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August 17, 2007

NHDES/Waste Management Division  
Site Remediation Programs  
Groundwater Management Permit Coordinator  
P.O. Box 95  
Concord, NH 03302-0095

RE: Groundwater Management Permit Application  
Former Allied Leather Tannery  
Concord, NH  
NHDES Site # 198605043  
ECS Project No. 02-202174.00.15

To Whom It May Concern:

Enclosed please find the Groundwater Management Permit (GMP) Application prepared by Environmental Compliance Services, Inc. for the above referenced site.

As required, one copy of the GMP Application has been forwarded to the City Clerk for the City of Concord, NH, as indicated on the application form.

Please note that the \$1,000 application fee is waived, since municipalities are exempt.

If you have any questions regarding the GMP Application, please feel free to contact us in our Bow, New Hampshire office at 603-224-8871.

Sincerely,  
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Doug Goddin  
Project Manager

Enclosures:  
Groundwater Management Permit Application

Cc: Matthew Walsh, City of Concord Community Development  
Mike McCluskey, NHDES  
City Clerk, City of Concord



APPLICATION FOR GROUNDWATER MANAGEMENT PERMIT

A GROUNDWATER MANAGEMENT PERMIT is issued under RSA 485-C:4, VIII and Env-Or 607 to a responsible party to remedy contamination associated with the past discharge of regulated contaminants, and to manage the use of the contaminated groundwater. (Examples include sites contaminated from leaking underground storage tanks, unlined landfills regulated pursuant to RSA 149-M, hazardous waste disposal, etc.)

SUBMIT:

- ONE SIGNED AND COMPLETED APPLICATION (Application shall be prepared and stamped by a professional engineer or professional geologist licensed in the State of New Hampshire.)
SUPPORTING INFORMATION
\$1,000 APPLICATION FEE (In the form of a check payable to the "Treasurer - State of New Hampshire." State and local government, including counties and political subdivisions, are exempt.)

TO:

NHDES Waste Management Division
Site Remediation Programs
Groundwater Management Permit Coordinator
PO Box 95, 29 Hazen Drive
Concord, NH 03302-0095

If you have any questions, contact the Groundwater Management Permit Coordinator at (603) 271-3644.

CERTIFICATION OF NOTICE TO LOCAL TOWN/CITY CLERK:

In order to meet the requirements of Env-Or 607.02 (b)(2), the applicant certifies that on 8/17/2007, a copy of this complete permit application was given to the Town/City Clerk of Concord (the town in which the facility requesting a permit is located).

Date: 8/15/07 Applicant Signature: Thomas J. Aspell, Jr.

Applicant Name: (print or type): Thomas J. Aspell, Jr. (City Manager)

I. Site Information

Site Name: Former Allied Leather Tannery DES Site # 198605043
Address: 31 & 35 East Street and 15 Crescent Street, Penacook Village
City: Concord State: NH Zip: 03303
Tax Map: P1, Block 7 Lot Number: 6
Deed Reference: County: Merrimack Book and Page: 2975/1136

II. Site Owner Information

Site Owner Name: City of Concord, NH Phone: (603) 225-8570
Mailing Address: 41 Green Street
City: Concord State: NH Zip: 03301

III. Permit Applicant Information (complete only if different than site owner)

Permit Applicant Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

IV. Contact Person Information (complete only if different than site owner)

Contact Person Name: Matthew Walsh Phone: (603) 225-8570  
 Mailing Address: 41 Green Street  
 City Concord State NH Zip 03301  
 Email mw Walsh@onconcord.com Fax # (603) 225-8558

V. Supporting Information

(Check Yes, "Y," if information is enclosed, or Not Applicable, "N/A," if requested information does not apply.)

Y	N/A	
<input checked="" type="checkbox"/>		A. A summary of the site investigation report;
<input checked="" type="checkbox"/>		B. A summary of the remedial action including remedial performance standards and status of the remedial action performed to date;
<input checked="" type="checkbox"/>		C. A plan scaled to fit onto an 8-1/2 inches by 11 inches or 11 inches by 17 inches sheet, using a tax map as a base, that identifies and locates the following:
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1. Proposed Groundwater Management Zone (GMZ) boundary;
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2. Any deeded easements which restrict the use of groundwater within the GMZ;
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Streets within 1,000 feet of the site;
<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Properties (including tax map and lot) that are within the proposed GMZ or that abut the lots within the proposed GMZ;
<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. Surface water bodies on and within 500 feet of the GMZ; and
<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. Water supply wells, including type of use, within 500 feet of the GMZ.
<input checked="" type="checkbox"/>		D. A site plan drawn to scale on an 8-1/2 inches by 11 inches or 11 inches by 17 inches sheet, that clearly identifies all proposed sampling locations and includes the following:
<input checked="" type="checkbox"/>		1. A title, a legend, and a true north arrow;
<input checked="" type="checkbox"/>		2. A graphic scale bar;
<input checked="" type="checkbox"/>		3. Source from which the site plan was derived;
<input checked="" type="checkbox"/>		4. The location, elevation and datum of a permanent, recoverable bench;
<input checked="" type="checkbox"/>		5. Ground surface spot elevations and contours to show surface topography;
<input checked="" type="checkbox"/>		6. Site's property boundaries;
<input checked="" type="checkbox"/>		7. Areas of known and possible contaminant sources past or present on the site including but not limited to current or former possible sources listed in Env-Or 606.04 (g)(1) - (12);
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. Any paved areas;
<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. Monitoring wells, test pits and borings; and;
<input checked="" type="checkbox"/>		10. Identification of the following on and within 100 feet of the site:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a. Surface water bodies;
<input checked="" type="checkbox"/>	<input type="checkbox"/>	b. Water supply wells;
<input checked="" type="checkbox"/>	<input type="checkbox"/>	c. Surface water sampling stations;
<input type="checkbox"/>	<input checked="" type="checkbox"/>	d. Structures and buildings;
<input checked="" type="checkbox"/>	<input type="checkbox"/>	e. Drainage swales; and
<input checked="" type="checkbox"/>	<input type="checkbox"/>	f. Potential preferential migration pathways including but not limited to underground utilities.

- E. Table of current water level measurements found in piezometers and monitoring wells used to develop the groundwater contours;
- F. Table, in a format acceptable to the Department, summarizing all monitoring results for the last five years, if applicable, from existing monitoring points;
- G. An updated list of reports, including copies of those not already available, of any previously-completed investigations and reports pertinent to the site;
- H. A summary table, if more than 3 previously-completed investigations and reports are available, that includes the date of report, consultant's name and scope of the investigation;
- I. A detailed proposal for a water quality monitoring program, including proposed monitoring schedule, parameters to be analyzed and monitoring locations with supporting information justifying the locations, frequency and parameters selected;
- J. Well construction details of existing monitoring wells and elevations of top of wells not previously referenced in the site investigation submitted under Env-Or 606.01;
- K. Documentation that easements and other rights of access necessary to conduct the approved remedial action have been obtained;
- L. Documentation that any necessary easement ownership rights have been obtained to restrict the use of water wells within the groundwater management zone and filed in the registry of deeds; and
- M. A list of properties located within the groundwater management zone including owner's name, mailing address, telephone number, property address, and deed reference including county book and page and tax map and lot number.

VI. Permit Issuance Information

- A. Within 90 days from the receipt of a complete permit application, DES shall issue a permit for a period of five years, subject to renewal, or notify the applicant in writing that the information submitted is not sufficient to make a decision and request additional information from the applicant.
- B. The groundwater management permit shall contain conditions for implementing the remedial action, monitoring its effectiveness and for submitting periodic status reports.
- C. DES shall have the right to enter any permitted facility for the purpose of collecting information, examining records, collecting samples or undertaking other action associated with the permit.
- D. A groundwater discharge permit shall not be required for discharges to groundwater associated with an approved remedial action plan provided a groundwater management permit is issued for the site.
- E. The permittee shall apply for the renewal of the permit 90 days prior to its expiration date.
- F. Within 30 days of the date DES approves the groundwater management permit, the permittee shall provide notice of the permit by certified mail, return receipt requested, to all owners of lots of record within the groundwater management zone. The permittee shall submit documentation of this notification to DES within 60 days of permit issuance.

- G. Within 60 days of DES approval of the permit, the permit holder shall record notice of the permit in the registry of deeds in the chain of title for each lot within the groundwater management zone. A copy of the recorded notice shall be submitted to the Department within 30 days of recordation.
- H. A permittee may request a permit modification or permit termination by submitting a written request to DES, including the reasons for the modification or termination and a table (in a format acceptable to the department) summarizing all monitoring results to date for existing monitoring points. DES shall modify or terminate the permit or deny the request, stating the reasons for denial in writing, within 90 days of the request.
- I. Prior to transfer of a groundwater management permit to a new permittee, the current permittee shall file a written request with DES, on a form provided by the department, for a transfer of the permit to the new permittee. The request shall include a summary of all monitoring results to date in a format acceptable to DES. Within 45 days of receiving a request for transfer, the department shall notify the present permittee and the new permittee of its decision in writing.

VII. Certification

To the best of my knowledge, the data and information that I have submitted to obtain the Groundwater Management Permit from the New Hampshire Department of Environmental Services, are true and correct.

The undersigned certifies that application has been made for all required local, state or federal permits.

Date: 8/15/07 Signature: *Thomas J Aspell, Jr.*  
Permit Applicant

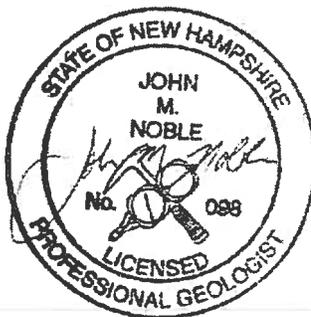
Name: (print or type): Thomas J Aspell, Jr. (City Manager)

VIII. Professional Certification

Date: 8/17/2007 Signature: *John M. Noble*  
Professional Engineer or Geologist

Name: (print or type): John M. Noble, P.G.

The New Hampshire licensed professional engineer or geologist who prepared this Permit Application is required to stamp this document in the space provided below.



No liability is incurred by the State by reason of any approval for Groundwater Management Permits. Approval by the New Hampshire Department of Environmental Services is based on the information supplied by the applicant. No guarantee is intended or implied by reason of any advice given by DES or its staff.

Waste Management Division  
 PO Box 95, 29 Hazen Drive  
 Concord, NH 03302

Type of Submittal (Check One-Most Applicable)

<input type="checkbox"/> Work Scope <input type="checkbox"/> Reimbursement Request	<input type="checkbox"/> Remedial Action <ul style="list-style-type: none"> <li>• Remedial Action Plan</li> <li>• Bid Plans and Specifications</li> <li>• Remedial Action Implementation Report</li> </ul>
<input type="checkbox"/> UST Facility Report <input type="checkbox"/> AST Facility Report	<input type="checkbox"/> Treatment System and POE O&M <input type="checkbox"/> Activity and Use Restriction
<input type="checkbox"/> Emergency/Initial Response Action <input type="checkbox"/> Groundwater Quality Assessment	<input type="checkbox"/> Temporary Surface Water Discharge Permit
<input type="checkbox"/> Initial Site Characterization Site Investigation <ul style="list-style-type: none"> <li>• Site Investigation Report</li> <li>• Supplemental Site Investigation Report</li> <li>• GMZ Delineation</li> <li>• Source Area Investigation</li> <li>• Data Submittal</li> <li>• Annual Summary Report</li> </ul> <input type="checkbox"/> Unsolicited Environmental Sampling Notification <input type="checkbox"/> Closure Documentation	<input checked="" type="checkbox"/> Groundwater Management Permit <ul style="list-style-type: none"> <li>• <b>Permit Application</b></li> <li>• Renewal Application</li> <li>• Deed Recordation Documentation</li> <li>• Abutter Notification Documentation</li> <li>• Release of Recordation</li> </ul> <input type="checkbox"/> Data Submittal <input type="checkbox"/> Annual Summary Report

**Groundwater Management Permit Application**  
**Former Allied Leather Tannery**  
 31 & 35 East Street and 15 Crescent Street  
 Concord, NH 03303  
 NHDES Site #198605043  
 ECS Project No. 02-202174.00.15

*Prepared For:*  
 City of Concord  
 Community Development  
 41 Green Street  
 Concord, NH 03301  
 Mr. Matthew Walsh

*Prepared By:*  
 Environmental Compliance Services, Inc.  
 722 Route 3A, Suite 3  
 Bow, NH 03304  
 Phone Number (603) 224-8871  
 Mr. Doug Goodin  
 August 17, 2007

Recommended Risk Category (Check One)

<input type="checkbox"/> 1. Immediate Human Health Risk (Impacted water supply well, etc.)	<input type="checkbox"/> 4. Surface Water Impact	<input checked="" type="checkbox"/> 7. Alternate Water Available / Low Level Groundwater Contamin- ation (< 1,000 x AGQS)
<input type="checkbox"/> 2. Potential Human Health Risk (Water supply well within 1000' or Site within SWPA)	<input type="checkbox"/> 5. No Alternate Water Available/No Existing Wells in Area	<input type="checkbox"/> 8. No AGQS Violation/No Source Remaining
<input type="checkbox"/> 3. Free Product or Source Hazard	<input type="checkbox"/> 6. Alternate Water Available/High Level Groundwater Contamination (> 1,000 x AGQS)	<input type="checkbox"/> Closure Recommended

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### Figures

Figure 1	Site Location Map
Figure 2	Site Plan with Groundwater Elevation Contours for May 8, 2007
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### Appendices

Appendix A	Notice of Lot Consolidation, recorded March, 29, 2007
Appendix B	Historical Groundwater Quality Data
Appendix C	Monitoring Well Construction Logs

## 1.0 INTRODUCTION

On behalf of the City of Concord, New Hampshire, Environmental Compliance Services, Inc. (ECS) has completed a Groundwater Management Permit (GMP) Application for the former Allied Leather Tannery - Side Division Main Plant located at 31 & 35 East Street and 15 Crescent Street in Penacook Village, Concord, New Hampshire (the Subject Property). The GMP Application has been completed in accordance with New Hampshire Code of Administrative Rules, Groundwater Management Permits, Env-Or 607, dated February 1, 2007. Specifically, the GMP Application was prepared in accordance with Part Env-Or 607.03, Groundwater Management Permit Application.

Figure 1 is a Site Location Map showing the location of the Subject Property. Figure 2 is a Site Plan showing pertinent physical site features including the location of groundwater monitoring wells (both active and decommissioned) and test boring locations.

The Subject Property formerly consisted of four separate parcels identified as 23 East Street (Map P1, Block 7, Lot 16), 31 East Street (Map P1, Block 7, Lot 7) and 35 East Street (Map P1, Block 7, Lot 6) and 13-15 Crescent Street (Map P1, Block 7, Lot 17), on the northwestern corner of the intersection of East Street and Crescent Street, in the Penacook Village of Concord, New Hampshire. On March 29, 2007, a Notice of Lot Consolidation was recorded with the Merrimack County Registry of Deeds (Appendix A). The Subject Property is now identified as Lot 6 of Block 7 on Map P1.

The deeds for the former individual properties which make up the current Subject Property are recorded in the following:

Lot 6: Merrimack County Book of Deeds 2585 Page 426  
Transaction Date: August 29, 2003

Lot 7: Merrimack County Book of Deeds 2585 Page 430  
Transaction Date: August 29, 2003

Lot 16: Merrimack County Book of Deeds 2585 Page 422  
Transaction Date: August 29, 2003

Lot 17: Merrimack County Book of Deeds 2662 Page 624  
Transaction Date: June 1, 2004

The NHDES has assigned the Subject Property the following Identification Number:

NHDES #198605043

The City of Concord has designated the following site contact:

Mr. Matthew R. Walsh  
Assistant for Special Projects  
41 Green Street  
Concord, NH 03301  
(603) 225-8595

## 2.0 SITE INVESTIGATION SUMMARY

The following is a summary of the various investigations completed at the Subject Property.

### 2.1 Geohydrologic Study/Geotechnical Engineers, Inc./June 25, 1987

Geotechnical Engineers, Inc. (GEI) performed a Geohydrologic Study in 1987 for the Allied Leather Corporation.

GEI identified several areas of concern, which were evaluated for the presence of hazardous waste and/or petroleum contamination. They included the former leather waste (California Fields) landfill located off Crescent Street and several areas, including underground storage tanks, at the Side Division Main Plant. In conjunction with their investigation, GEI conducted soil test borings, soil screening, groundwater monitoring well installation and the collection of soil and groundwater samples for laboratory analyses.

At the Side Division Main Plant, GEI installed six groundwater monitoring wells downgradient from buried petroleum storage tanks at the site. Groundwater samples were analyzed for volatile organic compounds (VOCs) and/or chromium. Gasoline related VOCs were detected in bedrock groundwater monitoring well MW-16, installed downgradient of a gasoline UST on the property, at concentrations exceeding EPA Maximum Contaminant Levels (MCLs), indicating the UST may have leaked. Low levels of gasoline related VOCs were detected in monitoring well MW-12, located on the Subject Property immediately upgradient of the gasoline UST.

Based on their investigation, GEI indicated that evidence of leakage from a gasoline underground storage tank (UST) was detected at MW-16 in the form of both soil and groundwater contamination exceeding applicable standards at that time. In addition, evidence of soil contamination with VOCs was detected at MW-15 on the Subject Property. GEI stated that other than the leaking gasoline UST, no other significant sources of groundwater contamination were detected at the Side Division plant site during their geohydrologic study.

GEI recommended that the gasoline tank be removed as well as contaminated groundwater and soil in the vicinity of the tank. GEI also recommended that the full extent of groundwater contamination be determined through additional subsurface explorations before the required extent of remedial cleanup could be determined. GEI made a general recommendation that all hazardous waste materials and oil stored on the site should be removed and properly disposed in a manner consistent with NHDES requirements.

### 2.2 Environmental Site Assessment Update/GEI Consultants, Inc./September 27, 1991

GEI's 1991 ESA Update included resampling and analyses of existing monitoring wells, review of NHDES files for records dealing with regulatory compliance since 1987, and a site reconnaissance to observe conditions remaining after the Allied Leather facility closed in 1987.

GEI indicated that it appeared that the level of groundwater contamination at the gasoline UST was equivalent or slightly less than contamination detected in 1987. Groundwater quality at the gasoline UST still exceeded Maximum Contaminant Levels for VOCs. GEI noted that remedial activities previously recommended for USTs had been partly completed including closure in-place or removal of tanks in accordance with NHDES rules.

GEI further stated that no activities had been completed to address compliance with ground water permit requirements. GEI noted that remedial activities were expected to be readily capable of controlling source areas and bringing the site into compliance with State groundwater hazardous waste regulations.

GEI stated that abandonment of the facility after closing in 1987 appears to have resulted in other non-compliance with State and Federal regulations due to storage of possible hazardous waste and waste oil within the abandoned buildings. The 1991 GEI ESA Update indicated that the Side Division of Allied Leather was a licensed generator of hazardous waste, primarily generated from leather finishing processes, which primarily consisted of dye pigments, mineral spirits, isopropanol, butyl acetate, and other miscellaneous solvents. GEI observed numerous labeled and unlabeled containers of chemicals or waste materials at many locations throughout the interior of the Side Division Main plant building, including numerous five-gallon pails of unknown liquids (including what appeared to be waste oil), six 30-gallon unlabeled drums containing grease, oily-appearing fluid and other unknown liquids, and approximately 20 55-gallon drums of unknown materials. GEI noted that the drums were partially or totally filled and were in heavily rusted or deteriorated conditions, many of which exhibited evidence of leakage. Some of the drums contained labeling for caustic soda and ammonium hydroxide, while other drums appeared to contain oil and solvents.

GEI noted that a large in-floor tank covered by a steel trap door was observed in the boiler room portion of the building, which was reportedly used to store chromium leather processing fluid. GEI also noted numerous miscellaneous debris including paint cans and labeled and unlabeled one-gallon cans containing miscellaneous chemicals.

GEI stated that PCB-contaminated transformers remaining on-site also had not been inspected for leakage with adequate frequency. GEI indicated that the non-compliance issues posed a potential threat for future releases and a threat of regulatory action and penalties. GEI recommended that Feuer Leather Group (the site owner at that time) obtain legal advice on the mechanism and time frame required for proper State notification of conditions at the Subject Property.

### **2.3 Removal Program Preliminary Assessment/Site Investigation/Roy F. Weston, Inc./March 1996**

The Removal Program Preliminary Assessment/Site Investigation (PA/SI) was completed by Roy F. Weston, Inc. in March 1996 for the U.S. Environmental Protection Agency (USEPA).

The results of the Removal Program PA/SI led to the determination that a removal action was appropriate at the former Allied Leather sites in Penacook and Boscawen due to the release or threat of release of ignitable wastes contained in drums and chromium in hides/leather at the facility. A description of potential hazards to the environment and/or population that may be met by the site under 40 CFR 300.415(b)(2) included:

- Actual or potential exposures to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants;
- Actual or potential contamination of drinking water supplies or sensitive ecosystems;
- Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;
- High levels of contaminants in soils largely at or near the surface, that may migrate;

- Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released; and
- Threat of fire or explosion.

#### **2.4 Site Investigation Services/Nobis Engineering Inc./October 1998**

In October 1998, Nobis Engineering Inc. (Nobis) completed Site Investigation Services at the former Allied Leather Facility Site located at East Street and Crescent Street in Penacook, New Hampshire. The following conclusions were developed for the Subject Property:

- The site is located at 23, 31 and 35 East Street in Penacook, New Hampshire, north of East Street, with the majority of the 3.73± acre study area located west of Crescent Street. With the exception of one office building, the site buildings were vacant.
- A total of 26 drums (labeled 1 to 26) were assessed and sampled in the former waterproofing building. Twelve drums (labeled 27 to 38) were assessed and sampled in the southeastern portion of the main plant building. Four empty drums were observed in the former waterproofing building and 19 empty drums were observed in two portions of the main plant building. Based on the results of the observations during sampling and the results of the waste profile analyses, Nobis and Cyn Environmental Services identified considerations for waste disposal.
- The laboratory results for the SUMP sample indicated that no VOCs or TPH were detected but total chromium was detected at a concentration of 16 parts per million (ppm).
- The location of the suspect chrome tank was sampled, although it was later discovered that the sample was likely collected water in the basement of the main plant building. The data indicates that low concentrations of VOCs and a relatively elevated concentration of total chromium were detected in the unfiltered aqueous material at the CTANK (chromium tank) sampling location. Available information indicated that the actual chrome tank was an approximate 500-Gallon above ground storage tank (AST) vessel located approximately 30± feet southeast of the CTANK sampling locations.
- Based on the measurements of a mechanic's pit located in the garage building, Nobis estimated the volume of oily water in the pit at approximately 2,000 gallons. A hole in the northern wall of the garage building was observed above the mechanic's pit at the approximate ground surface, although no stains or signs of vegetative distress were observed on the ground surface adjacent to the hole outside the garage building.
- Nobis performed a limited sampling effort, to preliminarily assess whether asbestos containing materials (ACMs) were present at selected locations at the site. Identified ACMs included linoleum flooring and mastic, transite ceiling panels, transite machinery panels and thermal system insulation.
- Nobis observed the areas where transformers were described in a 1992 NHDES polychlorinated biphenyl (PCB) Compliance inspection report. In most cases, the transformers identified in the NHDES inspection report were either drained, removed, inactive or no longer within the current site property boundaries. During SI services work, the site owner arranged for draining, removal and disposal of one observed leaking PCB-contaminated transformer.
- The Allied Leather facility formerly had four USTs on the property, which contained #6 fuel oil, waste oil and gasoline. The USTs were closed at the site between 1987 and 1989. Two of the USTs were closed in-place and filled with sand and two USTs were closed by removal. Sampling conducted for the SI services described in this report identified residual petroleum releases within the grave of the former gasoline UST location that had not been previously quantified.

