Municipality/Organization: **Town of Boxborough**

EPA NPDES Permit Number: **MA941183/MaDEP**

MaDEP Transmittal Number: **W-03602**

Annual Report Number & Reporting Period: **No. 1: March 03-March 04**

2004 JUN -4 A 12: 25

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Alicia A. Altieri

Title: Town Planner

Telephone #: 978/263-1116 x 112

Email: alicia.altieri@town.boxborough.ma.us

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: Natalie Lashmit

Printed Name: Natalie Lashmit

Title: Town Administrator

Date: April 30, 2004

Part II. Self-Assessment

The Town of Boxborough has completed the required self assessment and has determined that our municipality is in compliance with all permit conditions, except for the following provisions:

Part II.B.6 Employee training component added to the Stormwater Management Plan.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
I.A	Educate the community by distributing an informational brochure to all postal patrons, including businesses informing them that any dumping into town storm drains is illegal.	CC, BOH	Send out general information on Stormwater via the Board of Selectmen's email list. Develop brochure to distribute to businesses.	Sent out Community Bulletin regarding the PBS Stormwater Program to all Boxborough residents on the Board of Selectmen's email list.	Prepare informational pamphlet to be sent directly to all business owners in Boxborough. Put information on the town website.
Revised					
I.B	Distribute an informational brochure to all postal patrons regarding the following items: ▪ function and proper maintenance of private wells and septic systems with any well and septic permit. ▪ the use of detergents, fertilizers, and other potentially harmful practices. ▪ the use of environmentally friendly products.	CC, BOH	Prepare brochure for distribution in 2005.	In progress.	Send brochure in 2005. Put information on town website.

Revised	*Include articles in the BCT Newsletter on maintenance of wells and septic, use of fertilizers and use of environmentally friendly products.*	BCT	Monthly newsletters sent out to all BCT members.		
I.C	Distribute an informational brochure at the town transfer station explaining the hazards of dumping hazardous materials and the importance of participating in Hazardous Waste collections.	CC, BOH, DPW	Prepare brochure.	Distribute brochure at least two weeks prior to the collection date – publicize date in the local newspaper and on town website.	Schedule additional Hazardous Waste collection days.
Revised					
I.D	Promote the use of municipal and conservation lands for environmental education on habitat, wetlands, forest types, etc. Conduct informational walks with wildlife specialists, ecologists and naturalists.	CC, BCT	Schedule conservation and environmental educational programs.	Eyes on Owls interpretative program held at Blanchard Memorial School on March 28, 2004. 375 attendees - $550 in T-shirt and sweatshirt sales.	Plan additional interpretative programs in each permit year.
Revised					
I.E	Implement a stewardship program for conservation lands.	CC, BCT	Develop a volunteer stewardship program in FY04-05	Conducted meeting in March 2004, Liz Markiewicz appointed Stewardship Coordinator. Patch Hill subcommittee formed. May 2004 meeting scheduled – will form other subcommittees.	Appoint stewards for other Conservation Land.
Revised					

I.F	Inform the community that it is illegal to dump yard waste or any other debris on town land or wetlands. Conduct a workshop on how to compost yard waste on their own property.	BOS, BOH, CC, DPW	Draft Bylaw.	Animal Waste Control Bylaw has been included in the ATM 2004 Town Meeting Warrant.	Enforcement of Bylaw if passed.
Revised	*Propose an animal waste control bylaw*	BOH, REC, CC			
I.G	Update Conservation Land and Trail Guide.	CC, GIS Consultant, BCT	Update Trail Guide for distribution at ATM 2004	GIS mapping of trails and marking of trails on Flagg Hill, Patch Hill, Rolling Meadows, Have Not Pond, Wolf Swamp and Steele Farm. Distribute maps at ATM 2004 May.	Install information kiosks at the 6 major conservation lands.

1a. Additions

	Distribute information at ATM regarding the importance of wetlands	CC	Prepare brochure for distribution in ATM Warrant.	An article on the importance of wetlands was included in the ATM 2003 Warrant	
	Prepare a pamphlet on the Town's Conservation Lands	CC	Prepare pamphlet for distribution at ATM 2003	A pamphlet was designed and distributed at ATM 2003	
	Evaluate the Use Schedule of the Zoning Bylaw to further regulate uses that may impact groundwater quality.	PB	Prepare Article for changing Use Schedule so that Automobile fuel/ service stations and repair garages are allowed by special permit instead of by right.	An Article for changing the use schedule has been included in the ATM 2004 Warrant.	Review the Zoning Bylaws for other Uses that may be further regulated.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
2.A	Distribute copy of Draft Stormwater Management Plan to the following Boards/Commissions/ Department Heads for review and comment: Board of Selectmen; Board of Health; Conservation Commission; Board of Appeals; Planning Board; Director of Public Works; and Building Inspector. Incorporate comments into final draft.	PB	Prepare Stormwater Management Plan.	Draft copy of Plan reviewed by all parties, comments incorporated into the final draft of the Stormwater Management Plan.	Make necessary revisions to the Stormwater Management Plan.
Revised					
2.B	Conduct a public hearing on the proposed Stormwater Management Program to get public input on the proposed plan.	PB, BOH, BOS	Schedule public hearing after Annual Town Meeting.	Public hearing has not been scheduled.	Modify Plan action items based on public input.
Revised					

