-C10 Aromatics	ug/l	ND	06/27/01	KKP	20.0			
Benzene	ug/l	ND	06/27/01	KKP	0.3			
Ethyl Benzene	ug/l	ND	06/27/01	KKP	0.4			
MTBE	ug/l	ND	06/27/01	KKP	2.1			
Naphthalene	ug/l	ND	06/27/01	KKP	3.2			
Toluene	ug/l	ND	06/27/01	KKP	1.9			
m/p-Xylene	ug/l	ND	06/27/01	KKP	2.7			
o-Xylene	ug/l	ND	06/27/01	KKP	1.0			

Analytical Method:

MADEP-VPH-98-1 REVISION 0

SAMPLES ARE CONCENTRATED BY PURGE AND TRAP, FOLLOWED BY GAS CHROMATOGRAPHY ANALYSIS WITH PID/FID DETECTION. SUMMED RANGES ARE REPORTED WITH TARGET COMPOUND CONTRIBUTIONS SUBTRACTED AND CORRECTED FOR LABORATORY METHOD BLANK. C9-C12 ALIPHATIC HYDROCARBONS EXCLUDE THE CONCENTRATION OF C9-C10 AROMATIC HYDROCARBONS.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED ACCORDING TO THE METHOD.

NO SIGNIFICANT MODIFICATIONS WERE MADE TO THE METHOD.

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

YES NO

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

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Purchase Order No.: DOMH 0101.09

Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
 Date Received: 6/21/01
 Field Sample #: MW-04
 Sample ID: 01B17123
 Sample Matrix: GRND WATER

LIMS-BAT #: LIMS-56545
 Job Number: DOMH 0101.09

Sampled: 6/21/01
 NOT SPECIFIED

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C5-C8 Aliphatics	ug/l	ND	06/27/01	KKP	69.0			
C9-C12 Aliphatics	ug/l	ND	06/27/01	KKP	34.0			
C9-C10 Aromatics	ug/l	ND	06/27/01	KKP	20.0			
Benzene	ug/l	ND	06/27/01	KKP	0.3			
Ethyl Benzene	ug/l	ND	06/27/01	KKP	0.4			
MTBE	ug/l	ND	06/27/01	KKP	2.1			
Naphthalene	ug/l	ND	06/27/01	KKP	3.2			
Toluene	ug/l	ND	06/27/01	KKP	1.9			
m/p-Xylene	ug/l	ND	06/27/01	KKP	2.7			
o-Xylene	ug/l	ND	06/27/01	KKP	1.0			

Analytical Method:

MADEP-VPH-98-1 REVISION 0

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REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED ACCORDING TO THE METHOD.

NO SIGNIFICANT MODIFICATIONS WERE MADE TO THE METHOD.

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

YES NO

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

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Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
Date Received: 6/21/01
Field Sample #: MW-05

LIMS-BAT #: LIMS-56545
Job Number: DOMH 0101.09

Sample ID: 01B17124
Sampled: 6/21/01
NOT SPECIFIED
Sample Matrix: GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C5-C8 Aliphatics	ug/l	ND	06/27/01	KKP	69.0			
C9-C12 Aliphatics	ug/l	ND	06/27/01	KKP	34.0			
C9-C10 Aromatics	ug/l	ND	06/27/01	KKP	20.0			
Benzene	ug/l	ND	06/27/01	KKP	0.3			
Ethyl Benzene	ug/l	ND	06/27/01	KKP	0.4			
MTBE	ug/l	ND	06/27/01	KKP	2.1			
Naphthalene	ug/l	ND	06/27/01	KKP	3.2			
Toluene	ug/l	ND	06/27/01	KKP	1.9			
m/p-Xylene	ug/l	ND	06/27/01	KKP	2.7			
o-Xylene	ug/l	ND	06/27/01	KKP	1.0			

Analytical Method:

MADEP-VPH-98-1 REVISION 0

SAMPLES ARE CONCENTRATED BY PURGE AND TRAP, FOLLOWED BY GAS CHROMATOGRAPHY ANALYSIS WITH PID/FID DETECTION. SUMMED RANGES ARE REPORTED WITH TARGET COMPOUND CONTRIBUTIONS SUBTRACTED AND CORRECTED FOR LABORATORY METHOD BLANK. C9-C12 ALIPHATIC HYDROCARBONS EXCLUDE THE CONCENTRATION OF C9-C10 AROMATIC HYDROCARBONS.

REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED ACCORDING TO THE METHOD.

NO SIGNIFICANT MODIFICATIONS WERE MADE TO THE METHOD.

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

YES NO

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

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Purchase Order No.: DOMH 0101.09

Project Location: MEDFIELD STATE HOSPITAL POWER PLANT
Date Received: 6/21/01
Field Sample #: MW-06
Sample ID: 01B17125

LIMS-BAT #: LIMS-56545
Job Number: DOMH 0101.09

Sampled: 6/21/01
NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
C5-C8 Aliphatics	ug/l	ND	06/27/01	KKP	69.0			
C9-C12 Aliphatics	ug/l	ND	06/27/01	KKP	34.0			
C9-C10 Aromatics	ug/l	ND	06/27/01	KKP	20.0			
Benzene	ug/l	ND	06/27/01	KKP	0.3			
Ethyl Benzene	ug/l	ND	06/27/01	KKP	0.4			
MTBE	ug/l	ND	06/27/01	KKP	2.1			
Naphthalene	ug/l	ND	06/27/01	KKP	3.2			
Toluene	ug/l	ND	06/27/01	KKP	1.9			
m/p-Xylene	ug/l	ND	06/27/01	KKP	2.7			
o-Xylene	ug/l	ND	06/27/01	KKP	1.0			

Analytical Method:

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REPORTED DETECTION LIMITS (MDL) ARE THE REPORTING LIMITS (RL) CALCULATED ACCORDING TO THE METHOD.

NO SIGNIFICANT MODIFICATIONS WERE MADE TO THE METHOD.

WERE ALL QA/QC PROCEDURES REQUIRED BY THE METHOD FOLLOWED?

YES NO

WERE ALL PERFORMANCE/ACCEPTANCE STANDARDS FOR REQUIRED QA/QC PROCEDURES ACHIEVED?

YES NO

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CONCORD, NH 03301

Purchase Order No.: DOMH 0101.09

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Project Location: MEDFIELD STATE HOSPITAL POWER PLANT

LIMS-BAT #: LIMS-56545

Date Received: 6/21/01

Job Number: DOMH 0101.09

** END OF REPORT **

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