- Based on the results of the soil sampling conducted during the SI services work, detected concentrations of contaminants in soils in former UST closure areas did not exceed the NHDES Risk Characterization & Management Policy (RCMP) soil quality standards. Specific polycyclic aromatic hydrocarbons (PAHs) were detected in a soil sample collected from MW-105 adjacent to the site building, downgradient of the suspect chrome tank area. Detected concentrations in soils indicated that impacts from petroleum compounds had occurred on selected portions of the site. Three areas of concern were identified with elevated petroleum-related contamination, which could contribute to groundwater impacts. These areas included the former gasoline UST location (MW-101); the area downgradient of the gasoline UST and mechanic's pit (MW-109), and the area downgradient of the suspect chrome tank (MW- 105).
- Based on the results of the June 4, 1998 groundwater sampling round, detected contaminants in groundwater in the former waste oil (MW-107) and fuel oil UST closure areas (MW-104, MW-9, and MW-12) did not exceed the NHDES RCMP Method 1 GW-1 standards. Detected concentrations of contaminants in groundwater indicate that impacts from petroleum compounds have occurred on selected portions of the site. Available data indicated that acid-fraction semi-VOCs and dissolved chromium were present at levels above potentially applicable standards in the main plant vicinity.
- The most significant identified contaminant source at the main plant building area site was the former gasoline UST closure area (MW-101) where petroleum-related VOC concentrations exceeding NHDES Standards were detected in groundwater. In addition, impacts to soil and groundwater were apparent in the area downgradient of the gasoline UST closure area and the garage building with a former mechanic's pit (MW-16/MW-109). The paved area downgradient of a suspect chrome tank (MW-105) was observed to have detectable concentrations of PAHs in soil, although at levels which have not impacted groundwater above applicable standards.
- Based on measured groundwater elevations, overburden groundwater flow beneath the main plant building area (Penacook) site appeared to be in a general northerly direction toward the Contoocook River. Groundwater levels in the monitoring wells ranged from about 0.7 to 3 feet bgs in shallow overburden deposits in the main plant area. Data at one location indicated that vertically downward groundwater flow occurs from overburden to the underlying bedrock in the area north of the garage building. The measured vertical gradient of 0.26 ft/ft exceeded the horizontal overburden gradient by approximately one order of magnitude in that area.

## 2.5 Updated Environmental Site Assessment/ECSMarin/November 2002

In November 2002, ECSMarin (now Environmental Compliance Services, Inc.) completed an Updated Environmental Site Assessment (ESA Update) at the former Side Division Main Plant of the Allied Leather Tannery. ECSMarin completed a Phase I ESA Addendum in April 2003 to add content to the November 2002 ESA Update required by the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, designated E 1527-00 (ASTM E 1527-00). As a result of these Phase I ESA activities, several areas of concern (AOC) on the Subject Property were identified for further investigation. The AOC on the Subject Property included the following:

- A chromium solution UST located beneath the floor of the former machine shop on the northwest corner of the Side Division Main Plant building; and
- Elevated chromium concentrations detected in a water sample collected from a vat (beneath the Upper Dye Room), also on the northwest corner of the Side Division Main Plant building, during an investigation conducted in 1998.

In addition to the AOC identified during the November 2002 ESA Update, the April 2003 Phase I ESA Addendum revealed the following recognized environmental conditions (RECs) in connection with the Subject Property:

- The Subject Property has been used for industrial purposes, including the use of oil or hazardous materials (OHM), since 1846.
- Historic research identified at least one previously undocumented UST on the Subject Property. The UST was identified in historical records as a 500-gallon gasoline UST located in the northwest portion of the Subject Property.
- Historic research identified several former sulfuric acid above-ground storage tanks (ASTs) on the Subject Property. Several ASTs were formerly located on the southwest end of the main plant building and one tank was located between the old boiler room and the T-111 addition.
- Two filled canals and associated raceways were present on the Subject Property, one to the north and one to the south of the main plant building. The nature of the fill material used to fill the canals is not known.
- The discharge of waste waters/fluids into the on-site sump located on the eastern end of the main plant building and the observation of a petroleum odor in the area of the sump during the 2003 Phase I ESA Addendum.
- A “gas plant” was historically present on the northwest portion of the Subject Property.
- Observed groundwater monitoring wells along with municipal documentation of contamination on the Allied Leather Tannery property.
- The possible presence of Asbestos Containing Materials (ACMs) in the T-111 building addition.

## 2.6 Level I Site Investigation/ECSMarin/August 2003

In August 2003, on behalf of H.L. Turner Group, Inc. and the City of Concord, New Hampshire, ECSMarin completed a Level I Site Investigation (SI) at the Subject Property. To properly characterize the full nature and extent of groundwater and soil contamination in the AOC identified during previous investigations, ECSMarin conducted the SI in accordance with New Hampshire Code of Administrative Rules Env-Wm 1403.07.

In general, the SI included the following activities:

- Geophysical Investigation;
- Test Boring and Monitoring Well Installation;
- Soil Sampling and Laboratory Analyses;
- Monitoring Well Survey;
- Groundwater Sampling and Laboratory Analyses;
- Sump Sampling and Laboratory Analyses; and
- Report Preparation.

The purpose of the SI was to investigate the AOC and RECs and to render an opinion regarding the implications of the AOC and RECs to future redevelopment of the Subject Property.

Table 1 summarizes the test borings and monitoring wells installed during the SI as well as the associated AOC/RECs they were intended to assess.

**TABLE 1**  
**Test Boring and Monitoring Well Summary**

Designation	Test Boring (TB)/ Monitoring Well (MW)	Location/Purpose
ECS-1	TB/MW	Presumed upgradient location to the south of the chromium UST and the main plant building intended to characterize upgradient groundwater quality
ECS-2	TB/MW	West of existing monitoring well MW-105, the chromium UST, and the flooded room and vat, in a cross-gradient location, to determine if contamination has extended to the property boundary in this location. In addition, ECS-2 was used to determine if groundwater quality in this area has been impacted by potential releases from the former sulfuric acid tanks in this area.
ECS-3	TB/MW	North and downgradient of the chromium UST and upper dye room vat to characterize the downgradient extent of contamination in the vicinity of the property boundary in this area.
ECS-4 (A,B,C)	TB	North and downgradient of the chromium UST and upper dye room vat to characterize the downgradient extent of contamination in the vicinity of the property boundary in this area.
ECS-5 (A,B)	TB	North and downgradient of the chromium UST and upper dye room vat, the former 500-gallon gasoline UST, and the "gas plant", to characterize the downgradient extent of contamination in the vicinity of the property boundary in this area.
ECS-6	TB/MW	In the immediate vicinity of the "gas plant" to characterize groundwater and soil quality in this area
ECS-7	TB/MW	North and downgradient of the chromium UST and upper dye room vat to characterize the downgradient extent of groundwater contamination in this area. ECS-7 was installed to the south of the vacuum house following repeated shallow refusal at ECS-4 to the north of the vacuum house.
ECS-8	TB	Immediately adjacent to a magnetic anomaly immediately north of the upper dye room, which was identified during the geophysical investigation, to characterize soil quality in this area
ECS-9	TB/MW	Between the old boiler room and the T-111 addition to characterize the fill materials and groundwater quality in the filled canal to the north of the main mill building. In addition, ECS-9 was used to determine if groundwater quality in this area has been impacted by potential releases from the former sulfuric acid tank in this area.
ECS-10 (A,B)	TB	In general area of former waste house to characterize soil quality in this area.
ECS-11	TB/MW	South of the main mill building between the splitting and shaving room and vacant office building to characterize the fill materials and groundwater quality in the filled canal to the south of the main mill building

In accordance with NHDES guidance, two rounds of groundwater sampling and laboratory analyses were conducted in conjunction with the SI.

No PAHs were detected in the groundwater samples collected during the SI at concentrations exceeding AGQS. The overall lack of PAHs in the groundwater samples collected on the Subject Property further reinforced the strategy to manage PAH contaminated soils on-site since their presence has had a negligible impact on groundwater quality beneath the Subject Property.

AGQS were exceeded at three (3) of the 13 groundwater monitoring wells sampled during the SI. The concentration of total chromium (0.46 mg/L) detected in the groundwater samples collected from existing well MW-105 in the vicinity of the chromium UST and vat exceeded AGQS during the first sampling round. At ECS-3, also in the vicinity of the chromium UST and VAT near the property boundary, both total chromium (9.96 mg/L) and total lead (0.318 mg/L) exceeded their respective AGQS during the first sampling round and total chromium (0.617 mg/L) exceeded the AGQS during the second sampling round. The concentration of naphthalene (31 ug/L) detected at upgradient monitoring well ECS-1, located to the south of the main mill building, exceeded its AGQS during the first sampling round. The historical table contained in the SI summarizing this data is included herein (Appendix B).

Based on the groundwater quality data, ECSMarin recommended that a GMP Application be prepared to establish a Groundwater Management Zone (GMZ) for the Subject Property due to the detection of contaminants at concentrations exceeding NHDES AGQS, specifically in the vicinity of ECS-1, ECS-3, and MW-105.

## 2.7 Combined Phase I/II Environmental Site Assessment/Environmental Compliance Services Inc./May 2004

In May 2004, ECS completed a Combined Phase I/II ESA for the former Adams Auto Body property (15 Crescent Street) which included the installation of four replacement monitoring wells designated MW-101R, MW-102R, MW-108R and MW-109R. The replacement wells were installed in the approximate locations of previously installed monitoring wells which were placed to evaluate subsurface conditions in the vicinity of a former 3,000-gallon gasoline UST and a mechanics pit located in the former maintenance garage. In general, the Combined Phase I/II ESA included the following activities:

- Test Boring and Monitoring Well Installation;
- Soil Sampling and Laboratory Analyses;
- Two Rounds of Groundwater Sampling and Laboratory Analyses; and
- Report Preparation.

Table 2 summarizes monitoring wells sampled during the Combined Phase I/II ESA.

**TABLE 2**  
**Monitoring Well Summary**

Designation	Location/Purpose
MW-101R	Presumed source location of the former 3,000-gallon gasoline UST
MW-102R	East and presumed cross-gradient of replacement monitoring well MW-101R
MW-108R	North and downgradient of the former 3,000-gallon gasoline UST
MW-109R	North and downgradient of the former mechanics pit
MW-106	North and downgradient of the 20,000-gallon #6 fuel oil UST

The following discussion summarizes the results of the May 2004 Combined Phase I/II ESA.

The soil laboratory data indicated that no target analyte soil standards were exceeded at any of the sampled locations.

AGQS were exceeded at three of the four groundwater monitoring wells sampled during the ESA. The concentration of total chromium detected in the groundwater samples collected from replacement wells MW-101R (1.09 mg/L), MW-102R (3.06 mg/L) and MW-108R (0.287 mg/L) exceeded AGQS during the first sampling round. VOCs were detected above AGQS in the groundwater sample collected from replacement monitoring well MW-101R (19.0 and 11.9 ug/L, respectively) during both sampling rounds. The ESA summary table is included in Appendix B.

### 3.0 SUMMARY OF REMEDIAL ACTIONS

The following is a brief summary of remedial actions completed at the Subject Property from 1987 through 2005.

#### 3.1 Closure of Four USTs

Total Waste Management (TWM) reportedly closed four USTs at the Former Allied Leather Tannery between 1987 and 1989. In November 1987, TWM closed (by removal) a 3,000 gallon UST used to hold gasoline which was located between the former maintenance garage and the main mill building. A release from the UST was considered likely due to the presence of numerous holes and water in the tank. In addition, groundwater contamination was detected in a downgradient well (MW-16).

In November 1988, TWM closed the western most of two 15,000 gallon USTs located adjacent to the former machine shop, in place. The UST was reportedly cleaned and filled with a flowable fill. In late 1988, TWM closed the remaining (eastern most) 15,000 gallon UST in place. The official closure date is not known, but historical documents state it "will be completed by December 31, 1988".

In January 1989, TWM closed (by removal) one 20,000 gallon UST adjacent to the former new boiler room, which was used to hold fuel oil. The UST was reportedly in good condition and no gross contamination of soil was noted.

#### 3.2 Oil and Hazardous Material (OHM) Removal

In December 2003, ECS oversaw OHM removal activities performed at the Site by Cyn Environmental Services (Cyn). Site activities were performed from December 3, 2003 through December 5, 2003 with final removal performed on December 10, 2003.

Activities conducted during this phase of work included consolidating, over-packing, and disposal of various containerized and non-containerized materials. Materials removed included: aerosols, paint related materials, non-regulated materials, tannery waste (leather scraps), pressurized cylinders, oil and other miscellaneous materials.

The final removal of the containerized materials was performed by Jones Environmental Services on December 10, 2003. Materials which had been staged were loaded into a tractor trailer and transported under manifest to the Jones Environmental Services (NE) Inc. facility in Lowell, Massachusetts for disposal.

#### 3.3 Removal and Disposal of Transformers

On December 10, 2003 the removal of six (6) inactive electrical transformers was conducted by Transformer Services Inc. and was supervised by City of Concord staff.

#### 3.4 Closure of 600 Gallon Vat and 3,000 Gallon Vault

In December 2003, Cyn performed the closure of one 600 gallon vat in the former machine shop and one 3,000 gallon vault in the former upper dye room. The liquids from the tanks were removed and transported under manifest MAQ386340 as hazardous waste liquid. The material was disposed at United Oil Recovery in Meriden, Connecticut. Cyn performed industrial cleaning of the vat and vault using pressurized water and hand tools to remove any sediments remaining in the tank after the

liquids had been removed. Each tank was filled with flowable fill to prevent future infiltration of groundwater to the tanks.

### **3.5 Perimeter Drain Clean-out**

Between August 2004 and August 2005, Cyn performed perimeter drain clean-out activities at the main mill building at the Subject Property. Approximately 42,000 gallons of non-hazardous, state regulated groundwater were transported under manifest from the site to the Cyn treatment facility in Dover, NH. Approximately 33 tons of non-hazardous solids were transported under manifest from the site to the Cyn facility in Stoughton, MA.

### **3.6 Excavation and Off-site Disposal of Lead Impacted Soil**

#### **3.6.1 Swale**

In December 2004, Jay-Mor Enterprises, Inc. (Jay-Mor) performed excavation of soils in the drainage swale located between the main mill building and Crescent Street which had been previously identified as having elevated concentrations of lead. With the City's approval, the swale was dewatered to the municipal sewer. Upon receiving acceptable results for the confirmatory samples, the swale was backfilled to grade. The lead impacted material was transported and disposed at the Clean Earth of North Jersey, Inc. (Clean Earth) facility located in South Kearny, NJ under hazardous waste manifest.

#### **3.6.2 Area Adjacent to Former Maintenance Garage**

In November of 2005, Cyn performed excavation of lead impacted soils immediately adjacent (south) to the former maintenance garage at the Subject Property. Confirmatory samples indicated that no soil remained in this area with lead concentrations in excess of soil remediation standards. The material was stockpiled and secured on site until it was transported and disposed at the Clean Earth facility under hazardous waste manifest.

### **3.7 On-site Consolidation of Polycyclic Aromatic Hydrocarbon (PAH) Impacted Soil (Coal Related)**

Between January 2005 and April 2005, Jay-Mor performed excavation, on site consolidation, and capping with clean fill of coal related PAH impacted soils. The impacted soils were located primarily between the main mill building and the former dust collection building; however, smaller quantities were present elsewhere on-site. All of the excavated coal related PAH impacted soils were relocated to the area where the former "splitting and shaving" area was located in the southeast corner of the site. When all the material had been placed and compacted, a three foot layer of clean material from off-site was then placed over the entire area. An Activity Use Restriction (AUR) is currently being prepared for the Subject Property to identify this area. The AUR will be recorded with the Merrimack County Registry of Deeds when completed.

### **3.8 Closure of Chromium Vault**

In April of 2005, a chromium vault was closed in place at the site by Boston Environmental with assistance by Jay-Mor. The vault had not been previously identified during any of the site investigations and was discovered during demolition of an addition to the original main mill building. New England Disposal Technologies (NEDT), a subcontractor to Boston Environmental, pumped the liquid from the vault for off-site disposal and performed an industrial cleaning of the vault. The vault was then backfilled with clean gravel material from off-site.

### **3.9 Excavation of PAH Impacted Soil (Fuel Oil Related)**

In April of 2005, Jay-Mor performed excavation of soils in the vicinity of the former 20,000 gallon fuel oil UST which had been removed from the ground in January of 1989. A total of approximately 241 tons of impacted soils were transported from the site to Environmental Soil Management, Inc. in Loudon, NH for treatment by asphalt batching prior to recycling.

### **3.10 Removal of Two 15,000-Gallon USTs Previously Closed in Place**

From December 20 through 22, 2005, two 15,000-gallon USTs, formerly used to store #6 heating oil and waste oil, were removed from the ground adjacent to the former machine shop and disposed of off-Site. All soil material excavated from immediately adjacent and inside the previously "closed-in-place" tanks was disposed of off-site. Based on visual and olfactory evidence, residual petroleum contamination remains in the soil and groundwater in the immediate area of the former USTs.

Replacement monitoring well MW-107R was installed immediately downgradient from the former UST locations to evaluate groundwater in the vicinity of the removed USTs. No VOCs or PAHs were detected above laboratory reportable detection limits in groundwater samples collected from MW-107R on October 11, 2006 or May 8, 2007. No laboratory analyses were conducted to quantify the levels of soil contamination remaining in-place as they extended beneath the building to the south.

#### **4.0 GROUNDWATER MANAGEMENT ZONE MAP**

Figure 3 is a Groundwater Management Zone (GMZ) map showing the boundary of the proposed GMZ depicted on City of Concord and Town of Boscawen Tax Maps. The GMZ map depicts all of the properties (Tax Map, Block, and Lot Numbers) as well as all streets within 1,000 feet of the GMZ. The GMZ map also depicts any surface water bodies within 500 feet of the proposed GMZ. There are no known water supply wells within 500 feet of the proposed GMZ.

Based on information provided by the City of Concord, there are no deeded easements restricting the use of groundwater within the GMZ.

##### ***Groundwater Supply Wells***

ECS contacted the following sources relative to the existence of groundwater supply wells within a 500 foot radius of the GMZ:

- Concord General Services Department
- Concord Code Enforcement Department
- Boscawen Water Department
- Boscawen Health Officer
- Boscawen Town Clerk
- New Hampshire Geological Survey (NHGS)

Based on information provided by the Concord General Services Department and the Town of Boscawen Water Department, municipal water supply is provided to all developed properties within a 500 foot radius of the proposed GMZ by either Concord or Boscawen. Neither the Concord General Services Department nor the Town of Boscawen Water Department maintains records pertaining to private groundwater supply wells. Furthermore, the Town of Boscawen Water Department indicated that their groundwater supply wells are not located within 500 feet of the proposed GMZ.

The Concord Code Enforcement Department, the Town of Boscawen Health Officer, and the Boscawen Town Clerk indicated that they do not maintain records pertaining to groundwater supply wells.

The New Hampshire Geologic Society (NHGS) provided information pertaining to groundwater supply wells listed in their groundwater supply well inventory database. The NHGS database did not identify any water supply wells located within a 500 foot radius of the proposed GMZ.

Note that a property-to-property survey was not conducted to identify the existence of groundwater supply wells within 500 feet of the proposed GMZ.

## **5.0 SITE PLAN**

Figure 2 is a Site Plan showing pertinent physical site features including the location of previously installed groundwater monitoring wells and the test borings installed during past investigations. The Site Plan also shows those wells which are proposed for monitoring in conjunction with the GMP. No drinking water wells or surface water monitoring stations are proposed to be monitored in conjunction with the GMP.

## 6.0 GROUNDWATER LEVEL MEASUREMENTS

Table 3 summarizes the depth to groundwater measurements and groundwater elevation data measured by ECS on May 8, 2007 for wells used to calculate groundwater elevation contours.

**Table 3**  
**Groundwater Elevations**

Monitoring Well	PVC Elevation	Depth to Groundwater	Groundwater Elevation
ECS-1	313.54	8.42	305.12
ECS-3	309.87	4.63	305.24
MW-15	304.30	2.30	302.00

Notes:

1. Well elevations expressed in feet relative to the NGVD of 1929.
2. Survey referenced to (benchmark) nail in retaining wall adjacent to the Contoocook River (TBM=310.38 ft.).
3. Depth to groundwater measurements referenced to the top of the PVC well casing.

Figure 2 depicts the groundwater elevation contours and inferred shallow overburden groundwater flow direction for May 8, 2007.

Based on the May 8, 2007 groundwater elevation data as well as historic groundwater elevation data, shallow overburden groundwater beneath the Subject Property flows in a general northeasterly to easterly direction under an average hydraulic gradient of approximately 0.009 feet of head per foot of horizontal distance (ft/ft).

## **7.0 HISTORICAL GROUNDWATER QUALITY DATA**

Table 4 summarizes the historical groundwater quality data collected by ECS beginning in October 2004 with the most recent sampling performed in May 2007. Appendix B contains the available historical groundwater quality data summary tables from environmental investigations conducted on the Subject Property prior to October 2004. Section 2.0 details the investigative reports from which this groundwater quality data was compiled. Section 9.0 includes discussion of the historical groundwater quality data.

## **8.0 PREVIOUS ENVIRONMENTAL REPORTS**

ECS has prepared the following environmental reports for the Subject Property:

- ECSMarin. November 5, 2002. Environmental Site Assessment Update, Former Allied Leather – Side Division Main Plant, 35 East Street, Penacook, NH.
- ECSMarin. April 23, 2003. Phase 1 Environmental Site Assessment Addendum at Former Allied Leather Tannery, Side Division Main Plant, 35 East Street, Village of Penacook, Concord, New Hampshire.
- ECSMarin. August 2003. Level I Site Investigation, Former Allied Leather Tannery – Side Division Main Plant, 35 East Street, Penacook, NH.
- ECS. May 2004. Combined Phase I/II Environmental Site Assessment, Adams Auto Body Property (Former Allied Leather Tannery – Side Division Main Plant), 15 Crescent Street, Penacook, NH.

ECS obtained and reviewed the following environmental assessment reports for the Subject Property in conjunction with our November 5, 2002 Environmental Site Assessment Update:

- Geotechnical Engineers, Inc. June 25, 1987. Geohydrologic Study, Allied Leather Corp., Penacook, New Hampshire;
- GEI Consultants, Inc. September 27, 1991. Environmental Site Assessment Update, Former Allied Leather Corporation Plant, Penacook and Boscawen, New Hampshire;
- Roy F. Weston, Inc. March 1996. Removal Program Preliminary Assessment/Site Investigation for the Allied Leather Site, Concord (Penacook) and Boscawen, Merrimack County, New Hampshire; and
- Nobis Engineering, Inc. October 1998. Site Investigation Services Report, Former Allied Leather Facility, East Street, Penacook, New Hampshire.

ECS found no additional environmental reports pertaining to the Subject Property. Please refer to the ECS November 2002 Phase I ESA Update for a summary of the previous environmental reports prepared for the Subject Property.

## 9.0 PROPOSED GROUNDWATER QUALITY MONITORING PROGRAM

The following includes a discussion of the historical groundwater quality data collected in conjunction with the SI, ESA Update, and Combined ESA performed by ECS in 2002, 2003, and 2004, respectively. In addition, it includes consideration regarding groundwater quality data collected from October 2004 to date while performing periodic groundwater monitoring events required by the NHDES.

Based on the groundwater quality data collected to date, the following sentinel monitoring wells (ECS-1, MW-15, and MW-108R) and all monitoring wells with AGQS exceedances (ECS-3 and MW-101R) are proposed for biannual sampling under the GMP sampling program:

Sampling Locations	Parameters
ECS-1, MW-15, MW-101R, and MW-108R	Volatile Organic Compounds (VOCs) (EPA Method 8260B)
ECS-3	Dissolved Total Chromium (Cr <sup>+3</sup> & Cr <sup>+6</sup> ) (EPA Method 200.7)

- As noted in the SI report, VOC analysis was dropped from the analytical program for the second round of groundwater samples collected from existing previously installed monitoring wells MW-9, MW-12, MW-15, MW-104, MW-105, and MW-107 because no VOCs were detected above applicable AGQS in the previous two (2) sampling events for these monitoring wells conducted in conjunction with the October 2002 ESA Update and the June 3-5, 2003 SI sampling round.
- Monitoring well MW-15 was reincorporated into the sampling regiment to act as a down-gradient sentinel well.
- VOCs were only detected above applicable AGQS in the first round groundwater sample collected from upgradient monitoring well ECS-1. Naphthalene was detected in the June 3-5, 2003 groundwater sample collected from ECS-1 at a concentration of 31 ug/L, above the applicable 20 ug/L AGQS. Naphthalene was not detected above AGQS in any subsequent rounds from ECS-1 but has been kept in the sampling regiment to act as an up-gradient sentinel well.
- As noted in the 2004 ESA, VOCs were detected above applicable AGQS in groundwater samples collected from monitoring well MW-101R during two sampling events.
- Total chromium was detected above AGQS in groundwater samples collected from monitoring wells MW-101R, MW-102R and MW-108R. Groundwater samples collected from MW-101R continue to contain VOCs detected at concentrations above AGQS and is therefore included in the sampling regiment. Total chromium has not been detected above AGQS in samples collected from monitoring wells MW-101R, MW-102R and MW-108R for at least two consecutive rounds each. MW-108R has not had any VOC exceedances in the last six sampling events; however, it is being included in the sampling regiment as a second down-gradient sentinel well.
- Based on historical groundwater analytical results, PAHs do not appear to be a significant groundwater contaminant at the site, despite the detection of PAHs at concentrations exceeding RCMP S-1, S-2, and S-3 soil standards in the soil samples collected from the test borings conducted during the SI. As such, PAH analysis was dropped from the analytical program upon receiving a minimum of two consecutive rounds with no PAHs detected above AGQS.
- In the June 3-5, 2003 SI sampling event, total chromium was detected in duplicate groundwater sample MW-105 at a concentration exceeding the AGQS. Total chromium was not detected in groundwater samples collected from MW-105 in subsequent sampling rounds.

- Total chromium and lead were detected in groundwater sample ECS-3 above applicable AGQS. The only metal that exceeded applicable AGQS in the June 17-18, 2003 SI sampling event was chromium in the sample collected from monitoring well ECS-3. Chromium continues to be the only metal detected above AGQS in the groundwater samples collected from ECS-3 and is therefore included in the sampling regimen with analysis for total chromium.
- Total chromium was also detected during the ESA above AGQS in monitoring wells MW-16R, MW-101R, MW-102R and MW-108R during 2004 and/or 2005. Subsequent to the AGQS exceedances, two rounds of groundwater samples have been collected from each of these monitoring wells with total chromium concentrations below AGQS; therefore, total chromium has been dropped from the sampling protocol at these wells.
- No hexavalent chromium was detected above laboratory PQLs in any of the groundwater samples collected during the first or second SI sampling events indicating that the primary speciation for chromium in the groundwater beneath the Subject Property is trivalent ( $\text{Cr}^{+3}$ ). Accordingly, dissolved total chromium ( $\text{Cr}^{+3}$  &  $\text{Cr}^{+6}$ ) has been chosen for the analytical program.

### 10.0 MONITORING WELL CONSTRUCTION DETAILS

Table 5 summarizes the monitoring well construction details for the monitoring wells installed on the Subject Property.

**TABLE 5**  
**Groundwater Monitoring Well Construction Details**

Monitoring Well	Ground Elevation	PVC Elevation	Total Depth (ft. bgs)	Bentonite Divider Seal (ft. bgs)	Secondary Filter Pack (ft. bgs)	Filter Pack (ft. bgs)	Screened Interval	
							Top (ft. bgs)	Bottom (ft. bgs)
ECS-1	313.98	313.54	13.0	1.0 - 3.0	3.0 - 3.5	3.5 - 13.0	5.0	13.0
ECS-2	312.15	311.83	14.0	1.0 - 2.5	2.5 - 3.0	3.0 - 14.0	4.0	14.0
ECS-3	310.13	309.87	11.0	1.0 - 2.0	2.0 - 2.5	2.5 - 11.0	3.0	11.0
ECS-6	305.37	305.09	5.0	0.5 - 1.0 (RB)	NI	0.5 - 5.0	0.3	5.0
ECS-7	306.95	306.68	7.0	0.5 - 1.0 (RB)	NI	0.5 - 7.0	2.0	7.0
ECS-9	306.07	306.07	12.0	1.0 - 1.5	1.5 - 2.0	2.0 - 12.0	3.0	12.0
ECS-11	312.35	312.17	10.0	1.0 - 1.5	1.5 - 2.0	2.0 - 10.0	3.0	10.0
MW-9	305.58	305.58	11.6	Installed	NI	2.0 - 12.0	3.6	11.6
MW-10	NS	NS	11.0	Installed	NI	2.0 - 11.6	3.0	11.0
MW-12	306.15	306.10	15.4	Installed	NI	2.0 - 15.7	3.4	15.4
MW-13	NS	NS	11.5	Installed	NI	2.0 - 12.5	3.0	11.5
MW-15	304.38	304.30	14.4	Installed	NI	2.0 - 15.0	4.2	14.4
MW-16	NS	NS	18.5	Installed	NI	2.0 - 7.8	10.0	18.5
MW-16R	NS	NS	24.0	10.0-11.0 & 12.0-13.0	11.0 - 12.0	13.0-24.0	14.0	24.0
MW-104	306.20	305.98	10.0	Installed	NI	1.0 - 10.0	0.3	10.0
MW-105	306.69	306.47	8.0	Installed	NI	1.0 - 8.0	0.3	8.0
MW-106	NS	306.23	10.0	Installed	NI	1.0 - 10.0	0.3	10.0
MW-107	304.93	304.79	10.0	Installed	NI	1.0 - 10.0	0.3	10.0
MW-107R	NS	NS	12.0	0.0 - 1.0	NI	1.0 - 12.0	2.0	12.0
MW-101	NS	NS	10.0	0.0 - 1.0	NI	1.0 - 10.0	0.3	10.0
MW-101R	NS	NS	12.0	1.0 - 2.0	NI	2.0 - 12.0	0.2	12.0
MW-102	NS	NS	6.5	0.0 - 1.0	NI	1.0 - 6.5	0.3	6.5
MW-102R	NS	NS	10.0	0.5 - 1.0 (RB)	NI	1.0 - 10.0	1.0	10.0
MW-108	NS	NS	9.5	0.0 - 1.0	NI	1.0 - 9.5	0.3	9.5
MW-108R	NS	NS	8.0	0.5 - 1.0 (RB)	NI	1.0 - 8.0	1.0	8.0
MW-109	NS	NS	9.0	0.0 - 1.0	NI	1.0 - 9.0	0.3	9.0
MW-109R	NS	NS	9.0	0.5 - 1.0 (RB)	NI	1.0 - 9.0	1.0	9.0

Notes: RB - indicates bentonite seal was installed outside of the road box immediately below the cement surface seal  
 NI - not installed  
 NA - not available  
 NS - not surveyed  
 MW-16 & MW-16R were constructed as bedrock wells  
 Shaded cells indicate those wells identified for monitoring under this GMP

All available test boring and monitoring well construction logs for monitoring wells installed on the Subject Property are included as Appendix C.

#### **11.0 EASEMENTS & RELATED REQUIREMENTS**

No easements, rights of access, or easement ownership rights to restrict the use of water wells are necessary to implement the proposed GMP.

**12.0 LIST OF PROPERTIES WITHIN THE PROPOSED GMZ**

The following is a list of properties in the proposed GMZ and the required supplemental information, which is based on information obtained from the City of Concord.

**Groundwater Management Zone**

<b>Tax Map/ Block/Lot No.</b>	<b>Owner</b>	<b>Property Address</b>	<b>Mailing Address &amp; Phone Number</b>	<b>Merrimack County Book of Deeds Book/Page</b>
P1 / 7 / 6 P1 / 7 / 7 P1 / 7 / 16 P1 / 7 / 17	City of Concord 41 Green Street Concord, NH 03301	31 & 35 East Street and 15 Crescent Street	City of Concord 41 Green Street Concord, NH 03301	2585 / 426 2585 / 430 2585 / 422 2662 / 624

The Subject Property (proposed GMZ) formerly consisted of four separate parcels identified as 23 East Street (Map P1, Block 7, Lot 16), 31 East Street (Map P1, Block 7, Lot7) and 35 East Street (Map P1, Block 7, Lot 6) and 13-15 Crescent Street (Map P1, Block 7, Lot 17), on the northwestern corner of the intersection of East Street and Crescent Street, in Penacook, New Hampshire. On March 29, 2007, a Notice of Lot Consolidation was recorded with the Merrimack County Registry of Deeds (Appendix A). The new parcel is identified as Map P1, Block 7, Lot 6.

TABLE 4  
Historical Groundwater Quality Data  
Former Allied Leather Tannery  
Paramus, NY  
ECS 802-302174.00

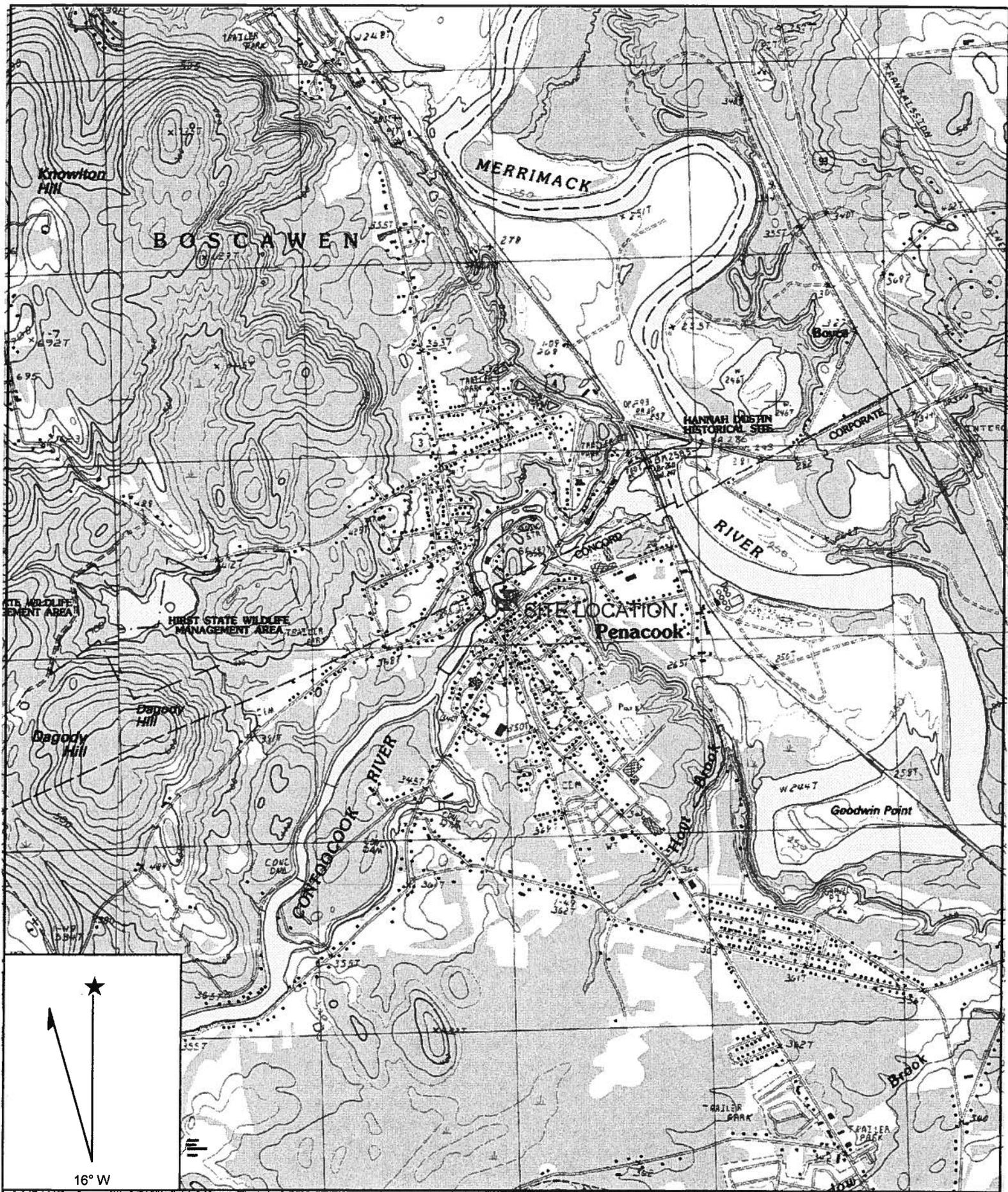
Analyte (Method)	AOCIS			ECS-1			ECS-3			MW-104			MW-106			MW-115			
	10/1/04	05/04/05	10/27/05	05/22/06	09/27/06	10/10/06	05/06/07	10/29/04	05/04/05	10/27/05	05/22/06	10/10/06	05/22/06	10/29/04	05/04/05	10/27/05	05/22/06	10/29/04	
VOCS (E2608) µg/L																			
Benzene	5	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
n-Butylbenzene	260	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
n-Octylbenzene	260	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dibenzofuran	1,000	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Diethylbenzene	70	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Hexamethylenediamine	10,000	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Triethylamine	700	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Isopropylbenzene	800	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-Hydroxytoluene	260	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane	20	5	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane	260	5	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	1,000	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene	300	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-Trichlorobenzene	300	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Xylenes	10,000	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dioxane	3	NA	NA	NA	ND	ND	NA	NA											
Tetrahydrofuran	154	ND	ND	ND	ND	ND	NA	NA											
PAHs/TOCS* (E2702) µg/L																			
Fluoranthene	290	5.81	NA	NA	NA	NA	NA	<5.0	NA	NA	NA	NA	NA	<5.0	NA	NA	NA	NA	NA
Phenanthrene	210	12.2	NA	NA	NA	NA	NA	<5.0	NA	NA	NA	NA	NA	<5.0	NA	NA	NA	NA	NA
Total Chromium (E & VI) (E2607) mg/L	0.1	<0.005	<0.0025	<0.0025	<0.005	NA	NA	4.12	1.89	0.21	0.182	NA	NA	<0.005	NA	0.0783	0.0401	0.0058	NA
Hexavalent Chromium (VI) (E2607) mg/L	NE	<0.01	NA	NA	NA	NA	NA	<0.01	NA	NA	NA	NA	NA	<0.01	NA	NA	NA	NA	NA
Trivalent Chromium (mg/L)	NE	<0.005	NA	NA	NA	NA	NA	4.12	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Dissolved Total Chromium (E & VI) (E2607) mg/L	0.1	<0.01	<0.01	<0.01	NA	<0.0110	NA	2.81	0.881	0.181	NA	0.273	7.28	<0.01	NA	0.0113	<0.01	0.0105	NA
Total Lead (E2607) mg/L	0.015	NA	0.0027	0.0118	<0.0150	NA	NA												

NOTE:  
AOCIS - Analytical Groundwater Quality Standards from EPA 816-G-00  
Comprehensive Environmental Response, Emergency Planning, and Control Act  
ECS-1 - Environmental Contaminant Sampling and Analysis Manual  
ECS-3 - Environmental Contaminant Sampling and Analysis Manual  
MW-104 - Environmental Contaminant Sampling and Analysis Manual  
MW-106 - Environmental Contaminant Sampling and Analysis Manual  
MW-115 - Environmental Contaminant Sampling and Analysis Manual  
NE - Not Evaluated  
ND - Not Detected  
NA - Not Analyzed  
The groundwater quality data were collected from May 1978 to October 2008  
Groundwater samples collected in June 2008 were left and sent to the  
laboratory for 1,4-Dioxane analysis. 1,4-Dioxane was not detected  
in any of the samples collected in 2008.

TABLE 4  
Historical Groundwater Quality Data  
Former Allied Leather Tannery  
Pawtucket, RI  
ECS 802-202174.00

Analyte (Method)	MW-10R*		MW-10TR													
	10/28/05	05/23/06	10/11/06	10/20/04	05/23/05	10/11/06	05/23/05	10/11/06	05/23/05	10/11/06	05/23/05	10/11/06	05/23/05	10/11/06	05/23/05	10/11/06
AGCS																
Benzene	5	<1.0	1.0	12.1	<1.0	2.60	12.7	7.8	3.9	1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0
n-Butylbenzene	200	<1.0	<1.0	4.8	<1.0	4.7	5.9	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
n-Butylbenzene	200	<1.0	<1.0	1.7	<1.0	<1.0	4.8	5.9	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Diethylbenzene	1,000	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
o,p-Dichlorobenzene	70	<1.0	<1.0	1.0	<1.0	<1.0	1.0	<1.0	2.2	<1.0	<1.0	<1.0	2.1	1.0	<1.0	<1.0
m,p-Dichlorobenzene	100	<1.0	<1.0	<1.0	<1.0	<1.0	1.3	<1.0	1.3	<1.0	<1.0	<1.0	4.2	2.4	<1.0	<1.0
1,4-Dichlorobenzene	700	<1.0	<1.0	20.9	3.9	1.4	14.9	19.3	1.7	1.5	<1.0	<1.0	1.5	<1.0	<1.0	2.9
Ethylbenzene	600	<1.0	<1.0	26.0	2.0	3.9	97.0	14.2	3.2	1.3	<1.0	<1.0	1.0	<1.0	<1.0	2.9
Isopropylbenzene	200	<1.0	<1.0	1.2	<1.0	4.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	8.4
4-Methylphenol	10	<1.0	1.4	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	<1.0
Naphthalene	20	<1.0	<1.0	3.1	<1.0	<1.0	28.8	7.1	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	1.4
n-Propylbenzene	200	<1.0	<1.0	26.1	2.4	3.8	85.1	16.6	3.0	1.4	<1.0	<1.0	1.5	<1.0	<1.0	8.8
Toluene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
o-Toluenesulfonate	500	<1.0	<1.0	1.8	<1.0	3.9	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene	200	<1.0	<1.0	4.2	1.0	1.0	2.9	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.2
1,2,4-Trichlorobenzene	200	<1.0	<1.0	4.2	1.0	1.0	2.9	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.2
1,2,5-Trichlorobenzene	300	<1.0	<1.0	4.1	<1.0	1.0	2.9	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Solvents	10,000	<5.0	<5.0	23.5	3.8	2.1	31.8	24.0	<3.0	NA	NA	NA	NA	NA	NA	2.8
1,4-Cyanate	3	<0.0	<0.0	NA	22.4	<0.0	<0.0	NA	<0.0							
Tetrahydrofuran	154	ND	10.4	ND	ND	ND	<10.0	<10.0	ND	ND	ND	<10.0	<10.0	ND	ND	<10.0
Fluoranthene	200	NA	NA	<5.0	NA											
Phenanthrene	210	NA	NA	<5.0	NA											
Total Chromium (Cr & VI) (200.7) mg/L	0.1	0.37	<0.090	NA	0.048	0.078	NA	NA	0.099	2.48	0.124	0.070	NA	0.0818	<0.0650	NA
Hexavalent Chromium (VI) (194) mg/L	NE	NA	NA	<0.01	NA	NA	NA	NA	<0.01	NA						
Trivalent Chromium mg/L	NE	NA	NA	NA	0.0548	NA	NA	NA	0.099	NA						
Dissolved Total Chromium (Cr & VI) (200.7) mg/L	0.1	0.0148	NA	<0.010	0.0144	0.0154	NA	<0.010	0.0335	0.0149	NA	<0.010	NA	<0.01	0.0181	<0.010
Total Lead (200.7) mg/L	0.015	NA														

NOTE:  
AGCS - Allied Groundwater Quality Standards from Enviro 600  
Committed to Management, effective February 1, 2007.  
\* - The groundwater samples collected from MW-10TR in October 2008  
were analyzed for 1,4-Cyanate and 1,4-Chloroform. 1,4-Chloroform was not detected  
in any of the samples.  
\* - MW-10R is a backup well.  
\* - The groundwater samples collected from MW-10TR in October 2008  
were analyzed for 1,4-Cyanate and 1,4-Chloroform. 1,4-Chloroform was not detected  
in any of the samples.  
\* - MW-10R is a backup well.



Name: PENACOOK  
 Date: 1/10/2007  
 Scale: 1 inch equals 2000 feet

Location: 043° 16' 56.6" N 071° 36' 01.5" W  
 Caption: Figure 1: Site Location Map  
 Former Allied Leather Tannery  
 35 East Street, Concord, New Hampshire



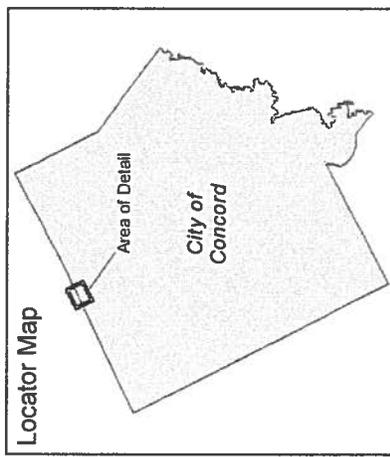
# Allied Leather Tannery Groundwater Management Zone



This map prepared by  
City of Concord, New Hampshire  
Community Development Dept.  
41 Green St  
Concord, NH 03301  
Date: June 25, 2007

- Legend**
-  Groundwater Management Zone
  -  1,000 GMZ Buffer Area
  -  Buildings\*
  -  Parcels
  -  Municipal Boundary
  -  Water Bodies

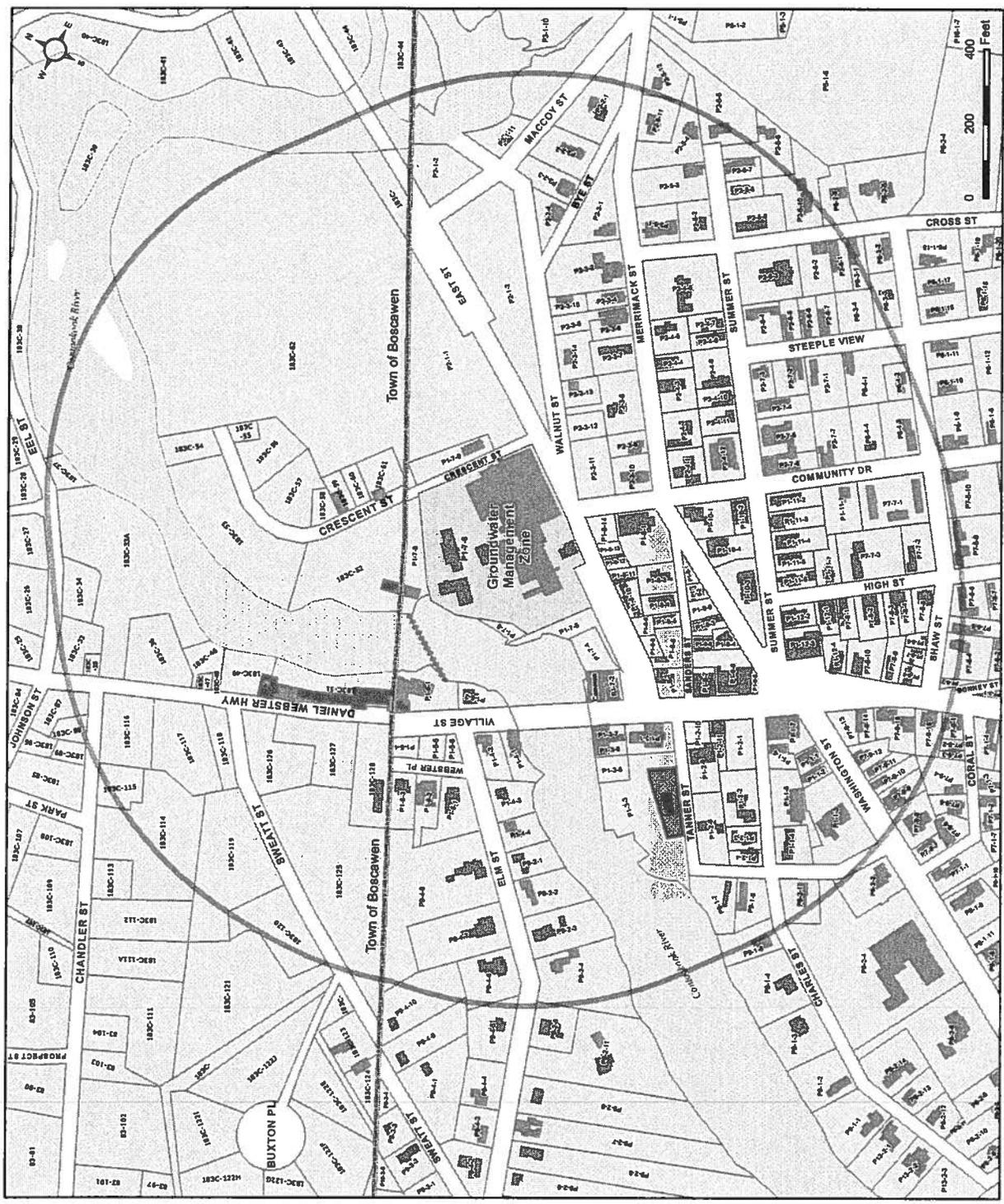
\* Building data only available for the City of Concord.



Town of Boscawren data provided by  
Central New Hampshire Regional Planning Commission

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The City makes no representations or guarantees of its  
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Return to: Community Development Dept.  
Planning Division  
41 Green Street  
Concord, NH 03301

1027  
2

Doc# 674745  
Book: 2975  
Pages: 1136  
Filed & Recorded  
03/29/2007 3:26PM  
MERRIMACK COUNTY REGISTRY OF DEEDS  
KATHI L. GURRY, CPO, REGISTER

Fees \$12.39

MERRIMACK COUNTY RECORDS

*Kathi L. Gurry*, CPO, Register



**Notice of Lot Consolidation**  
Pursuant to RSA 674:39-a

CITY OF CONCORD, a municipal corporation with a usual place of business 41 Green Street, Concord, New Hampshire 03301, hereby acknowledges ownership of the following parcels of land: 23 East Street, known as City of Concord Assessor's Map P1, Block 7, Lot 16 (Tract # 7002-B) acquired by deed recorded at the Merrimack County Registry of Deeds in Book 2585, Page 422; 31 East Street, known as City of Concord Assessor's Map P1, Block 7, Lot 7 (Tract # 7002-C-1), acquired by deed recorded at the Merrimack County Registry of Deeds in Book 2585, Page 430; 35 East Street, known as City of Concord's Assessor's Map P1, Block 7, Lot 6 (Tract #'s 7002-A; 7002-D-1 and 7002-E), acquired by deed recorded at the Merrimack County Registry of Deeds in Book 2585, Page 426; and 13-15 Crescent Street, known as City of Concord Assessor's Map P1, Block 7, Lot 17 (Tract # 7002-H) acquired by deed recorded at the Merrimack County Registry of Deeds in Book 2662, Page 624.

Henceforth, all the above-mentioned parcels of land shall for all purposes be considered a single lot and shall not be sold separately or any other divided interest be conveyed except with the prior approval of the City Planning Board in accordance with its duly adopted subdivision regulations.

Signed this 21<sup>st</sup> day of March, 2007.

CITY OF CONCORD

*Thomas J. Aspell, Jr.*  
Thomas J. Aspell, Jr., City Manager

The above consolidation of lots have been approved by Douglas G. Woodward, Clerk of the City Planning Board, pursuant to RSA 674:39-a as the City Planning Board's designee.

3/21/07  
Date

*Douglas G. Woodward*  
Douglas G. Woodward, Clerk  
City Planning Board  
Duly Authorized

Original: Merrimack County Registry of Deeds/Owner  
Planning, Assessing, Code Enforcement,  
Engineering and Solicitor's Office

TABLE 7 - CONCENTRATIONS OF VOC'S DETECTED IN  
GROUNDWATER SAMPLED 2/26-27/87 AT SIDE  
DIVISION MAIN PLANT, PENACOOK

Monitoring Well No.	Concentration of Volatile Organic Chemical, ppb (1)						
	Trichloro- ethylene	Tetrachloro- ethylene	Toluene	Benzene	Ethyl- benzene	Xylenes	Unknowns
W9	BDL	BDL	BDL	BDL	BDL	BDL	BDL
W10	2	2	BDL	BDL	BDL	BDL	BDL
W12	BDL	BDL	5	4	BDL	4	50
W13	BDL	BDL	BDL	BDL	BDL	BDL	10
W15	BDL	BDL	BDL	BDL	BDL	BDL	20
W16	BDL	BDL	6	100	31	BDL	200
ion t	2	2	1	1	1	1	N/A
laboratory compliance 1	5(2) 4.5(6)	3.5(6)	1000(5) 2000(3)	5(2)	680(3)	440(3) 620(4)	N/A

Notes:

BDL = Below Detection Limit Given for each VOC, ppb

EPA Phase I Recommended Maximum Contaminant Level (RMCL)

EPA Phase II RMCL

New Hampshire Code of Administrative Rules, Part Ws 302.08,  
Lifetime Suggested No Adverse Response Level (SNARL)

New Hampshire Code of Administrative Rules, Part Ws 302.08,  
10-day SNARL

One in  $10^{-6}$  cancer risk level, New Hampshire Code of Administrative  
Rules, Part Ws 302.08

TABLE 1 - CONCENTRATIONS OF VOLATILE ORGANIC CHEMICALS (VOCs) DETECTED IN GROUND WATER  
Environmental Assessment Update  
Former Allied Leather Facility, New Hampshire

VOLATILE ORGANIC CHEMICAL	Concentration (ppb)																
	MW1		MW2		MW3		MW7		MW10		MW12		MW15		MW16		
	2/87	9/91	2/89	9/91	2/87	9/91	2/87	5/87	9/91	2/87	2/87	9/91	2/87	9/91	2/87	9/91	MCL
Benzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Toluene	-	-	670	10	-	-	-	-	-	-	-	-	-	-	-	-	1000
Ethylbenzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
Xylene, total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,000
Trichloroethene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Tetrachloroethene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-	33	-	-	-	-	-	-	-	200
1,2-Dichloroethane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Chloroform	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	100
2-Butanone	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	NA
Acetone	-	-	940	-	-	-	-	-	-	-	-	-	-	-	-	-	NA
TOTAL VOCs	-	-	1710	10	33	-	-	-	12	4	13	-	-	-	137	449	NA
VPH (CA-C14) and Non-HSL VOCs	20	-	70	-	-	-	-	-	-	-	50	-	20	-	200	17001	NA

- NOTES:
- 1) Only detected VOCs reported. Complete laboratory reports included in Appendices.
  - 2) VPH = Volatile Petroleum Hydrocarbons.
  - 3) "-" indicates no VOCs detected above reported laboratory quantification limits.
  - 4) Maximum Contaminant Limits listed in Federal Safe Drinking Water Act and State of New Hampshire Protection of Ground Water Rules.
  - 5) MW10 destroyed and unable to be sampled in September 1991.
  - 6) "NA" indicates no MCL currently exists for the listed chemical.

**TABLE 2 - CONCENTRATIONS OF PRIMARY SAFE DRINKING WATER ACT METALS  
 DETECTED IN GROUND WATER  
 Environmental Assessment Update  
 Former Allied Leather Facility, New Hampshire**

METALS	Concentration (ppb)												MCL			
	MW1		MW2		MW3		MW4		MW8		MW15			MW16		
	2/87	9/91	2/87	9/91	2/87	9/91	2/87	9/91	2/87	9/91	2/87	9/91		2/87	9/91	
Chromium	5	32	590	11	NP	42	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
Barium	.	120	170	.	.	NP	100	NP	NP	NP	280	NP	NP	NP	NP	2,000
Cadmium	NP	NP	.	NP	3	NP	NP	NP	NP	5						

NOTES: 1) Only detected metals reported. Complete laboratory reports included in Appendix B.

2) "-" indicates not detected above reported laboratory quantification limits.

3) Maximum Contaminant Limits listed in Federal Safe Drinking Water Act and State of New Hampshire Protection of Ground Water Rules.

4) "NP" indicates analysis not performed.

5) Chromium concentration recorded for MW8 on 2/87 is hexavalent chromium.

TABLE 6  
 (Page 1 of 2)  
 SUMMARY OF GROUNDWATER ANALYSES  
 Site Investigation Services  
 Turner Allied Leather Facility  
 Penacook, New Hampshire  
 NHDES Site #199101052

Parameter Monitoring Well	4-Jun-98	10-Jun-98	17-Jun-98	24-Jun-98	1-Jul-98	8-Jul-98	15-Jul-98	22-Jul-98	29-Jul-98	5-Aug-98	12-Aug-98	19-Aug-98	26-Aug-98	2-Sep-98	9-Sep-98	16-Sep-98	23-Sep-98	30-Sep-98	7-Oct-98	14-Oct-98	21-Oct-98	28-Oct-98	4-Nov-98	11-Nov-98	18-Nov-98	25-Nov-98	2-Dec-98	9-Dec-98	16-Dec-98	23-Dec-98	30-Dec-98	6-Jan-99	13-Jan-99	20-Jan-99	27-Jan-99	3-Feb-99	10-Feb-99	17-Feb-99	24-Feb-99	3-Mar-99	10-Mar-99	17-Mar-99	24-Mar-99	31-Mar-99	7-Apr-99	14-Apr-99	21-Apr-99	28-Apr-99	5-May-99	12-May-99	19-May-99	26-May-99	2-Jun-99	9-Jun-99	16-Jun-99	23-Jun-99	30-Jun-99	7-Jul-99	14-Jul-99	21-Jul-99	28-Jul-99	4-Aug-99	11-Aug-99	18-Aug-99	25-Aug-99	1-Sep-99	8-Sep-99	15-Sep-99	22-Sep-99	29-Sep-99	6-Oct-99	13-Oct-99	20-Oct-99	27-Oct-99	3-Nov-99	10-Nov-99	17-Nov-99	24-Nov-99	1-Dec-99	8-Dec-99	15-Dec-99	22-Dec-99	29-Dec-99	5-Jan-00	12-Jan-00	19-Jan-00	26-Jan-00	2-Feb-00	9-Feb-00	16-Feb-00	23-Feb-00	2-Mar-00	9-Mar-00	16-Mar-00	23-Mar-00	30-Mar-00	6-Apr-00	13-Apr-00	20-Apr-00	27-Apr-00	4-May-00	11-May-00	18-May-00	25-May-00	1-Jun-00	8-Jun-00	15-Jun-00	22-Jun-00	29-Jun-00	6-Jul-00	13-Jul-00	20-Jul-00	27-Jul-00	3-Aug-00	10-Aug-00	17-Aug-00	24-Aug-00	31-Aug-00	7-Sep-00	14-Sep-00	21-Sep-00	28-Sep-00	5-Oct-00	12-Oct-00	19-Oct-00	26-Oct-00	2-Nov-00	9-Nov-00	16-Nov-00	23-Nov-00	30-Nov-00	7-Dec-00	14-Dec-00	21-Dec-00	28-Dec-00	4-Jan-01	11-Jan-01	18-Jan-01	25-Jan-01	1-Feb-01	8-Feb-01	15-Feb-01	22-Feb-01	1-Mar-01	8-Mar-01	15-Mar-01	22-Mar-01	29-Mar-01	5-Apr-01	12-Apr-01	19-Apr-01	26-Apr-01	3-May-01	10-May-01	17-May-01	24-May-01	31-May-01	7-Jun-01	14-Jun-01	21-Jun-01	28-Jun-01	5-Jul-01	12-Jul-01	19-Jul-01	26-Jul-01	2-Aug-01	9-Aug-01	16-Aug-01	23-Aug-01	30-Aug-01	6-Sep-01	13-Sep-01	20-Sep-01	27-Sep-01	4-Oct-01	11-Oct-01	18-Oct-01	25-Oct-01	1-Nov-01	8-Nov-01	15-Nov-01	22-Nov-01	29-Nov-01	6-Dec-01	13-Dec-01	20-Dec-01	27-Dec-01	3-Jan-02	10-Jan-02	17-Jan-02	24-Jan-02	31-Jan-02	7-Feb-02	14-Feb-02	21-Feb-02	28-Feb-02	6-Mar-02	13-Mar-02	20-Mar-02	27-Mar-02	4-Apr-02	11-Apr-02	18-Apr-02	25-Apr-02	2-May-02	9-May-02	16-May-02	23-May-02	30-May-02	6-Jun-02	13-Jun-02	20-Jun-02	27-Jun-02	4-Jul-02	11-Jul-02	18-Jul-02	25-Jul-02	1-Aug-02	8-Aug-02	15-Aug-02	22-Aug-02	29-Aug-02	5-Sep-02	12-Sep-02	19-Sep-02	26-Sep-02	3-Oct-02	10-Oct-02	17-Oct-02	24-Oct-02	31-Oct-02	7-Nov-02	14-Nov-02	21-Nov-02	28-Nov-02	5-Dec-02	12-Dec-02	19-Dec-02	26-Dec-02	2-Jan-03	9-Jan-03	16-Jan-03	23-Jan-03	30-Jan-03	6-Feb-03	13-Feb-03	20-Feb-03	27-Feb-03	6-Mar-03	13-Mar-03	20-Mar-03	27-Mar-03	4-Apr-03	11-Apr-03	18-Apr-03	25-Apr-03	2-May-03	9-May-03	16-May-03	23-May-03	30-May-03	6-Jun-03	13-Jun-03	20-Jun-03	27-Jun-03	4-Jul-03	11-Jul-03	18-Jul-03	25-Jul-03	1-Aug-03	8-Aug-03	15-Aug-03	22-Aug-03	29-Aug-03	5-Sep-03	12-Sep-03	19-Sep-03	26-Sep-03	3-Oct-03	10-Oct-03	17-Oct-03	24-Oct-03	31-Oct-03	7-Nov-03	14-Nov-03	21-Nov-03	28-Nov-03	5-Dec-03	12-Dec-03	19-Dec-03	26-Dec-03	2-Jan-04	9-Jan-04	16-Jan-04	23-Jan-04	30-Jan-04	6-Feb-04	13-Feb-04	20-Feb-04	27-Feb-04	6-Mar-04	13-Mar-04	20-Mar-04	27-Mar-04	4-Apr-04	11-Apr-04	18-Apr-04	25-Apr-04	2-May-04	9-May-04	16-May-04	23-May-04	30-May-04	6-Jun-04	13-Jun-04	20-Jun-04	27-Jun-04	4-Jul-04	11-Jul-04	18-Jul-04	25-Jul-04	1-Aug-04	8-Aug-04	15-Aug-04	22-Aug-04	29-Aug-04	5-Sep-04	12-Sep-04	19-Sep-04	26-Sep-04	3-Oct-04	10-Oct-04	17-Oct-04	24-Oct-04	31-Oct-04	7-Nov-04	14-Nov-04	21-Nov-04	28-Nov-04	5-Dec-04	12-Dec-04	19-Dec-04	26-Dec-04	2-Jan-05	9-Jan-05	16-Jan-05	23-Jan-05	30-Jan-05	6-Feb-05	13-Feb-05	20-Feb-05	27-Feb-05	6-Mar-05	13-Mar-05	20-Mar-05	27-Mar-05	4-Apr-05	11-Apr-05	18-Apr-05	25-Apr-05	2-May-05	9-May-05	16-May-05	23-May-05	30-May-05	6-Jun-05	13-Jun-05	20-Jun-05	27-Jun-05	4-Jul-05	11-Jul-05	18-Jul-05	25-Jul-05	1-Aug-05	8-Aug-05	15-Aug-05	22-Aug-05	29-Aug-05	5-Sep-05	12-Sep-05	19-Sep-05	26-Sep-05	3-Oct-05	10-Oct-05	17-Oct-05	24-Oct-05	31-Oct-05	7-Nov-05	14-Nov-05	21-Nov-05	28-Nov-05	5-Dec-05	12-Dec-05	19-Dec-05	26-Dec-05	2-Jan-06	9-Jan-06	16-Jan-06	23-Jan-06	30-Jan-06	6-Feb-06	13-Feb-06	20-Feb-06	27-Feb-06	6-Mar-06	13-Mar-06	20-Mar-06	27-Mar-06	4-Apr-06	11-Apr-06	18-Apr-06	25-Apr-06	2-May-06	9-May-06	16-May-06	23-May-06	30-May-06	6-Jun-06	13-Jun-06	20-Jun-06	27-Jun-06	4-Jul-06	11-Jul-06	18-Jul-06	25-Jul-06	1-Aug-06	8-Aug-06	15-Aug-06	22-Aug-06	29-Aug-06	5-Sep-06	12-Sep-06	19-Sep-06	26-Sep-06	3-Oct-06	10-Oct-06	17-Oct-06	24-Oct-06	31-Oct-06	7-Nov-06	14-Nov-06	21-Nov-06	28-Nov-06	5-Dec-06	12-Dec-06	19-Dec-06	26-Dec-06	2-Jan-07	9-Jan-07	16-Jan-07	23-Jan-07	30-Jan-07	6-Feb-07	13-Feb-07	20-Feb-07	27-Feb-07	6-Mar-07	13-Mar-07	20-Mar-07	27-Mar-07	4-Apr-07	11-Apr-07	18-Apr-07	25-Apr-07	2-May-07	9-May-07	16-May-07	23-May-07	30-May-07	6-Jun-07	13-Jun-07	20-Jun-07	27-Jun-07	4-Jul-07	11-Jul-07	18-Jul-07	25-Jul-07	1-Aug-07	8-Aug-07	15-Aug-07	22-Aug-07	29-Aug-07	5-Sep-07	12-Sep-07	19-Sep-07	26-Sep-07	3-Oct-07	10-Oct-07	17-Oct-07	24-Oct-07	31-Oct-07	7-Nov-07	14-Nov-07	21-Nov-07	28-Nov-07	5-Dec-07	12-Dec-07	19-Dec-07	26-Dec-07	2-Jan-08	9-Jan-08	16-Jan-08	23-Jan-08	30-Jan-08	6-Feb-08	13-Feb-08	20-Feb-08	27-Feb-08	6-Mar-08	13-Mar-08	20-Mar-08	27-Mar-08	4-Apr-08	11-Apr-08	18-Apr-08	25-Apr-08	2-May-08	9-May-08	16-May-08	23-May-08	30-May-08	6-Jun-08	13-Jun-08	20-Jun-08	27-Jun-08	4-Jul-08	11-Jul-08	18-Jul-08	25-Jul-08	1-Aug-08	8-Aug-08	15-Aug-08	22-Aug-08	29-Aug-08	5-Sep-08	12-Sep-08	19-Sep-08	26-Sep-08	3-Oct-08	10-Oct-08	17-Oct-08	24-Oct-08	31-Oct-08	7-Nov-08	14-Nov-08	21-Nov-08	28-Nov-08	5-Dec-08	12-Dec-08	19-Dec-08	26-Dec-08	2-Jan-09	9-Jan-09	16-Jan-09	23-Jan-09	30-Jan-09	6-Feb-09	13-Feb-09	20-Feb-09	27-Feb-09	6-Mar-09	13-Mar-09	20-Mar-09	27-Mar-09	4-Apr-09	11-Apr-09	18-Apr-09	25-Apr-09	2-May-09	9-May-09	16-May-09	23-May-09	30-May-09	6-Jun-09	13-Jun-09	20-Jun-09	27-Jun-09	4-Jul-09	11-Jul-09	18-Jul-09	25-Jul-09	1-Aug-09	8-Aug-09	15-Aug-09	22-Aug-09	29-Aug-09	5-Sep-09	12-Sep-09	19-Sep-09	26-Sep-09	3-Oct-09	10-Oct-09	17-Oct-09	24-Oct-09	31-Oct-09	7-Nov-09	14-Nov-09	21-Nov-09	28-Nov-09	5-Dec-09	12-Dec-09	19-Dec-09	26-Dec-09	2-Jan-10	9-Jan-10	16-Jan-10	23-Jan-10	30-Jan-10	6-Feb-10	13-Feb-10	20-Feb-10	27-Feb-10	6-Mar-10	13-Mar-10	20-Mar-10	27-Mar-10	4-Apr-10	11-Apr-10	18-Apr-10	25-Apr-10	2-May-10	9-May-10	16-May-10	23-May-10	30-May-10	6-Jun-10	13-Jun-10	20-Jun-10	27-Jun-10	4-Jul-10	11-Jul-10	18-Jul-10	25-Jul-10	1-Aug-10	8-Aug-10	15-Aug-10	22-Aug-10	29-Aug-10	5-Sep-10	12-Sep-10	19-Sep-10	26-Sep-10	3-Oct-10	10-Oct-10	17-Oct-10	24-Oct-10	31-Oct-10	7-Nov-10	14-Nov-10	21-Nov-10	28-Nov-10	5-Dec-10	12-Dec-10	19-Dec-10	26-Dec-10	2-Jan-11	9-Jan-11	16-Jan-11	23-Jan-11	30-Jan-11	6-Feb-11	13-Feb-11	20-Feb-11	27-Feb-11	6-Mar-11	13-Mar-11	20-Mar-11	27-Mar-11	4-Apr-11	11-Apr-11	18-Apr-11	25-Apr-11	2-May-11	9-May-11	16-May-11	23-May-11	30-May-11	6-Jun-11	13-Jun-11	20-Jun-11	27-Jun-11	4-Jul-11	11-Jul-11	18-Jul-11	25-Jul-11	1-Aug-11	8-Aug-11	15-Aug-11	22-Aug-11	29-Aug-11	5-Sep-11	12-Sep-11	19-Sep-11	26-Sep-11	3-Oct-11	10-Oct-11	17-Oct-11	24-Oct-11	31-Oct-11	7-Nov-11	14-Nov-11	21-Nov-11	28-Nov-11	5-Dec-11	12-Dec-11	19-Dec-11	26-Dec-11	2-Jan-12	9-Jan-12	16-Jan-12	23-Jan-12	30-Jan-12	6-Feb-12	13-Feb-12	20-Feb-12	27-Feb-12	6-Mar-12	13-Mar-12	20-Mar-12	27-Mar-12	4-Apr-12	11-Apr-12	18-Apr-12	25-Apr-12	2-May-12	9-May-12	16-May-12	23-May-12	30-May-12	6-Jun-12	13-Jun-12	20-Jun-12	27-Jun-12	4-Jul-12	11-Jul-12	18-Jul-12	25-Jul-12	1-Aug-12	8-Aug-12	15-Aug-12	22-Aug-12	29-Aug-12	5-Sep-12	12-Sep-12	19-Sep-12	26-Sep-12	3-Oct-12	10-Oct-12	17-Oct-12	24-Oct-12	31-Oct-12	7-Nov-12	14-Nov-12	21-Nov-12	28-Nov-12	5-Dec-12	12-Dec-12	19-Dec-12	26-Dec-12	2-Jan-13	9-Jan-13	16-Jan-13	23-Jan-13	30-Jan-13	6-Feb-13	13-Feb-13	20-Feb-13	27-Feb-13	6-Mar-13	13-Mar-13	20-Mar-13	27-Mar-13	4-Apr-13	11-Apr-13	18-Apr-13	25-Apr-13	2-May-13	9-May-13	16-May-13	23-May-13	30-May-13	6-Jun-13	13-Jun-13	20-Jun-13	27-Jun-13	4-Jul-13	11-Jul-13	18-Jul-13	25-Jul-13	1-Aug-13	8-Aug-13	15-Aug-13	22-Aug-13	29-Aug-13	5-Sep-13	12-Sep-13	19-Sep-13	26-Sep-13	3-Oct-13	10-Oct-13	17-Oct-13	24-Oct-13	31-Oct-13	7-Nov-13	14-Nov-13	21-Nov-13	28-Nov-13	5-Dec-13	12-Dec-13	19-Dec-13	26-Dec-13	2-Jan-14	9-Jan-14	16-Jan-14	23-Jan-14	30-Jan-14	6-Feb-14	13-Feb-14	20-Feb-14	27-Feb-14	6-Mar-14	13-Mar-14	20-Mar-14	27-Mar-14	4-Apr-14	11-Apr-14	18-Apr-14	25-Apr-14	2-May-14	9-May-14	16-May-14	23-May-14	30-May-14	6-Jun-14	13-Jun-14	20-Jun-14	27-Jun-14	4-Jul-14	11-Jul-14	18-Jul-14	25-Jul-14	1-Aug-14	8-Aug-14	15-Aug-14	22-Aug-14	29-Aug-14	5-Sep-14	12-Sep-14	19-Sep-14	26-Sep-14	3-Oct-14	10-Oct-14	17-Oct-14	24-Oct-14	31-Oct-14	7-Nov-14	14-Nov-14	21-Nov-14	28-Nov-14	5-Dec-14	12-Dec-14	19-Dec-14	26-Dec-14	2-Jan-15	9-Jan-15	16-Jan-15	23-Jan-15	30-Jan-15	6-Feb-15	13-Feb-15	20-Feb-15	27-Feb-15	6-Mar-15	13-Mar-15	20-Mar-15	27-Mar-15	4-Apr-15	11-Apr-15	18-Apr-15	25-Apr-15	2-May-15	9-May-15	16-May-15	23-May-15	30-May-15	6-Jun-15	13-Jun-15	20-Jun-15	27-Jun-15	4-Jul-15	11-Jul-15	18-Jul-15	25-Jul-15	1-Aug-15	8-Aug-15	15-Aug-15	22-Aug-15	29-Aug-15	5-Sep-15	12-Sep-15	19-Sep-15	26-Sep-15	3-Oct-15	10-Oct-15	17-Oct-15	24-Oct-15	31-Oct-15	7-Nov-15	14-Nov-15	21-Nov-15	28-Nov-15	5-Dec-15	12-Dec-15	19-Dec-15	26-Dec-15	2-Jan-16	9-Jan-16	16-Jan-16	23-Jan-16	30-Jan-16	6-Feb-16	13-Feb-16	20-Feb-16	27-Feb-16	6-Mar-16	13-Mar-16	20-Mar-16	27-Mar-16	4-Apr-16	11-Apr-16	18-Apr-16	25-Apr-16	2-May-16	9-May-16	16-May-16	23-May-16	30-May-16	6-Jun-16	13-Jun-16	20-Jun-16	27-Jun-16	4-Jul-16	11-Jul-16	18-Jul-16	25-Jul-16	1-Aug-16	8-Aug-16	15-Aug-16	22-Aug-16	29-Aug-16	5-Sep-16	12-Sep-16	19-Sep-16	26-Sep-16	3-Oct-16	10-Oct-16	17-Oct-16	24-Oct-16	31-Oct-16	7-Nov-16	14-Nov-16	21-Nov-16	28-Nov-16	5-Dec-16	12-Dec-16	19-Dec-16	26-Dec-16	2-Jan-17	9-Jan-17	16-Jan-17	23-Jan-17	30-Jan-17	6-Feb-17	13-Feb-17	20-Feb-17	27-Feb-17	6-Mar-17	13-Mar-17	20-Mar-17	27-Mar-17	4-Apr-17	11-Apr-17	18-Apr-17	25-Apr-17	2-May-17	9-May-17	16-May-17	23-May-17	30-May-17	6-Jun-17	13-Jun-17	20-Jun-17	27-Jun-17	4-Jul-17	11-Jul-17	18-Jul-17	25-Jul-17	1-Aug-17	8-Aug-17	15-Aug-17	22-Aug-17	29-Aug-17	5-Sep-17	12-Sep-17	19-Sep-17	26-Sep-17	3-Oct-17	10-Oct-17	17-Oct-17	24-Oct-17	31-Oct-17	7-Nov-17	14-Nov-17	21-Nov-17	28-Nov-17	5-Dec-17	12-Dec-17	19-Dec-17	26-Dec-17	2-Jan-18	9-Jan-18	16-Jan-18	23-Jan-18	30-Jan-18	6-Feb-18	13-Feb-18	20-Feb-18	27-Feb-18	6-Mar-18	13-Mar-18	20-Mar-18	27-Mar-18	4-Apr-18	11-Apr-18	18-Apr-18	25-Apr-18	2-May-18	9-May-18	16-May-18	23-May-18	30-May-18	6-Jun-18	13-Jun-18	20-Jun-18
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TABLE 4  
GROUNDWATER ANALYTICAL DATA  
Adams Auto Body  
(Former Allied Leather Tannery)  
ECS # 02-201782.00

VOCs (ug/l)	AGQS	MW-101R	MW-102R	MW-106	MW-106D	MW-108R	MW-109R
		Sampled May 18, 2004					
Benzene	5	19	3.8	<1	<1	2	<1
Toluene	1,000	7.1	<1	<1	<1	<1	4.6
Ethylbenzene	700	139	5.1	<1	<1	3.2	25.6
Total Xylenes	10,000	252.5	<3	<3	<3	4	195.1
Methyl-tert-butyl-ether	13	<5	<1	<1	<1	<1	9.8
Naphthalene	20	30.7	<1	<1	<1	<1	9
Isopropylbenzene	280	54.6	7.5	<1	<1	2.2	1.6
Cis 1,2 dichloroethene	70	<5	<1	<1	<1	1.4	<1
Trans 1,2 dichloroethene	100	<5	<1	<1	<1	4.1	<1
Trichloroethene	5	<5	1.2	<1	<1	<1	<1
<b>ALKYLBENZENES</b>							
1,3,5-Trimethylbenzene	see below	37.1	<1	<1	<1	<1	15
1,2,4-Trimethylbenzene	see below	385	1	<1	<1	1.3	30.6
n-Propylbenzene	see below	58.8	10.1	<1	<1	2.2	1.9
p-Isopropyltoluene	see below	<5	<1	<1	<1	<1	<1
sec-Butylbenzene	see below	<5	2.4	<1	<1	<1	<1
n-Butylbenzene	see below	5.1	1.8	<1	<1	<1	<1
<b>Total Alkylbenzenes</b>	<b>50</b>	<b>486</b>	<b>15.3</b>	<b>&lt;5</b>	<b>&lt;5</b>	<b>3.5</b>	<b>47.5</b>
<b>PAHs (ug/l)</b>							
Naphthalene	20	9.07	<5	<5	<5	<5	<5
<b>METALS (mg/l)</b>							
Dissolved Chromium	NE	<0.01	<0.01	<0.01	<0.01	<0.01	0.0223
Total Chromium	0.1	1.09	3.06	<0.005	<0.005	0.287	0.0352

Notes: MW-106D indicates duplicate sample of MW-106

<2 - below detection limit of 2 concentration units

NE - Not Established

**BOLD** - Exceeds AGOS Standard

AGOS - Ambient Groundwater Quality Criteria



# GROUNDWATER OBSERVATION WELL REPORT

Project Geohydrologic Study, Allied Leather  
 Location Penacook and Boscawen, NH  
 Client Allied Leather Corporation  
 Contractor Con-Tec, Inc. Driller R. Gilfillan  
 Inspected by R. Mechaber Date 2/11/87  
 Checked by J.F.S. Date 3/4/87

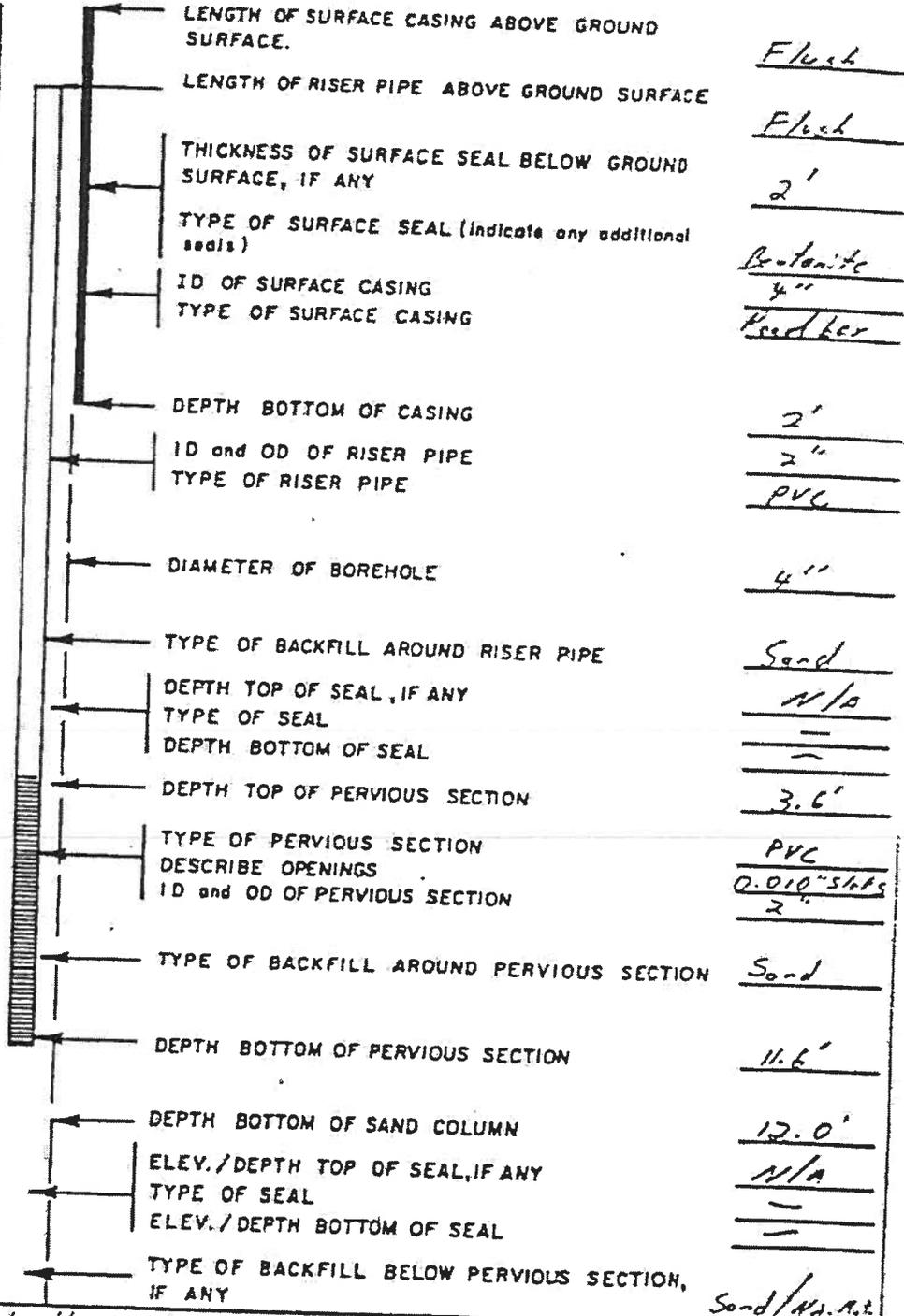
MW9  
 PG. 1 OF 1  
 Boring No. B9  
 Location Twin Falls,  
Penacook, SW  
 Project No. 87020

E.L. 97.89 →  
 SURVEY  
 DATUM TBM = 100.00  
 GROUND  
 ELEVATION 97.9

GENERAL SOIL CONDITIONS (Not to Scale)

*Sand - trace gravel,  
trace fines, non-  
stratified.*

*Refusal @ 12.0'*



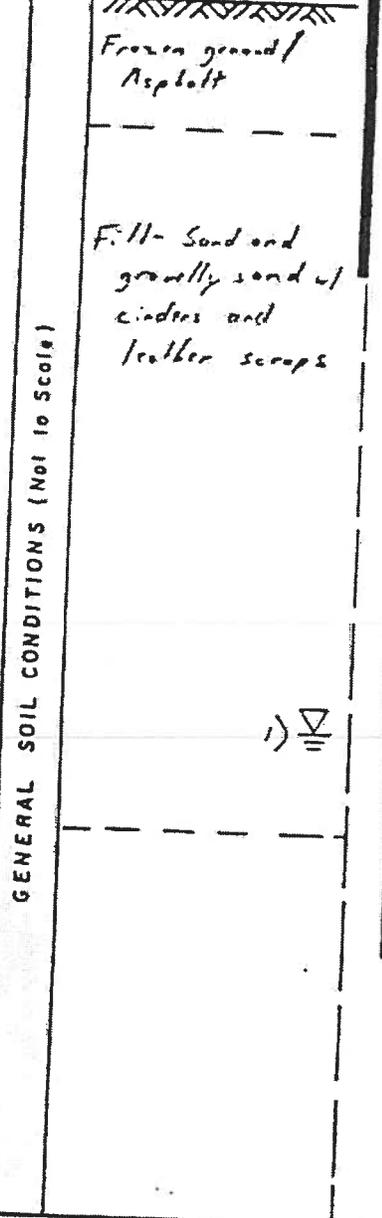
NOTES: 1) G.W. @ 4.5' depth on 2/23/87

# GROUNDWATER OBSERVATION WELL REPORT

Project Geohydrologic Study, Allied Leather  
 Location Penacook and Boscawen, NH  
 Client Allied Leather Corporation  
 Contractor Con-Tec, Inc. Driller R. Gilfillan  
 Inspected by R. Mechaber Date 2/12/87  
 Checked by RLS Date 3/4/87

MW 10  
 PG. 1 OF 1  
 Boring No. B10  
 Location Twin tanks, Penacook, NH  
 Project No. 87020

EL. 97.38 →  
 SURVEY DATUM TBM = 100.00  
 GROUND ELEVATION 97.4



LENGTH OF SURFACE CASING ABOVE GROUND SURFACE.	<u>Flush</u>
LENGTH OF RISER PIPE ABOVE GROUND SURFACE	<u>Flush</u>
THICKNESS OF SURFACE SEAL BELOW GROUND SURFACE, IF ANY	<u>2'</u>
TYPE OF SURFACE SEAL (Indicate any additional seals)	<u>Concrete/Concrete</u>
ID OF SURFACE CASING	<u>4"</u>
TYPE OF SURFACE CASING	<u>Parker</u>
DEPTH BOTTOM OF CASING	<u>2'</u>
ID and OD OF RISER PIPE	<u>2"</u>
TYPE OF RISER PIPE	<u>PVC</u>
DIAMETER OF BOREHOLE	<u>4"</u>
TYPE OF BACKFILL AROUND RISER PIPE	<u>Sand</u>
DEPTH TOP OF SEAL, IF ANY	<u>N/A</u>
TYPE OF SEAL	<u>-</u>
DEPTH BOTTOM OF SEAL	<u>-</u>
DEPTH TOP OF PERVIOUS SECTION	<u>3.0'</u>
TYPE OF PERVIOUS SECTION	<u>PVC</u>
DESCRIBE OPENINGS	<u>0.010' size</u>
ID and OD OF PERVIOUS SECTION	<u>2"</u>
TYPE OF BACKFILL AROUND PERVIOUS SECTION	<u>Sand</u>
DEPTH BOTTOM OF PERVIOUS SECTION	<u>11.0'</u>
DEPTH BOTTOM OF SAND COLUMN	<u>11.6'</u>
ELEV./DEPTH TOP OF SEAL, IF ANY	<u>N/A</u>
TYPE OF SEAL	<u>-</u>
ELEV./DEPTH BOTTOM OF SEAL	<u>-</u>
TYPE OF BACKFILL BELOW PERVIOUS SECTION, IF ANY	<u>Sand</u>

NOTES: 1) GW @ 4.2' depth on 2/13/87

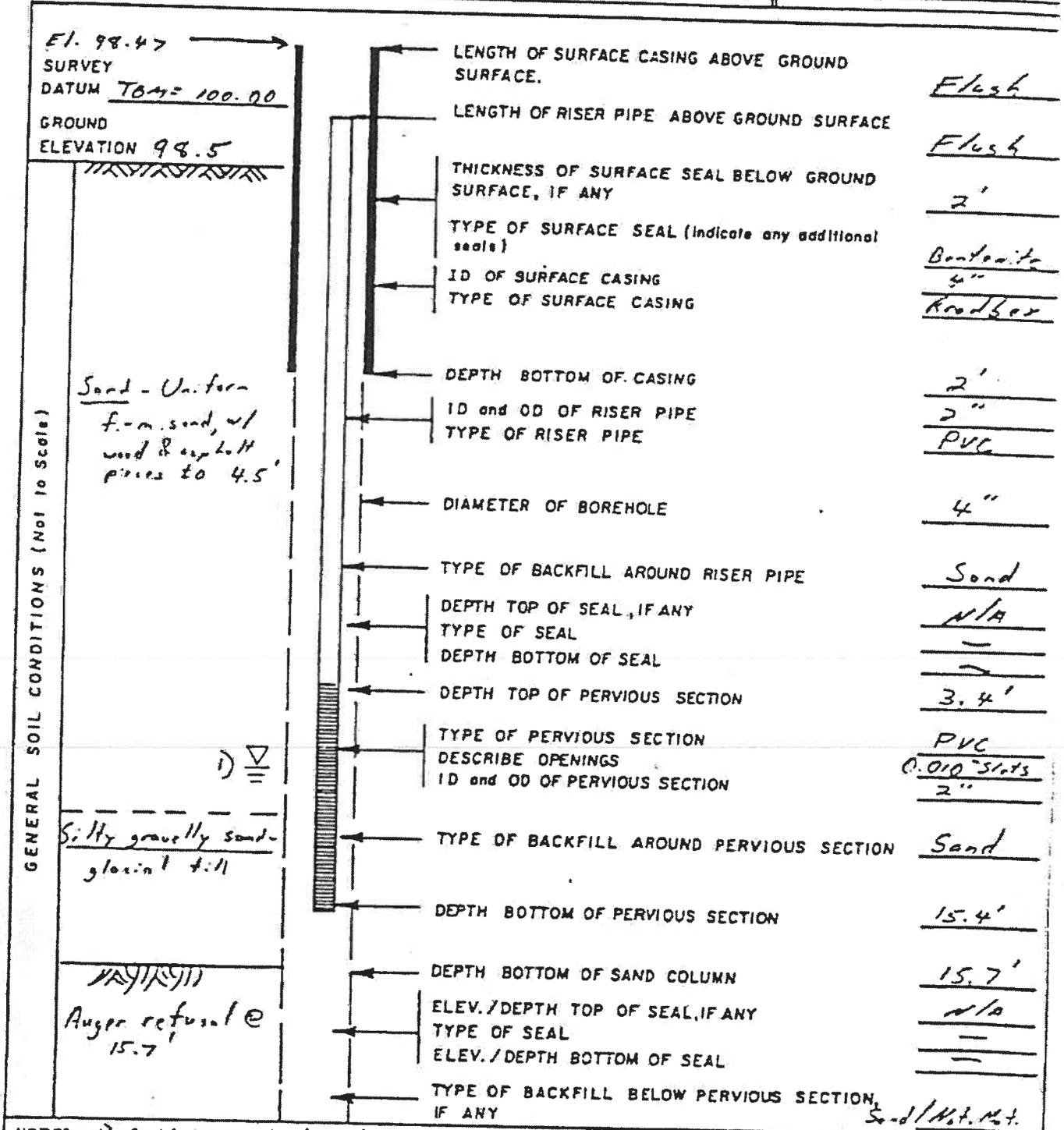
# GROUNDWATER OBSERVATION WELL REPORT

Project Geohydrologic Study, Allied Leather  
 Location Penacook and Boscawen, NH  
 Client Allied Leather Corporation  
 Contractor Con-Tec, Inc. Driller R. Gilfillan  
 Inspected by R. Meagher Date 2/12/87  
 Checked by R.E. Date 3/4/87

MW 12

PG. 1 OF 1

Boring No. B12  
 Location Gasline / S. 1/4  
0.1 Acre, NE  
 Project No. 87020



El. 98.47 →  
 SURVEY  
 DATUM TBM = 100.00  
 GROUND  
 ELEVATION 98.5

GENERAL SOIL CONDITIONS (Not to Scale)

Sand - Uniform  
f. m. sand, w/  
wood & asphalt  
pieces to 4.5'

Silty gravelly sand -  
glacial till

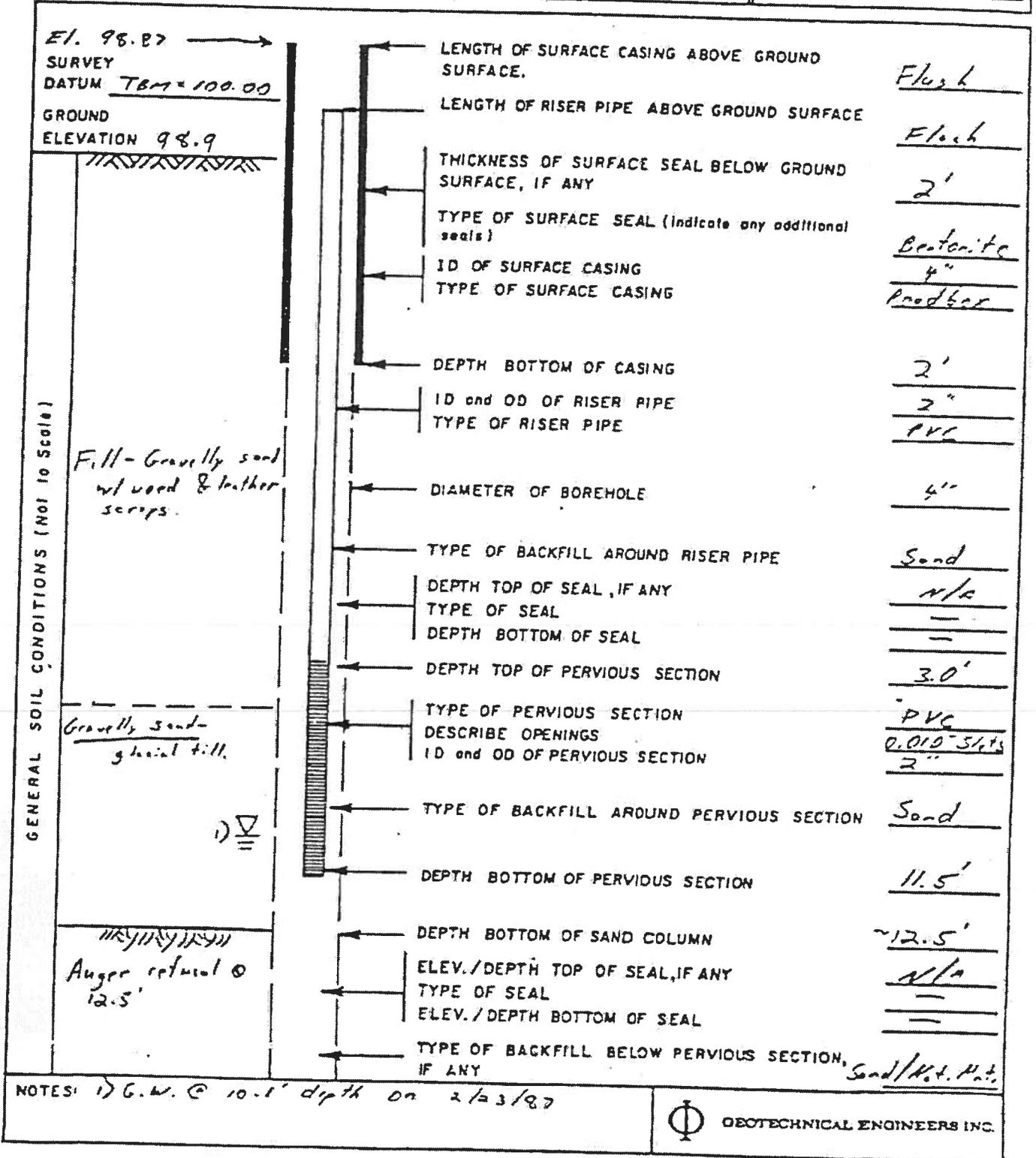
Auger refusal @  
15.7'

NOTES: 1) G.W. @ 6.4' depth on 2/13/87

# GROUNDWATER OBSERVATION WELL REPORT

Project Geohydrologic Study, Allied Leather  
 Location Penacook and Boscawen, NH  
 Client Allied Leather Corporation  
 Contractor Con-Tec, Inc. Driller R. Gilfillan  
 Inspected by R. Mechaber Date 2/13/87  
 Checked by RFS Date 3/4/87

MW13  
 PG. 1 OF 1  
 Boring No. 013  
 Location Waterproofing Building  
 Project No. 87020



NOTES: 1) G.W. @ 10.1' depth on 2/13/87

# GROUNDWATER OBSERVATION WELL REPORT

Project Geohydrologic Study, Allied Leather

Location Penacook and Boscawen, NH

Client Allied Leather Corporation

Contractor Con-Tec, Inc. Driller R. Gilfillan

Inspected by R. Mechaber Date 2/17/87

Checked by REJ Date 3/4/87

MW 15

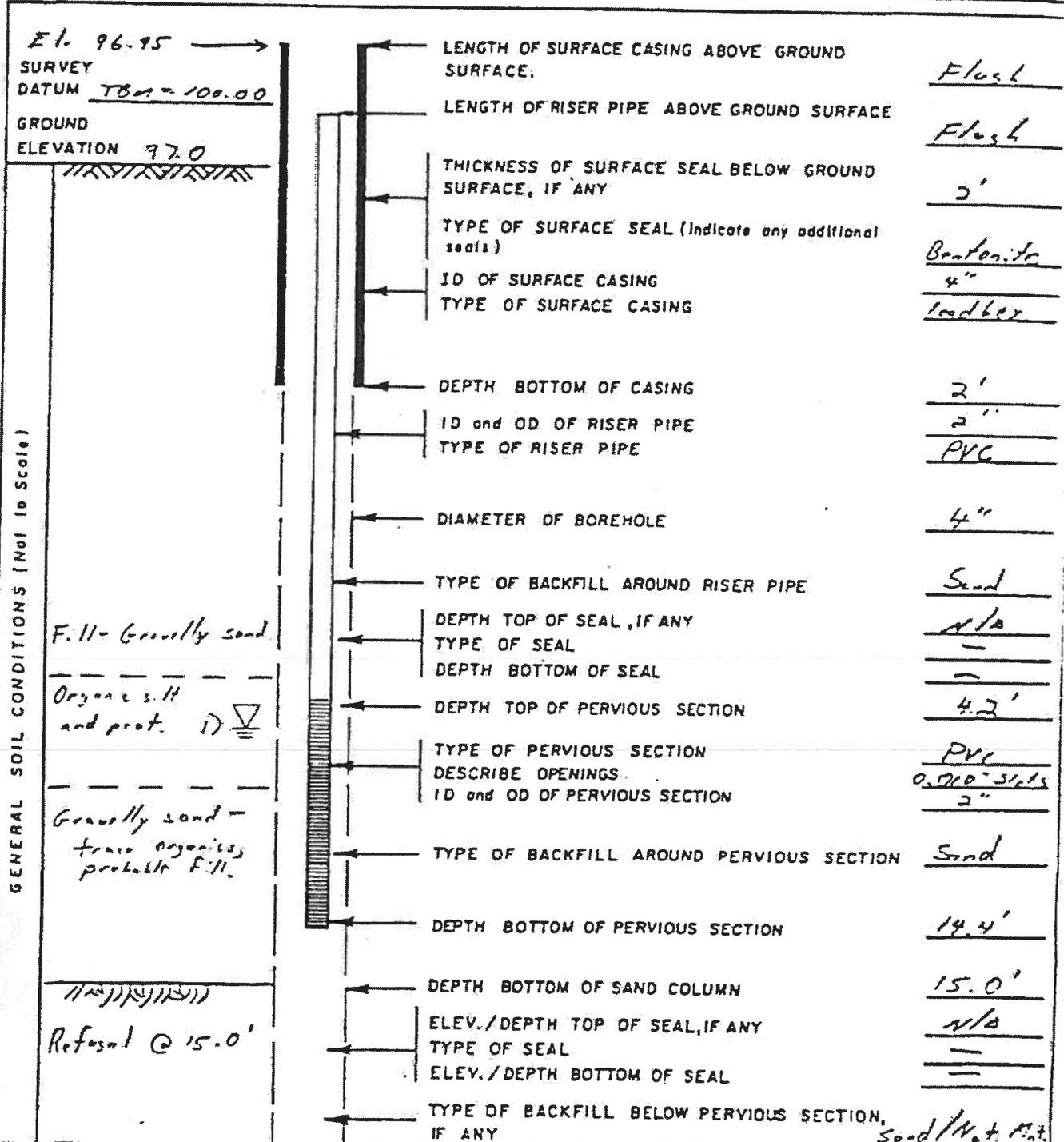
PG. 1 OF 1

Boring No. B15

Location End of

Driveway

Project No. B7020



NOTES: 1) G.W. @ 4.8' depth on 2/23/87

# GROUNDWATER OBSERVATION WELL REPORT

Project Geohydrologic Study, Allied Leather

Location Penacook and Boscaawen, NH

Client Allied Leather Corporation

Contractor Con-Tec, Inc. Driller R. Gilfillan

Inspected by R. Mechaber Date 2/12/87

Checked by FEJ Date 3/4/87

MW 16

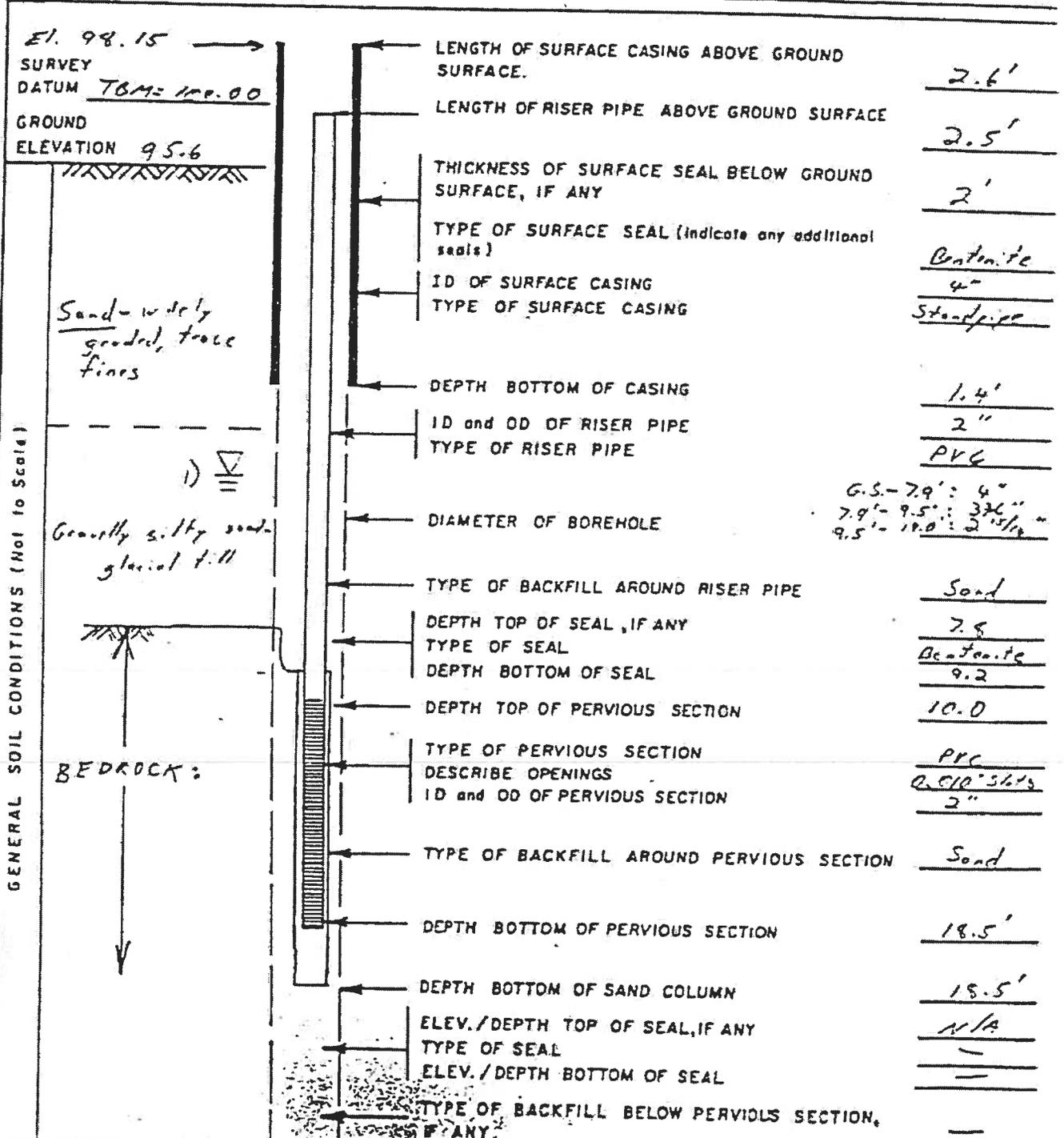
PG. 1 OF 1

Boring No. B16

Location Don construction

area, behind garage

Project No. B7020



NOTES: 1) G.W. @ 5.0' depth on 2/12/87

TEST BORING LOG

CON-TEC., INC.  
 P.O. BOX 1153  
 CONCORD, N.H. 03301  
 603-224-0020

PROJECT ALLIED LEATHER

LOCATION PENACOCK, NH

HOLE NO. MW-13

DATE STARTED 2/13/87 COMPLETED 2/13/87

SURF. ELEV. 91.9

GROUND WATER DEPTH ON COMPLETION - 9.9'

JOB NO. 8712

N-NO OF BLOWS TO DRIVE 2" SAMPLER 6" W/140 LB. WEIGHT FALLING 30"

C.NO. OF BLOWS TO DRIVE CASING 12" W/300 LB. WEIGHT FALLING 24"

SHEET 1 OF 1

BORING MADE WITH HOLLOW STEM AUGER CASING

DEPTH	C.	N.	SPL. NO.	SAMPLE DEPTH	DESCRIPTION OF MATERIAL
5.0'		1-3	1	1'-3'	Brown, dry, loose, fine to medium SAND, little fine to coarse gravel, trace silt, trace leather. <i>fill.</i> 4.2'
		7-11			
		4-3	2	3'-5'	
10.0'		4-9			Brown, moist, medium stiff SILT, little embedded fine to medium sand, little embedded fine to medium gravel, trace wood. (SM) 5.0' <del>12.0'</del>
		14-45	3	5'-7'	
		40-53			
15.0'		44-47	4	10.5'-12'	Rust-brown, moist, very dense, fine to medium SAND, some fine to coarse gravel, trace silt, <i>glacial till</i> (SP) 10.0'
		80			
					Brown-gray, wet, very dense, fine to medium SAND and SILT, some embedded fine to coarse gravel <i>Gravelly sand-glacial till.</i> (SP) AUGER REFUSAL 12.5'
					BOTTOM OF BORING 12.5'
<p>Note: Installed 11.5' of 2" PVC pipe in borehole; bottom 8.5' section is slotted.</p>					

LUN-TEC, INC.  
P.O. BOX 1153  
CONCORD, N.H. 03301  
603-224-0020

PROJECT ALLIED LEATHER

LOCATION PENACOOK, NH

DATE STARTED 2/17/87

COMPLETED 2/17/87

HOLE NO. MW-16

SURF. ELEV. 95.3

GROUND WATER DEPTH ON COMPLETION - 3.6'  
DEPTH AFTER 24 HOURS - 7.6'

JOB NO. 8712

N-NO OF BLOWS TO DRIVE 2" SAMPLER 6" W/140 LB. WEIGHT FALLING 30"

C-NO. OF BLOWS TO DRIVE

CASING 12" W/300 LB. WEIGHT FALLING 24"

SHEET 1 OF 1

BORING MADE WITH 4" CASING

DEPTH	C.	N.	SPL. NO.	SAMPLE DEPTH	DESCRIPTION OF MATERIAL
5.0'		2-4	1	2'-4'	Brown, fine to coarse SAND and fine coarse GRAVEL (No sample taken) 2.0'
		4-5			
10.0'		5-9	2A	4'-4.9'	Gray, wet, loose, fine to medium SAND, trace fine to medium gravel (SW) 4.8' 41EX
		9-18	2B	4.9'-6'	
15.0'					Gray, moist, medium dense SILT, little embedded fine to medium gravel, trace embedded fine to medium sand (Petroleum Odor) (SW) 7.9'
					TOP OF ROCK
20.0'					Drilled with roller bit 7.9' to 9.5'
					Run - 1 9.5' - 10.9' RQD-35% Recovery 1.3' - 93% 39%
					Run - 2 10.9' - 15.8' RQD-57% Recovery 4.8' - 98% 50%
					Run - 3 15.8' - 19' RQD-87% Recovery 3.2' - 100% 87%
					19.0'
					BOTTOM OF BORING 19.0'
					Average fracture spacing overall-7"
					Note: 1. Coring time in rock averaged 3.7 x̄ min/ft.; No water loss. 2. Rock Type = Green-gray, biotite muscovite SCHIST. 3. 2" PVC well installed.

**NOBIS  
ENGINEERING, INC.**

CONCORD · NEW HAMPSHIRE

**PROJECT**

Former Allied Leather Facility - Brownfields

Penacook, New Hampshire

WELL NO. MW-101

SHEET 1 of 1

FILE NO. 59150.05

CHKD. BY TSB

Boring Co. Great Works Test Boring, Inc. Boring Location See Site Sketch  
 Driller Peter Michaud Top of PVC Elev. 305.03 TBM NGVD  
 Engineer Dan Michaud Date Start 5/18/98 Date End 5/18/98

Sampler: Unless otherwise noted, sampler consists of a 2-inch split spoon driven by a 140-lb. hammer free-falling 30-inches. Casing: Unless otherwise noted, casing driven using a 300-lb. hammer falling 24-inches. Casing Size: Other 4-1/4-inch hollow-stem auger	Groundwater Readings (from top of PVC)				
	Date	Time	Depth	Elev.	Stabilization Time
	5/20	13:00	2.4	302.6	48 hours
	6/4	10:00	2.06	303.0	2 weeks

DEPTH (ft)	SAMPLE					SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESC.	WELL INSTALLATION	REMARKS
	No.	PEN/ REC. (in)	DEPTH (ft)	BLOWS/FT	PID (ppm)				
2	S-1	24/18	0-2	3-2	4	Loose, brown fine to coarse SAND, some fine to coarse gravel, trace silt. Moist. No odor.	SAND & GRAVEL (FILL)	Steel Curb box Concrete seal Top of Screen 0.3' BGS Bentonite seal  2" PVC well screen   Filter sand	1
			2-2						
4	S-2	24/6	2-4	3-1	8	Similar to S-1. Wet. No odor.			
			1-5						
6	S-3	24/9	4-6	2-10	1205	Loose, brown fine to coarse SAND, some fine to coarse gravel, some cobbles. Staining. Strong odors.			
			6-2						
8	S-4	24/6	6-8	4-3	3670	Similar to S-3. Staining. Strong odors.	TILL	Bottom of Screen - 10'	2
			2-1						
10	S-5	24/18	8-10	5-17	854	Dense, fine to coarse SAND, some silty clay, some cobbles, fractured rock. Staining. Strong odors.			
			30-40						
12						Bottom of Exploration @ 10'			
14									
16									
18									
20									

REMARKS:

- 1) Groundwater first noted at approximately 2.5 feet.
- 2) Groundwater monitoring well installed to a depth of approximately 10 feet upon completion of the boring.

NOTES:

- 1) Stratification lines represent approximate boundaries between soil types; Actual transitions may be gradual and varied.
- 2) Fluctuations in water levels will occur due to conditions different from those present at the time these measurements were made.
- 3) PID=In-air concentration of total volatile organic compounds (VOCs) as measured with a photoionization detector (PID). Readings less than 1.0 are considered 'Below Detection'.

**NOBIS  
ENGINEERING, INC.**

CONCORD · NEW HAMPSHIRE

**PROJECT**

Former Allied Leather Facility - Brownfields

Penacook, New Hampshire

WELL NO. MW-102

SHEET 1 of 1

FILE NO. 59150.05

CHKD. BY TSB

Boring Co. Great Works Test Boring, Inc. Boring Location See Site Sketch  
 Driller Peter Michaud Top of PVC Elev. 304.72 TBM NGVD  
 Engineer Dan Michaud Date Start 5/18/98 Date End 5/18/98

Sampler. Unless otherwise noted, sampler consists of a 2-inch split spoon driven by a 140-lb. hammer free-falling 30-inches. Casing. Unless otherwise noted, casing driven using a 300-lb hammer falling 24-inches. Casing Size Other 4-1/4-inch hollow-stem auger	Groundwater Readings (from top of PVC)				
	Date	Time	Depth	Elev	Stabilization Time
	5/20	13:00	1.7	303.0	48 hours
	6/4	10:00	1.47	303.3	2 weeks

DEPTH	SAMPLE					SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESC.	WELL INSTALLATION	REMARKS
	No.	PEN-REC. (in)	DEPTH (ft)	BLOWS/ft	PID (ppm)				
2	S-1	24/12	0-2	15-7 12-10	11	Medium dense, dark brown, fine to coarse SAND, some fine to coarse gravel, trace silt. Moist. Slight odor.	SAND & GRAVEL	Steel Curb box Concrete seal Top of Screen 0.3' BGS Benonite seal 2" PVC well screen	1
4	S-2	24/16	2-4	10-13 20-19	4	Similar to S-1. Moist. Slight odor.			
6	S-3	24/6	4-6	18-25 22-52	96	Very dense, dark brown fine to coarse SAND, some cobbles, rock fragments, trace silt. Wet. Strong odor.			
8	S-4	12/12	6-7	40-60	20	Similar to S-3. Wet. Moderate odor.	TILL	Filter sand Bottom of Screen - 6.5'	2
8						Auger refusal @ 7.0'			
10									
12									
14									
16									
18									
20									

**REMARKS:**

- 1) Groundwater first noted at approximately 2 feet.
- 2) Groundwater monitoring well installed to a depth of approximately 6.5 feet upon completion of the boring.

**NOTES:**

- 1) Stratification lines represent approximate boundaries between soil types; Actual transitions may be gradual and varied.
- 2) Fluctuations in water levels will occur due to conditions different from those present at the time these measurements were made.
- 3) PID=in-air concentration of total volatile organic compounds (VOCs) as measured with a photoionization detector (PID).  
Readings less than 1.0 are considered "Below Detection"

**NOBIS ENGINEERING, INC.**

CONCORD · NEW HAMPSHIRE

**PROJECT**

Former Allied Leather Facility - Brownfields

Penacook, New Hampshire

WELL NO. MW-106

SHEET 1 of 1

FILE NO. 59150.05

CHKD. BY TSB

Boring Co. Great Works Test Boring, Inc. Boring Location See Site Sketch  
 Driller Peter Michaud Top of PVC Elev. 306.23 TBM NGVD  
 Engineer Dan Michaud Date Start 5/18/98 Date End 5/18/98

Sampler	Unless otherwise noted, sampler consists of a 2-inch split spoon driven by a 140-lb hammer free-falling 30-inches.	Groundwater Readings (from top of PVC)				
		Date	Time	Depth	Elev	Stabilization Time
Casing	Unless otherwise noted, casing driven using a 300-lb hammer falling 24-inches	5/20	13 00	3 15	303 1	48 hour
		6/4	10 00	3 02	303 2	2 weeks
Casing Size	Other	4-1/4-inch hollow-stem auger				

DEPTH	SAMPLE					SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESC	WELL INSTALLATION	REMARKS
	No	PEN/REC (lb)	DEPTH (ft)	BLOWS/ft	PID (ppm)				
						Asphalt		Steel Curb box Concrete seal	
2	S-1	24/10	1-3	11-14	<1	Medium dense, brown, fine to coarse SAND, some fine to coarse gravel, trace silt. Moist No odor	SAND & GRAVEL	Top of Screen 0.3' BGS Bentonite seal	
4	S-2	24/8	3-5	6-5	<1	Medium dense, gray, fine to coarse SAND, some silty clay, some cobbles. Wet. No odor	TILL	2" PVC well screen	1
				6-13					
6	S-3	24/22	5-7	18-25	<1	Dense, gray, fine to coarse SAND, some silty clay, trace gravel. Wet. No odor		Filter sand	
				22-20					
8	S-4	24/20	7-9	24-24	<1	Very dense, gray, fine to coarse SAND, some silty clay, some cobbles. Wet. No odor			
				26-27					
10	S-5	24/18	9-11	9-18	<1	Similar to S-3. Rock fragments. Wet. No odor.		Bottom of Screen - 10'	2
				26-38					
12						Bottom of Exploration @ 11.0'			
14									
16									
18									
20									

**REMARKS**

- Groundwater first noted at approximately 3 feet.
- Groundwater monitoring well installed to a depth of approximately 10 feet upon completion of the boring.

**NOTES:**

- Stratification lines represent approximate boundaries between soil types; Actual transitions may be gradual and varied.
- Fluctuations in water levels will occur due to conditions different from those present at the time these measurements were made.
- PID= in-air concentration of total volatile organic compounds (VOCs) as measured with a photoionization detector (PID). Readings less than 1.0 are considered 'Below Detection'.

**NOBIS ENGINEERING, INC.**

CONCORD - NEW HAMPSHIRE

**PROJECT**

Former Allied Leather Facility - Brownfields

Penacook, New Hampshire

WELL NO.           MW-108          

SHEET           1 of 1          

FILE NO.           5915005          

CHKD. BY           TSB          

Boring Co.           Great Works Test Boring, Inc.           Boring Location           See Site Sketch            
 Driller           Peter Michaud           Top of PVC Elev.           303.33           TBM           NGVD            
 Engineer           Dan Michaud           Date Start           5/19/98           Date End           5/19/98          

Sampler	Unless otherwise noted, sampler consists of a 2-inch split spoon driven by a 140-lb hammer free-falling 30-inches. Unless otherwise noted, casing driven using a 300-lb hammer falling 24-inches.	Groundwater Readings (from top of PVC)				
		Date	Time	Depth	Elev.	Stabilization Time
Casing:		5/20	13 00	1.15	302.2	24 hours
Casing Size:	Other 4-1/4-inch hollow-stem auger	6/4	10 00	0.82	302.5	2 weeks

DEPTH	SAMPLE					SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESC.	WELL INSTALLATION	REMARKS
	No.	PEW REC (in)	DEPTH (ft)	BLOWS/ft	PID (ppm)				
2	S-1	24/12	0-2	4-7	<1	Medium dense, brown, fine to coarse SAND, some gravel, some silt. Moist. No odor. (Topsoil)	SAND & GRAVEL	Steel Curb box Concrete seal Top of Screen 0.3' BGS Bentonite seal	
4	S-2	24/18	2-4	6-5	3	Medium dense, brown fine to coarse SAND, some gravel, some silt. Wet, no odor.		2" PVC well screen	1
6	S-3	24/12	4-6	18-20	4	Dense, brown, fine to coarse SAND, some gravel, trace silt. Cobbles. Wet, no odor.		Filter sand	
8	S-4	24/24	6-8	45-33	8	Very dense, brown, fine to coarse SAND, some fine to coarse gravel, some cobbles, rock fragments, trace silt. Wet. No odor.			
10	S-5	24/4	8-10	25-27	21	Similar to S-4. Wet. Slight odor.			
12						Bottom of Exploration @ 10'			
14									
16									
18									
20								Bottom of Screen - 9.5'	2

REMARKS:  
 1) Groundwater first noted at approximately 1.2 feet.  
 2) Groundwater monitoring well installed to a depth of approximately 9.5 feet upon completion of the boring.

NOTES:  
 1) Stratification lines represent approximate boundaries between soil types; Actual transitions may be gradual and varied  
 2) Fluctuations in water levels will occur due to conditions different from those present at the time these measurements were made.  
 3) PID=in-air concentration of total volatile organic compounds (VOCs) as measured with a photoionization detector (PID).  
 Readings less than 1.0 are considered 'Below Detection'.

# NOBIS ENGINEERING, INC.

CONCORD - NEW HAMPSHIRE

## PROJECT

Former Allied Leather Facility - Brownfields

Penacook, New Hampshire

WELL NO. MW-108

SHEET 1 of 1

FILE NO. 59150.05

CHKD. BY TSB

Boring Co. Great Works Test Boring, Inc. Boring Location See Site Sketch  
 Driller Peter Michaud Top of PVC Elev. 303.77 TBM NGVD  
 Engineer Dan Michaud Date Start 5/19/98 Date End 5/19/98

Sampler.	Unless otherwise noted, sampler consists of a 2-inch split spoon driven by a 140-lb hammer free-falling 30-inches	Groundwater Readings (from top of PVC)				
		Date	Time	Depth	Elvy	Stabilization Time
Casing	Unless otherwise noted, casing driven using a 300-lb hammer falling 24-inches	5/20	13 00	2.2	301.6	24 hours
Casing Size	Other 4-1/4-inch hollow-stem auger	6/4	10 00	1.82	302.0	2 weeks

DEPTH Feet	SAMPLE					SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESC.	WELL INSTALLATION	REMARKS
	No.	PEN/REC. (in)	DEPTH (ft)	BLOWS/FT	PID (ppm)				
2	S-1	24/18	0-2	4-4	5	Loose, brown, fine to coarse SAND, some fine to coarse gravel, some silt. Moist (Topsoil)	SAND	Steel Curb box Concrete seal Top of Screen 0.3' BGS Bentonite seal	
				3-5					
4	S-2	24/24	2-4	4-2	95	Loose, brown, fine to coarse SAND, some silt, trace gravel. Wet. Black staining (petroleum), moderate odor.	& GRAVEL	2" PVC well screen	1
				2-2					
6	S-3	24/24	4-6	2-3	67	Similar to S-2. Wet. Black staining (petroleum), odors.		Filter sand	
				3-4					
8	S-4	24/24	6-8	20-29	79	Dense, gray, fine to coarse sand, some silty clay. Wet. Slight odor.	TILL		
				23-20					
10	S-5	18/8	8-9.5	10-12	35	Similar to S-4. Wet. Slight odor.		Bottom of Screen - 9'	2
				50/5					
12						Auger refusal @ 9.5'			
14									
16									
18									
20									

### REMARKS

- 1) Groundwater first noted at approximately 2 feet.
- 2) Groundwater monitoring well installed to a depth of approximately 9 feet upon completion of the boring.

### NOTES:

- 1) Stratification lines represent approximate boundaries between soil types; Actual transitions may be gradual and varied.
- 2) Fluctuations in water levels will occur due to conditions different from those present at the time these measurements were made.
- 3) PID=in-air concentration of total volatile organic compounds (VOCs) as measured with a photoionization detector (PID). Readings less than 1.0 are considered 'Below Detection'.

# ECSMarin

722 Route 3A, Suite 3  
Bow, NH 03304

## TEST BORING/MONITORING WELL CONSTRUCTION LOG

<b>PROJECT:</b>	Former Allied Leather Tannery	<b>BORING/WELL #:</b>	ECS-1
<b>LOCATION:</b>	35 Fast Street, Penacook, NH	<b>STARTED:</b>	5/19/2003
<b>CLIENT:</b>	H.L. Turner Group, Inc	<b>COMPLETED:</b>	5/19/2003
<b>PROJECT NO.:</b>	NHA2-075B	<b>INSPECTOR:</b>	J. Noble
<b>CONTRACTOR:</b>	Geosearch	<b>RIG:</b>	Mobile B-59
		<b>DRILLER:</b>	D. Crawford

DRILLING INFORMATION					Well Construction	GROUNDWATER INFORMATION				
TYPE	CASING	SAMPLE	WELL	CORE	Elevation (feet):	Date	Time	Depth	Reference	Elevation
DIAMETER	9"	2" OD	2"	-	Ground: 313.98	1	5/19/2003	B 4)	PVC	305.13
WEIGHT	-	140 lbs	-	-	PVC: 313.54	2	6/7/2003	B 3)	PVC	305.16
FALL	-	30"	-	-		3	6/10/2003	B 4)	PVC	305.11
						4				

Depth (feet)	Sample #	Blows per 6"	Penetration/Recovery	OVM (ppm)	Notes	SAMPLE DESCRIPTION / REMARKS
1.0	S-1	5	24" 11"	2.1		2" Asphalt Gravelly SAND: Yellowish brown, loose, medium to fine SAND, little fine Gravel, little coarse Sand, moist.
2.0		4				Gravelly SAND: Yellowish brown, loose, medium to fine SAND, trace medium to fine Gravel, little coarse Sand, slightly moist.
3.0	S-2	4	24" 16"	2.1		Gravelly SAND: Yellowish brown, very loose, coarse to fine SAND, trace medium to fine Gravel, moist.
4.0		1				Gravelly SAND: Yellowish brown, very loose, coarse to fine SAND, trace coarse to fine Gravel, moist.
5.0	S-3	2	24" 7"	2.1		Boney @ 9.5'
6.0		1		LAB		Sandy GRAVEL, Dark grey, loose, coarse to fine GRAVEL, trace coarse to medium Sand, saturated, cobbles.
7.0	S-4	1	24" 7"	2.0		Very boney @ 12' to 13'
8.0		1		LAB		Auger Refusal at approximately 13 feet below the ground surface. Probable bedrock.
9.0						
10.0	S-5	3	24" 8"	2.1		
11.0		3				
12.0		2				
13.0						
14.0						
15.0						
16.0						
17.0						
18.0						
19.0						
20.0						
21.0						
22.0						
23.0						
24.0						
25.0						

**Well Construction (feet lbs)**

0.0 - 0.5	Cement Surface Seal
1.0 - 3.0	Bentonite Chip Divider Seal
0.25 - 5.0	2" Schedule 40 PVC Well Riser Flush-Threaded w/ O-Ring
3.0 - 3.5	#0 Silica Sand
3.5 - 13.0	#1 Silica Filter Sand
5.0 - 13.0	2" Schedule 40 PVC Well Screen (0.010" Slot)

# ECSMarin

722 Route 3A, Suite 3  
Bow, NH 03304

## TEST BORING/MONITORING WELL CONSTRUCTION LOG

<b>PROJECT:</b>	Former Allied Leather Tannery	<b>BORING/WELL #:</b>	ECS-2
<b>LOCATION:</b>	35 East Street, Penacook, NH	<b>STARTED:</b>	5/19/2003
<b>CLIENT:</b>	H.L. Turner Group, Inc	<b>COMPLETED:</b>	5/19/2003
<b>PROJECT NO.:</b>	NHA2-075H	<b>INSPECTOR:</b>	J. Noble
<b>CONTRACTOR:</b>	Geosearch	<b>RIG:</b>	Mobile B-59
		<b>DRILLER:</b>	D. Crawford

DRILLING INFORMATION					Well Construction	GROUNDWATER INFORMATION					
TYPE	CASING	SAMPLE	WELL	CORE		Date	Time	Depth	Reference	Elevation	
	H5A	Split-Spoon	Sch 40 PVC	-	Elevation (feet):	1	5/19/2003	6'23"	PVC	305.60	
<b>DIAMETER</b>	9"	2" OD	2"	-	Ground:	2	6/3/2003	6'27"	PVC	305.56	
<b>WEIGHT</b>	-	140 lbs	-	-	PVC:	3	6/10/2003	6'30"	PVC	305.47	
<b>FALL</b>	-	30"	-	-		4					

Depth (feet)	Sample #	Blows per 6"	Penetration/ Recovery	DVM (ppm)	Road Box	SAMPLE DESCRIPTION / REMARKS
1.0						2" Asphalt
2.0	S-1	7	24" 12"	2.1		Gravelly/Silty SAND. Olive brown, medium dense, Silty medium to fine SAND, some coarse to fine Gravel, Cobbles, trace coarse Sand, slightly moist
3.0		2				
4.0	S-2	4	24" 9"	2.6		Gravelly/Silty SAND. Olive brown, loose, Silty coarse to fine SAND, some coarse to fine Gravel, Cobbles, trace Silt, slightly moist
5.0		5				
6.0	S-3	11	24" 2"	2.1		Silty SAND & GRAVEL. Dark olive brown, dense, Silty coarse to fine SAND and coarse to fine GRAVEL, Cobbles, trace to little Silt, saturated, some oxidation staining, more Silt than above
7.0		12				
8.0						
9.0						
10.0						
11.0	S-4	1	24" 12"	2.1 LATS		Gravelly SAND & SILT/TILL. Olive brown, very loose, medium(-) to fine(-) SAND, SILT, trace fine GRAVEL, trace coarse Sand, saturated
12.0		1				
13.0						
14.0	S-5	30 3"	3" 3"	2.1		SAND, GRAVEL & SILT/TILL. Olive brown, medium(-) to fine(-) SAND coarse to medium GRAVEL, SILT, saturated
15.0						Auger & Spoon Refusal at approximately 14 feet below the ground surface. Probable bedrock
16.0						
17.0						
18.0						
19.0						
20.0						
21.0						
22.0						
23.0						
24.0						
25.0						

Well Construction (feet lbs)	
0.0 - 0.5	Cement Surface Seal
1.0 - 2.5	Benonite Chip Divider Seal
0.25 - 4.0	2" Schedule 40 PVC Well Riser Flush-Threaded w/ O-Ring
2.5 - 3.0	#0 Silica Sand
3.0 - 14.0	#1 Silica Filter Sand
4.0 - 14.0	2" Schedule 40 PVC Well Screen (0.010" Slot)

# ECSMarin

722 Route 3A, Suite 3  
Bow, NH 03304

## TEST BORING/MONITORING WELL CONSTRUCTION LOG

<b>PROJECT:</b>	Former Allied Leather Tannery	<b>BORING/WELL #:</b>	ECS-3
<b>LOCATION:</b>	35 East Street, Penacook, NH	<b>STARTED:</b>	5/19/2003
<b>CLIENT:</b>	H.L. Turner Group, Inc	<b>COMPLETED:</b>	5/19/2003
<b>PROJECT NO.:</b>	NHA2-075B	<b>INSPECTOR:</b>	J Noble
<b>CONTRACTOR:</b>	Geosearch	<b>RIG:</b>	Mobile B-59
		<b>DRILLER:</b>	D Crawford

DRILLING INFORMATION					Well Construction	GROUNDWATER INFORMATION				
TYPE	CASING	SAMPLE	WELL	CORE	Elevation (feet):	Date	Time	Depth	Reference	Elevation
DIAMETER	4"	2" OD	Sch 40 PVC	-	Ground: 316.13	1	5/19/2003	4.45	PVC	315.43
WEIGHT	-	140 lbs	-	-	PVC: 308.87	2	6/3/2003	4.38	PVC	315.49
FALL	-	30"	-	-		3	6/10/2003	4.48	PVC	315.39
						4				

Depth (feet)	Sample #	Blows per 6"	Penetration/ Recovery	DVM (ppm)	Notes	SAMPLE DESCRIPTION / REMARKS
1.0						2"-3" Asphalt
2.0	S-1	6	24" 7"	10		Gravelly/Silty SAND FILL. Dark olive grey, medium dense, Silty coarse to fine SAND, some coarse to fine Gravel, brick and cement fragments, trace Silt
3.0		4				
4.0	S-2	5	24" 3"	10		Gravelly/Silty SAND FILL. Dark olive grey, very loose, Silty coarse to fine SAND, some coarse to fine Gravel, brick and cement fragments, trace Silt
5.0		3				
6.0	S-3	2	24" 13"	2.1		1/2 Gravelly/Clayey SILT & SAND FILL. Olive brown, very loose, SILT and fine SAND, little medium to fine Gravel, trace to little Clay, saturated
7.0		1				1/2 Gravelly/Clayey SILT & SAND. Black, very loose, SILT and fine SAND, trace fine Gravel, trace to little Clay, possible coal dust, cinders, and/or ash, organic, possible petroleum odor.
8.0						
9.0						
10.0		2				
11.0	S-5	2	15" 15"	7.9 LAB		SILT & SAND. Black, SILT & fine SAND, possible coal dust, cinders, and/or ash, organic odor.
12.0		25 1/2"				Auger Refusal at approximately 11 feet below the ground surface Spoon refusal at 11.25 feet bgs. Probable bedrock
13.0						
14.0						
15.0						
16.0						
17.0						
18.0						
19.0						
20.0						
21.0						
22.0						
23.0						
24.0						
25.0						

Well Construction (feet bgs)	
0.0 - 0.5	Cement Surface Seal
1.0 - 2.0	Bentonite Chip Divider Seal
0.25 - 3.0	2" Schedule 40 PVC Well Riser/Flush-Threaded w O-Ring
2.0 - 2.5	#0 Silica Sand
2.5 - 11.0	#1 Silica Filter Sand
3.0 - 11.0	2" Schedule 40 PVC Well Screen (0.010" Slot)

# ECSMarin

722 Route 3A, Suite 3  
Bow, NH 03304

## TEST BORING/MONITORING WELL CONSTRUCTION LOG

<b>PROJECT:</b>	Former Allied Leather Tannery	<b>BORING/WELL #:</b>	ECS-6
<b>LOCATION:</b>	35 East Street, Penacook, NH	<b>STARTED:</b>	5/19/2003
<b>CLIENT:</b>	H. L. Turner Group, Inc.	<b>COMPLETED:</b>	5/19/2003
<b>PROJECT NO.:</b>	NH1A2-07513	<b>INSPECTOR:</b>	J. Noble
<b>CONTRACTOR:</b>	Geosearch	<b>DRILLER:</b>	D. Crawford
<b>RIG:</b> Mobile B-59			

DRILLING INFORMATION					Well Construction	GROUNDWATER INFORMATION					
TYPE	CASING	SAMPLE	WELL	CORE		Date	Time	Depth	Reference	Elevation	
	HSA	Sple Spoon	Sch 40 PVC	-	Elevation (feet):	1	5/19/2003	2.26	PVC	303.89	
<b>DIAMETER</b>	6"	2" O.D.	2"	-	Ground: 305.37	2	6/3/2003	2.22	PVC	302.67	
<b>WEIGHT</b>	-	140 lbs	-	-	PVC: 365.09	3	6/10/2003	2.12	PVC	302.77	
<b>FALL</b>	-	30"	-	-		4					

Depth (feet)	Sample #	Blows per 6"	Penetration/Recovery	QVBT (ppm)	Road box	SAMPLE DESCRIPTION / REMARKS
1.0						3"-4" Asphalt
2.0	S-1	4	24" / 15"	3.1		SAND. Yellowish brown, loose, coarse to medium SAND.
3.0		5				
4.0	S-2	3	24" / 11"	4.2 LAB		5" SAND & GRAVEL. Yellowish brown, very loose, very coarse to coarse SAND & coarse to fine GRAVEL, saturated.
5.0		1				6" Silty SAND & GRAVEL/TILL. Olive brown, very loose. Silty medium to fine SAND and coarse to fine GRAVEL. Cobbles from 3" to 4"
6.0	S-3	1	4" / 4"	3.6		SILT, SAND & GRAVEL/TILL. Olive brown, SILT, fine SAND and medium to fine GRAVEL.
7.0						Auger refusal at approximately 6 feet below the ground surface
8.0						Spoon refusal at approximately 5.3 feet. Probable bedrock
9.0						
10.0						
11.0						
12.0						
13.0						
14.0						
15.0						
16.0						
17.0						
18.0						
19.0						
20.0						
21.0						
22.0						
23.0						
24.0						
25.0						

Well Construction (feet bgs)	
0.0 - 0.5	Cement Surface Seal
0.5 - 1.0	Bentonite Chip Divider Seal (outside road box)
1.0 - 1.1	2" Schedule 40 PVC Well Riser: Flush-Threaded w/ O-Ring
1.1 - 1.2	#0 Silica Sand
1.2 - 6.0	#1 Silica Filter Sand
6.0 - 5.0	2" Schedule 40 PVC Well Screen (0.010" Slot)

# ECSMarin

722 Route 3A, Suite 3  
Bow, NH 03304

## TEST BORING/MONITORING WELL CONSTRUCTION LOG

<b>PROJECT:</b>	Former Allied Leather Tannery	<b>BORING/WELL #:</b>	ECS-7
<b>LOCATION:</b>	35 East Street, Penacook, NH	<b>STARTED:</b>	5/19/2003
<b>CLIENT:</b>	H.L. Turner Group Inc	<b>COMPLETED:</b>	5/19/2003
<b>PROJECT NO.:</b>	NH1A2-075B	<b>INSPECTOR:</b>	J. Noble
<b>CONTRACTOR:</b>	Geosearch	<b>RIG:</b>	Mobile B-59
		<b>DRILLER:</b>	D. Crawford

DRILLING INFORMATION					Well Construction	GROUNDWATER INFORMATION				
TYPE	CASING	SAMPLE	WELL	CORE		Date	Time	Depth	Reference	Elevation
	HSA	Sph. Spoon	Sch 40 PVC	-	Elevation (feet):	1	5/19/2003	2.13	PVC	310.35
DIAMETER	4"	2" OD	2"	-	Ground:	2	5/19/2003	2.11	PVC	310.37
WEIGHT	-	140 lbs	-	-	PVC:	3	5/19/2003	2.19	PVC	310.24
FALL	-	38"	-	-		4				

Depth (feet)	Sample #	Blows per 6"	Penetration/ Recovery	QVM (ppm)	Road Box	SAMPLE DESCRIPTION / REMARKS
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1.0						4" Asphalt
2.0	S-1	4	24"1"	1.5		Silty SAND & GRAVEL/FILL: Olive brown, loose, coarse to fine SAND & coarse to fine GRAVEL, trace silt
3.0		1				
4.0	S-2	1 12"	24"4"	3.1 LAB		2" Silty SAND & GRAVEL/TILL: Olive brown, very loose, Silty fine SAND & GRAVEL, trace silt, saturated
5.0						2" Organic Material/FILL: Brown leather and/or wood scraps, very loose
6.0	S-3	2	24"6"	3.1 LAB		
7.0		12				Silty SAND & GRAVEL/TILL: Olive brown, Silty, fine SAND and coarse to fine GRAVEL, saturated
8.0						Auger refusal at approximately 7 feet below the ground surface.
9.0						Probable bedrock
10.0						
11.0						

Well Construction (feet bgs)	
0.0 - 0.5	Cement Surface Seal
0.5 - 1.0	Bentonite Chip Divider Seal (outside road box)
0.25 - 2.0	2" Schedule 40 PVC Well Riser/Flush-Threaded w. O-Ring
NI	#1 Silica Sand
0.5 - 7.0	#1 Silica Filter Sand
2.0 - 7.0	2" Schedule 40 PVC Well Screen (1/10" Slot)

# ECSMarin

722 Route 3A, Suite 3  
Bow, NH 03304

## TEST BORING/MONITORING WELL CONSTRUCTION LOG

<b>PROJECT:</b>	Former Allied Leather Tannery	<b>BORING/WELL #:</b>	ECS-9
<b>LOCATION:</b>	35 East Street, Penacook, NH	<b>STARTED:</b>	5/20/2003
<b>CLIENT:</b>	11 L. Turner Group Inc	<b>COMPLETED:</b>	5/26/2003
<b>PROJECT NO.:</b>	NHA2-075B	<b>INSPECTOR:</b>	J. Noble
<b>CONTRACTOR:</b>	Crescent	<b>RIG:</b>	Mobile 15-59
		<b>DRILLER:</b>	D. Crawford

DRILLING INFORMATION					Well Construction	GROUNDWATER INFORMATION				
TYPE	CASING	SAMPLE	WELL	CORE		Date	Time	Depth	Reference	Elevation
	11SA	Split Spoon	Sch 40 PVC	-	Elevation (feet):	1	5/20/2003	2.97	PVC	103.16
<b>DIAMETER</b>	9"	2" OD	2"	-	Ground:	2	6/5/2003	2.95	PVC	103.12
<b>WEIGHT</b>	-	140 lbs	-	-	PVC:	3	6/10/2003	1.06	PVC	103.01
<b>FALL</b>	-	30"	-	-		4				

Depth (feet)	Sample #	Blows per 6"	Penetration/Recovery	QVM (ppm)	Notes	SAMPLE DESCRIPTION / REMARKS
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1.0	S-1	8	24" 13"	0.2		1/2" Asphalt
		24				Silty SAND & GRAVEL FILL. Olive brown, dense, Silty coarse to fine SAND & coarse to fine GRAVEL, little Silt, moist, 4" grey layer in middle
2.0		17				
		19				
3.0	S-2	25	24" 3"	2.3		SAND FILL. Dark olive grey, very dense, very coarse (-) to fine (-) SAND, trace Silt, moist, concrete fragments
		37				
4.0		25				
		22				Oil Auger. Dark Grey and Fuel Oil Odor below 4.5 feet bgs
5.0	S-3	5	24" 4"	67		Silty/Gravelly SAND FILL. Dark grey, medium dense, Silty coarse to fine SAND, trace to little medium to fine Gravel, wood fragments, trace Silt, moist, fuel oil odor. Screen
		6				
6.0		5				
		5				
7.0	S-4	6	24" 13"	4.5		Silty/Gravelly SAND FILL. Dark grey to black, loose, Silty very coarse (-) to fine (-) SAND, little medium to fine Gravel, saturated, fuel oil odor, screen possible NAPL
		4				
8.0		2				
		3				
9.0						
10.0						
11.0	S-5	10	24" 23"	0.0		17" Blow In/Same As Above
		9				
12.0		17				
		23				6" SILT, SAND, & GRAVEL. Olive, medium dense, Silty, fine SAND, coarse to medium GRAVEL, saturated, fuel oil odor
13.0						Auger Refusal at approximately 12 feet below the ground surface
14.0						Probable bedrock.
15.0						
16.0						
17.0						
18.0						
19.0						
20.0						
21.0						
22.0						
23.0						
24.0						
25.0						

Well Construction (feet bgs)	
0.0 - 0.5	Cement Surface Seal
1.0 - 1.5	Bentonite Chip Divider Seal
0.25 - 3.0	2" Schedule 40 PVC Well Riser Flush-Threaded w O-Ring
1.5 - 2.0	#0 Silica Sand
2.0 - 12.0	#1 Silica Filter Sand
3.0 - 12.0	2" Schedule 40 PVC Well Screen (0.010" Slot)

# ECSMarin

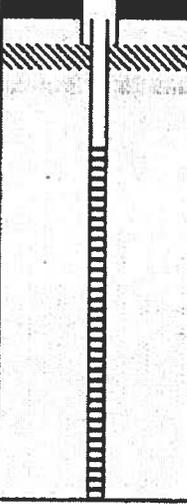
722 Route 3A, Suite J  
Bow, NH 03304

## TEST BORING/MONITORING WELL CONSTRUCTION LOG

<b>PROJECT:</b>	Former Allied Leather Tannery	<b>BORING/WELL #:</b>	ECS-11
<b>LOCATION:</b>	35 East Street, Penacook, NH	<b>STARTED:</b>	5/20/2003
<b>CLIENT:</b>	H.L. Turner Group, Inc	<b>COMPLETED:</b>	5/20/2003
<b>PROJECT NO.:</b>	NHA2-075B	<b>INSPECTOR:</b>	J. Noble
<b>CONTRACTOR:</b>	Geosearch	<b>RIG:</b>	Mobile B-55
		<b>DRILLER:</b>	D. Crawford

DRILLING INFORMATION					Well Construction	GROUNDWATER INFORMATION				
TYPE	CASING	SAMPLE	WELL	CURE		Date	Time	Depth	Reference	Location
DIAMETER	4"	2" ID	2"	-	Elevation (feet):	1	5/20/2003	6.60	PVC	306.17
WEIGHT	-	143 lbs	-	-	Ground:	2	6/5/2003	6.60	PVC	306.17
FALL	-	30"	-	-	PVC:	3	6/10/2003	6.13	PVC	306.04
						4				

Depth (feet)	Sample #	Blows per 6"	Penetration/Recovery	QVM (ppm)	Head Box	SAMPLE DESCRIPTION / REMARKS
--------------	----------	--------------	----------------------	-----------	----------	------------------------------

1.0	S-1	7	24" 14"	13		1/2" Asphalt
2.0		8				7" SAND & GRAVEL. Yellowish brown, medium dense, coarse to fine SAND & coarse to fine GRAVEL
3.0		9				7" Silty/Gravelly SAND. Olive brown, medium dense, Silty medium to fine SAND, some medium to fine Gravel
4.0	S-2	11	24" 19"	19		Silty/Gravelly SAND. Olive brown, Silty fine SAND. Little fine Gravel, little to some Silty, very moist in bottom.
5.0		13				
6.0		17				
7.0	S-3	10	24" 11"	2.5		Silty SAND & GRAVEL. Olive brown, medium dense. Silty coarse to fine SAND & medium to fine GRAVEL. Little Silty, 2" lens of coarse to medium SAND @ 2", bottom 2"-3" dark grey, very moist.
8.0		23 12"				
9.0		4				
10.0	S-4	30	24" 8"	2.5		SILT SAND & GRAVEL/TILL. Grey, dense, SILT, fine SAND, & coarse to medium GRAVEL, saturated.
11.0		26 12"				

12.0						Auger Refusal at approximately 10.5 feet below the ground surface. Probable bedrock.
13.0						
14.0						
15.0						
16.0						
17.0						
18.0						

Well Construction (feet bgs)	
0.0 - 0.5	Cement Surface Seal
1.0 - 1.5	Bentonite Chip Divider Seal
0.25 - 3.0	2" Schedule 40 PVC Well Riser Flush-Threaded w/ O-Ring
1.5 - 2.0	#6 Silica Sand
2.0 - 10.0	#1 Silica Filter Sand
3.0 - 10.0	2" Schedule 40 PVC Well Screen (0.010" Slot)

19.0						
20.0						
21.0						
22.0						
23.0						
24.0						
25.0						



722 Rte 3A Suite 3  
Bow, New Hampshire 03304

SOIL BORING and MONITORING WELL  
INSTALLATION LOG

BORING NO	WW-101R		
DOCUMENT NO			
SHEET	1	of	1

BORING COMPANY	Environmental Compliance Services, Inc	JOB NUMBER	02-201782 00
BORING COMPANY ADDRESS	588 Silver Street, Agawam, MA	PROJECT NAME	Adams Auto Body (Alfred Tannery)
FOREMAN	Niel Allen	PROJECT ADDRESS	13 & 15 Crescent Street Concord, NH
ECS INSPECTOR	Doug Goodin	CLIENT NAME	City of Concord

LOCATION  
**See Site Plan**

GROUNDWATER OBSERVATIONS				CASING	SAMPLER	CORE BARREL
Date	Depth (ft)	Stratification Time	TYPE	Geoprobe		
			INSIDE DIAMETER			Casing Elevation (ft)
			HAMMER WEIGHT			PVC Elevation (ft)
			HAMMER FALL			Surface Elevation (ft)
			NOTES			Date Started
						Date Completed

Depth	Sample Number	Sample Depths (ft)	Penetration/ Recovery (inches)	Blows per 6" penetration	Strata Changes	Soil Descriptions	Soil Boring	Field Testing (ppm)	Notes	
5	SS1	0 to 4	48/24		SAND	2" dark brown organics 22" brown medium to coarse SAND, little gravel, wet		0		
									80	
	SS2	4 to 8'	48/36					SAME as bottom above wet, bottom 8" heavily stained with strong odor		
10					TILL	Top 36" fine SAND, trace silt, wet, heavily stained with strong odor				
	SS3	8 to 12'	48/48			Bottom 12" fine to coarse SAND trace gravel, wet		588	LAB	
15						BOB refusal 12"				
20										
25										
30										
35										
40										

1 Field testing values represent total volatile organic vapors measured in the headspace of sealed soil sample jars or Zip-lock™ bags, with a Thermo OVM 550B photoionization detector (PID). Results reported in parts per million (ppm)

2 Groundwater encountered at approximately 3 feet below grade during drilling

3 1" diameter PVC groundwater monitoring well installed at 12' bgs consisting of 10' slotted (0.010") screen and 1.5' solid riser. Backfilled with graded sand (#2) 12-2' bentonite 2-1' natural fill to top. 2 1/2" cast iron road box cemented in for surface seal

Depth of Groundwater

Natural fill      Well sand  
Well screen      Bentonite seal



722 Rte 3A Suite 3  
Bow, New Hampshire 03304

SOIL BORING and MONITORING WELL  
INSTALLATION LOG

BORING NO	UW - 102R		
DOCUMENT NO			
SHEET	1	OF	1

BORING COMPANY	Environmental Compliance Services, Inc	JOB NUMBER	02-201782 00
BORING COMPANY ADDRESS	588 Silver Street, Agawam MA	PROJECT NAME	Adams Auto Body (Allied Tannery)
FOREMAN	Niel Allen	PROJECT ADDRESS	13 & 15 Crescent Street Concord NH
ECS INSPECTOR	Doug Goodin	CLIENT NAME	City of Concord

LOCATION  
  
**See Site Plan**

GROUNDWATER OBSERVATIONS				CASING	SAMPLER	CORE BARREL	Casing Elevation (ft)	
Date	Depth (ft)	Stabilization Time	TYPE	Geoprobe			PVC Elevation (ft)	
			INSIDE DIAMETER				Surface Elevation (ft)	
			HAMMER WEIGHT				Date Started	5/4/2004
			HAMMER FALL				Date Completed	5/4/2004
			NOTES					

Depth	Sample Number	Sample Depths (ft)	Penetration/ Recovery (inches)	Blows per 6" penetration	Strata Changes	Soil Descriptions	Soil Boring	Field Testing (ppm)	Notes
5	SS1	0 to 4'	48/12		SAND	Top 9" brown fine to medium SAND, organics Bottom 3" broken cobble		0	
	SS2	4 to 8	48/15			Brown-reddish brown fine to medium SAND little gravel, wet, staining, odor		174	LAB
10	SS3	8 to 12	24/24		TILL	Brown fine SAND, trace gravel, trace silt, wet, slight staining and odor		13	
15						BOB refusal 10'			
20									
25									
30									
35									
40									

1 Field testing values represent total volatile organic vapors measured in the headspace of sealed soil sample jars or Zip-lock™ bags with a Thermo OVM 5805 photoionization detector (PID). Results reported in parts per million (ppm)

2 Groundwater encountered at approximately 4 feet below grade during drilling

3 1" diameter PVC groundwater monitoring well installed at 10' bgs consisting of 9" silted (0.010) screen and 1" solid riser. Backfilled with graded sand (#2) 10'-1' bentonite 1'-0.5' 2 1/2" cast iron rod box cemented in for surface seal

▼ Depth of Groundwater

Natural Fill

Well sand

Well screen

Bentonite seal



722 Rte 3A Suite 3  
Bow, New Hampshire 03304

SOIL BORING and MONITORING WELL  
INSTALLATION LOG

BORING NO	MVV - 106R		
DOCUMENT NO.			
SHEET	1	OF	1

LOCATION  
  
**See Site Plan**

BORING COMPANY	Environmental Compliance Services, Inc	JOB NUMBER	02-201762 00
BORING COMPANY ADDRESS	588 Silver Street, Agawam, MA	PROJECT NAME	Adams Auto Body (Allied Tannery)
FOREMAN	Niel Allen	PROJECT ADDRESS	13 & 15 Crescent Street Concord, NH
ECS INSPECTOR	Doug Goodin	CLIENT NAME	City of Concord

GROUNDWATER OBSERVATIONS			CASING	SAMPLER	CORE BARREL	Casing Elevation (ft)	
Date	Depth (ft)	Stabilization Time	Geoprobe				
						PVC Elevation (ft)	
						Surface Elevation (ft)	
						Date Started	5/4/2004
						Date Completed	5/4/2004

Depth	Sample Number	Sample Depths (ft)	Penetration/ Recovery (inches)	Blows per 6" penetration	Strata Changes	Soil Descriptions	Soil Boring	Field Testing (ppm)	Notes
5	SS1	0 to 4	48/20		SAND	Brown fine to coarse SAND little fine gravel moist, slight staining and odor		0	
	SS2	4 to 8	48/24		TILL	Dark brown - brown fine to medium SAND weathered rock, wet, slight odor		0	LAB
10						BOB refusal @			
15									
20									
25									
30									
35									
40									

1 Field testing values represent total volatile organic vapors measured in the headspace of sealed soil sample jars or Zip-lock™ bags, with a Thermo OVM 580B photoionization detector (PID) Results reported in parts per million (ppm)

2 Groundwater encountered at approximately 4 feet below grade during drilling

3 1" diameter PVC groundwater monitoring well installed at 8' bgs consisting of 7' slotted (0.010) screen and 1' sand riser. Backfilled with graded sand (#2) 6-1' bentonite 1-0.5' 2 1/2" cast iron road box cemented in for surface seal.

☒ Depth of Groundwater

Natural Fill      Well sand

Well screen      Bentonite seal



722 Rte 1A Suite 3  
Bow, New Hampshire 03304

SOIL BORING and MONITORING WELL  
INSTALLATION LOG

BORING NO	MVV - 105R		
DOCUMENT NO			
SHEET	1	OF	1

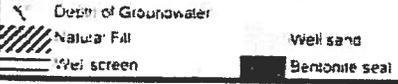
LOCATION  
  
**See Site Plan**

BORING COMPANY	Environmental Compliance Services, Inc	JOB NUMBER	02-201782 00
BORING COMPANY ADDRESS	588 Silver Street, Agawam, MA	PROJECT NAME	Adams Auto Body (Allied Tannery)
FOREMAN	Niel Allen	PROJECT ADDRESS	13 & 15 Crescent Street Concord, NH
ECS INSPECTOR	Doug Goodin	CLIENT NAME	City of Concord

GROUNDWATER OBSERVATIONS			CASING	SAMPLER	CORE BARREL	Casing Elevation (ft.)	PVC Elevation (ft.)	Surface Elevation (ft.)	Date Started	Date Completed
Date	Depth (ft)	Stabilization Time	TYPE	Geoprobe					5/4/2004	5/4/2004
			INSIDE DIAMETER							
			HAMMER WEIGHT							
			HAMMER FALL							
			NOTES							

Depth	Sample Number	Sample Depths (ft)	Penetration/ Recovery (inches)	Blows per 6" penetration	Strata Changes	Soil Descriptions	Soil Boring	Field Testing (ppm)	Notes
5	SS1	0 to 4	4B/24		SAND	Brown fine to medium SAND, organics in top 10", wet, heavy staining and odor		128	LAB
10	SS2	4 to 8	4B/48		TILL	Gray fine to medium SAND, wet, heavy staining and odor			89
10	SS3	8 to 9	12/12			SAME as above		58	
						BOB refusal 9'			
15									
20									
25									
30									
35									
40									

- Field testing values represent total volatile organic vapors measured in the headspace of sealed soil sample jars or Zip-lock™ bags, with a Thermo OVM 5508 photoionization detector (PID). Results reported in parts per million (ppm).
- Groundwater encountered at approximately 3 feet below grade during drilling.
- 1" diameter PVC groundwater monitoring well installed at 5' bgs consisting of 8' slotted (0.010) screen and 1' solid riser. Backfilled with graded sand (#2); 4-1' bentonite 1-0.5' 2 1/2" cast iron road box cemented in for surface seal.





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Bow, New Hampshire 03304

SOIL BORING and MONITORING WELL  
INSTALLATION LOG

BORING NO	MW-16R		
DOCUMENT NO			
SHEET	1	OF	1

LOCATION  
**See Site Plan**

BORING COMPANY	Great Works Pump and Test Boring Inc	JOB NUMBER	02 202174 00
BORING COMPANY ADDRESS	P O Box 491 Rollinsford NH 03869	PROJECT NAME	Allied Tannery
FOREMAN	Wayne Macpherson, Cheryl Dionne	PROJECT ADDRESS	East Street Concord, NH
ECS INSPECTOR	Krystle Day	CLIENT NAME	City of Concord

GROUNDWATER OBSERVATIONS				CASING	SAMPLER	CORE BARREL
Date	Depth (ft)	Stabilization Time	TYPE	SSA	Split-Spoon	
			INSIDE DIAMETER		2"	
			HAMMER WEIGHT		180 lbs	
			HAMMER FALL		30"	
			NOTES			

Casing Elevation (ft)	
PVC Elevation (ft)	
Surface Elevation (ft)	
Date Started	7/12/2005
Date Completed	7/12/2005

Depth	Sample Number	Sample Depths (ft)	Penetration/ Recovery (inches)	Blows per 6" penetration	Strata Changes	Soil Descriptions	Soil Boring	Field Testing (ppm)	Notes
5	SS-1	0 to 2'	24/8	5-8 7-11	SAND	Brown medium SAND, trace fine sand, trace brick pieces		13	
	SS-2	5 to 7'	24/24	20-19 17-14				TILL	12" of brown medium SAND, bottom 12" of brown fine sand and trace silt, trace gravel, wet
10	SS-3	7 to 9'	21/21	18-21 32-50/3"	BEDROCK	fine SAND trace silt, trace gravel, wet with slight odor		10.1	
15									
20									
25						BOB 24			
30									
35									
40									
45									
46									

1 Field testing values represent total volatile organic vapors measured in the headspace of sealed soil sample jars or Zip-lock™ bags, with a Thermo OVM 585E photoionization detector (PID). Results reported in parts per million (ppm).

2 Groundwater encountered at approximately 4 feet below grade during drilling.

3 2" diameter PVC groundwater monitoring well installed at 24' bgs consisting of 10' slotted (D 010) screen and 14' solid riser. Backfilled with graded sand (#2) 24' 12" and 12' 11" bentonite 15-12 and 11-10" natural fill to top. 6" cast iron road box cemented in for surface seal.

▽ Depth of Groundwater

Natural Fill      Well sand

Well screen      Bentonite seal



722 Rte 3A Suite 3  
Bow, New Hampshire 03304

SOIL BORING and MONITORING WELL  
INSTALLATION LOG

BORING NO	MW-107R		
DOCUMENT NO			
SHEET	1	of	1

BORING COMPANY	ECS Drilling	JOB NUMBER	02 202 174 00 14
BORING COMPANY ADDRESS	Agawam, MA	PROJECT NAME	Allied Tannery
FOREMAN	Stanley Werbicki	PROJECT ADDRESS	East Street Concord, NH
ECS INSPECTOR	Doug Goodin, Owen Casidi	CLIENT NAME	City of Concord

LOCATION  
  
**See Site Plan**

GROUNDWATER OBSERVATIONS				CASING	SAMPLER	CORE BARREL	Casing Elevation (ft)	PVC Elevation (ft)	Surface Elevation (ft)	Date Started	Date Completed
Date	Depth (ft)	Stabilization Time	TYPE	4" HSA	Split-Spoon					9/25/2006	9/25/2006
9/25/2006	5.50	immediate	INSIDE DIAMETER		2"						
			HAMMER WEIGHT		180 lbs						
			HAMMER FALL		30"						
			NOTES								

Depth	Sample Number	Sample Depth (ft)	Penetration/ Recovery (inches)	Blows per 6" penetration	Strata Changes	Soil Descriptions	Soil Boring	Field Testing (ppm)	Notes
5						6" gravelly sand over 1" asphalt			
	SS-1	5.7	24/20	5 - 4 3 - 3		Brown, fine to medium SAND, little gravel, trace coal ash, wet at 5.5		6.9	
10									
15						BOB 12			
20									
25									
30									
35									
40									

1 Field testing values represent total volatile organic vapors measured in the headspace of sealed soil sample jars or Zip-lock™ bags, with a Thermo OVM 5905 photoionization detector (PID). Results reported in parts per million (ppm).

2 Groundwater encountered at approximately 5.5 feet below grade during drilling.

3 2" diameter PVC groundwater monitoring well installed at 12' bgs consisting of 10' slotted (0.010) screen and 2' solid riser. Backfilled with graded sand (#2) 12-1' bentonite 1'-grade. 6" cast iron road box cemented in for surface seal.

☼ Depth of Groundwater

/// Natural Fill      Wet sand

— Well screen      ■ Bentonite seal



APPLICATION FOR GROUNDWATER MANAGEMENT PERMIT

A GROUNDWATER MANAGEMENT PERMIT is issued under RSA 485-C:4, VIII and Env-Or 607 to a responsible party to remedy contamination associated with the past discharge of regulated contaminants, and to manage the use of the contaminated groundwater. (Examples include sites contaminated from leaking underground storage tanks, unlined landfills regulated pursuant to RSA 149-M, hazardous waste disposal, etc.)

SUBMIT:

- ONE SIGNED AND COMPLETED APPLICATION (Application shall be prepared and stamped by a professional engineer or professional geologist licensed in the State of New Hampshire.)
SUPPORTING INFORMATION
\$1,000 APPLICATION FEE (In the form of a check payable to the "Treasurer - State of New Hampshire." State and local government, including counties and political subdivisions, are exempt.)

TO:

NHDES Waste Management Division
Site Remediation Programs
Groundwater Management Permit Coordinator
PO Box 95, 29 Hazen Drive
Concord, NH 03302-0095

If you have any questions, contact the Groundwater Management Permit Coordinator at (603) 271-3644.

CERTIFICATION OF NOTICE TO LOCAL TOWN/CITY CLERK:

In order to meet the requirements of Env-Or 607.02 (b)(2), the applicant certifies that on 2007, a copy of this complete permit application was given to the Town/City Clerk of Concord (the town in which the facility requesting a permit is located).

Date: Applicant Signature: [Handwritten Signature]

Applicant Name: (print or type): Thomas J. Aspell, Jr. (City Manager)

I. Site Information

Site Name: Former Allied Leather Tannery DES Site # 198605043
Address: 31 & 35 East Street and 15 Crescent Street, Penacook Village
City: Concord State: NH Zip: 03303
Tax Map: P1, Block 7 Lot Number: 6
Deed Reference: County: Merrimack Book and Page: 2975/1136

II. Site Owner Information

Site Owner Name: City of Concord, NH Phone: (603) 225-8570
Mailing Address: 41 Green Street
City: Concord State: NH Zip: 03301

III. Permit Applicant Information (complete only if different than site owner)

Permit Applicant Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

IV. Contact Person Information (complete only if different than site owner)

Contact Person Name: Matthew Walsh Phone: (603) 225-8570  
 Mailing Address: 41 Green Street  
 City Concord State NH Zip 03301  
 Email mwalsh@onconcord.com Fax # (603) 225-8558

V. Supporting Information

(Check Yes, "Y," if information is enclosed, or Not Applicable, "N/A," if requested information does not apply.)

Y N/A

- |                                     |                                     |     |  |
|-------------------------------------|-------------------------------------|-----|--|
| <input checked="" type="checkbox"/> |                                     | A.  | A summary of the site investigation report;  |
| <input checked="" type="checkbox"/> |                                     | B.  | A summary of the remedial action including remedial performance standards and status of the remedial action performed to date;   |
| <input checked="" type="checkbox"/> |                                     | C.  | A plan scaled to fit onto an 8-1/2 inches by 11 inches or 11 inches by 17 inches sheet, using a tax map as a base, that identifies and locates the following:                      |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 1.  | Proposed Groundwater Management Zone (GMZ) boundary;   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 2.  | Any deeded easements which restrict the use of groundwater within the GMZ;   |
| <input checked="" type="checkbox"/> |                                     | 3.  | Streets within 1,000 feet of the site;   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 4.  | Properties (including tax map and lot) that are within the proposed GMZ or that abut the lots within the proposed GMZ;   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 5.  | Surface water bodies on and within 500 feet of the GMZ; and  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 6.  | Water supply wells, including type of use, within 500 feet of the GMZ.   |
| <input checked="" type="checkbox"/> |                                     | D.  | A site plan drawn to scale on an 8-1/2 inches by 11 inches or 11 inches by 17 inches sheet, that clearly identifies all proposed sampling locations and includes the following:    |
| <input checked="" type="checkbox"/> |                                     | 1.  | A title, a legend, and a true north arrow;   |
| <input checked="" type="checkbox"/> |                                     | 2.  | A graphic scale bar;   |
| <input checked="" type="checkbox"/> |                                     | 3.  | Source from which the site plan was derived;   |
| <input checked="" type="checkbox"/> |                                     | 4.  | The location, elevation and datum of a permanent, recoverable bench;   |
| <input checked="" type="checkbox"/> |                                     | 5.  | Ground surface spot elevations and contours to show surface topography;  |
| <input checked="" type="checkbox"/> |                                     | 6.  | Site's property boundaries;  |
| <input checked="" type="checkbox"/> |                                     | 7.  | Areas of known and possible contaminant sources past or present on the site including but not limited to current or former possible sources listed in Env-Or 606.04 (g)(1) – (12); |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 8.  | Any paved areas;   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 9.  | Monitoring wells, test pits and borings; and;  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 10. | Identification of the following on and within 100 feet of the site:  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | a.  | Surface water bodies;  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | b.  | Water supply wells;  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | c.  | Surface water sampling stations;   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | d.  | Structures and buildings;  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | e.  | Drainage swales; and   |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | f.  | Potential preferential migration pathways including but not limited to underground utilities.  |

- E. Table of current water level measurements found in piezometers and monitoring wells used to develop the groundwater contours;
- F. Table, in a format acceptable to the Department, summarizing all monitoring results for the last five years, if applicable, from existing monitoring points;
- G. An updated list of reports, including copies of those not already available, of any previously-completed investigations and reports pertinent to the site;
- H. A summary table, if more than 3 previously-completed investigations and reports are available, that includes the date of report, consultant's name and scope of the investigation;
- I. A detailed proposal for a water quality monitoring program, including proposed monitoring schedule, parameters to be analyzed and monitoring locations with supporting information justifying the locations, frequency and parameters selected;
- J. Well construction details of existing monitoring wells and elevations of top of wells not previously referenced in the site investigation submitted under Env-Or 606.01;
- K. Documentation that easements and other rights of access necessary to conduct the approved remedial action have been obtained;
- L. Documentation that any necessary easement ownership rights have been obtained to restrict the use of water wells within the groundwater management zone and filed in the registry of deeds; and
- M. A list of properties located within the groundwater management zone including owner's name, mailing address, telephone number, property address, and deed reference including county book and page and tax map and lot number.

VI. Permit Issuance Information

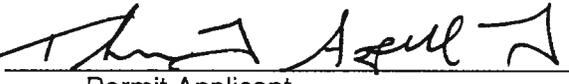
- A. Within 90 days from the receipt of a complete permit application, DES shall issue a permit for a period of five years, subject to renewal, or notify the applicant in writing that the information submitted is not sufficient to make a decision and request additional information from the applicant.
- B. The groundwater management permit shall contain conditions for implementing the remedial action, monitoring its effectiveness and for submitting periodic status reports.
- C. DES shall have the right to enter any permitted facility for the purpose of collecting information, examining records, collecting samples or undertaking other action associated with the permit.
- D. A groundwater discharge permit shall not be required for discharges to groundwater associated with an approved remedial action plan provided a groundwater management permit is issued for the site.
- E. The permittee shall apply for the renewal of the permit 90 days prior to its expiration date.
- F. Within 30 days of the date DES approves the groundwater management permit, the permittee shall provide notice of the permit by certified mail, return receipt requested, to all owners of lots of record within the groundwater management zone. The permittee shall submit documentation of this notification to DES within 60 days of permit issuance.

- G. Within 60 days of DES approval of the permit, the permit holder shall record notice of the permit in the registry of deeds in the chain of title for each lot within the groundwater management zone. A copy of the recorded notice shall be submitted to the Department within 30 days of recordation.
- H. A permittee may request a permit modification or permit termination by submitting a written request to DES, including the reasons for the modification or termination and a table (in a format acceptable to the department) summarizing all monitoring results to date for existing monitoring points. DES shall modify or terminate the permit or deny the request, stating the reasons for denial in writing, within 90 days of the request.
- I. Prior to transfer of a groundwater management permit to a new permittee, the current permittee shall file a written request with DES, on a form provided by the department, for a transfer of the permit to the new permittee. The request shall include a summary of all monitoring results to date in a format acceptable to DES. Within 45 days of receiving a request for transfer, the department shall notify the present permittee and the new permittee of its decision in writing.

VII. Certification

To the best of my knowledge, the data and information that I have submitted to obtain the Groundwater Management Permit from the New Hampshire Department of Environmental Services, are true and correct.

The undersigned certifies that application has been made for all required local, state or federal permits.

Date: \_\_\_\_\_ Signature:  \_\_\_\_\_  
Permit Applicant

Name: (print or type): Thomas J Aspell, Jr. (City Manager)

VIII. Professional Certification

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Professional Engineer or Geologist

Name: (print or type): John M. Noble, P.G.

The New Hampshire licensed professional engineer or geologist who prepared this Permit Application is required to stamp this document in the space provided below.

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No liability is incurred by the State by reason of any approval for Groundwater Management Permits. Approval by the New Hampshire Department of Environmental Services is based on the information supplied by the applicant. No guarantee is intended or implied by reason of any advice given by DES or its staff.