2.C	Assess whether there is an interest in volunteer stream monitoring and coordinate such monitoring with local watershed associations.	CC	Conservation Commission has determined that this should be placed under the Water Resources Committee.		
Revised	*Assess whether the now defunct Water Resources Commission should be reinstated*	BOS, CC, PB, BOH	Put water quality monitoring under the WRC's charge.		
2.D	Continue to follow up on the Water Resources Analysis Final Report, prepared by CDM, December 2002. Involve the public in determining future action items that should be implemented including the testing of unconsolidated deposits in test sites recommended by CDM	BOS, BOH, CC, PB and WRC (if reinstated)	Propose a Warrant article in the ATM Warrant to fund additional testing.	Reported to 2003 Annual Town Meeting the results of the CDM Final Report – Water Resources Analysis, 2002.	Bring additional action items to future ATM.
Revised					

2.E	Identify parcels of land within the Zone II delineations of Acton and Littleton wells which extend into Boxborough for possible future acquisition. Conduct public hearing on possible parcels for protection.	BOS, BOH, CC, PB and WRC (if reinstated)		Areas of Zone II that extend into Boxborough have been identified and mapped on the GIS system.	Begin discussions with neighboring towns for land acquisition in Boxborough to protect neighboring wells.
Revised					

2a. Additions

2.F	Provide public information on the importance of Vernal Pools	CC	Put information on the town website with contact person	Information has been added to the Conservation Commission section of the website.	Certify existing vernal pools with the state.
2.G	Provide public information on the removal and elimination of Invasive, non-native vegetation	CC, BCT	Conduct Workshop	Conservation Commission and BCT have conducted 3 workshops on town conservation land. BCT has donated a hand operated brush cutter.	Schedule at least 3 workshops in each permit year.
2.H	Participate in the state's EOEA Water Assets Study being prepared by Earth Tech.	PB	Provide land use and natural resource data to Earth Tech to use in the Study of Water Supplies in 130 Communities along I-495.	Review study results – provide information on the Study results on the town website.	Implement action items identified in Report.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
3.A	Map the location of all catch basins, manholes, pipes, outfall pipes, and the names of all waters that receive discharges from those outfalls on GIS.	DPW, GIS Consultant	Number of drainage facilities mapped.	All catchbasins have been mapped on GIS. Watershed areas have been mapped on GIS. GIS department is working with EarthTech to share GIS information. Town is also sharing GIS information with Littleton Water Dept. and has offered GIS information to Stoney Brook watershed association and to SuAsCo.	Map drainage manholes, pipes, and outlet pipes.
Revised	*Add aquifer protection overlay district to the town's GIS maps*	GIS Consultant	Convert paper map to GIS.		

3.B	Form a multi-board committee comprised of the Board of Selectmen; the Public Works Department; the Conservation Commission; the Board of Heath; and the Planning Board to perform Dry Weather Screening of Outfalls. Once mapped, all outfalls will be visually inspected to determine any illicit discharge, this will be performed during Years 3 and 5 of the Permit. Such inspections will occur in August/September within 72 hours of a dry period. Screening will include assessment of smell; debris and sedimentation; color, stains, oil; plants; and flows.	BOS, DPW, CC, BOH, PB	Perform inspections.	Scheduled for years 3 through 5.	
Revised					
3.C	Develop a System for removal, clean-up, and mitigation of Illicit Discharges once detected.	PB, BOH	Number of illegal discharges that have been detected.	Scheduled for years 3 and 5.	
Revised					

3.D	Stencil all storm drains with "NO DUMPING" stencils.	DPW	Prepare stencils.	Scheduled for year 2.	Complete by Year 3.
Revised					
3.E	Initiate "Stop Work" orders or Zoning Violation fees for environmental violations	BI	Number of Stop Work Orders or other Zoning Violations issued.	No formal Stop Work Orders issued in Permit Year 1.	Continued enforcement of wetlands/environmental violations.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
4.A	Review existing regulations: Subdivision, Site Plan, Private/Common Driveway, Board of Health and Wetlands to ensure adequate construction site stormwater management provisions.	CC, PB, BOH	Amendments to existing regulations.	Proposed changes to the Site Plan Rules and Regulations are being reviewed by the Planning Board. Including a list of preferred and discouraged landscaping plant materials.	Review and propose changes to the Subdivision Rules and Regulations.
Revised					

4.B	Propose amendments to existing regulations or propose a new Stormwater Control Bylaw where existing regulations are deficient.	CC, PB, BOH	Draft amendments to regulations.	Scheduled for year 3.	
Revised					
4.C	Require the Building Inspector to aggressively enforce regulations and bylaws pertaining to construction run-off.	BOS, BI	Number of enforcement orders issued.	Building Inspector requested the installation of erosion control measure for single-family home construction on Middle Road. Developer also requested to install erosion control at Barteau Lane and Barteau Lane Ext. to Hill Road in the High Pastures subdivision.	Continued enforcement of site construction erosion control measures.

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	**BMP Description**	**Responsible Dept./Person Name**	**Measurable Goal(s)**	**Progress on Goal(s) – Permit Year 1** (Reliance on non-municipal partners indicated, if any)	**Planned Activities – Permit Year 2**
5.A	Review existing regulations: Subdivision, Site Plan, Private/Common Driveway, Board of Health and Wetlands to ensure adequate post-construction stormwater management provisions.	CC, PB, BOH	Adopt or amend procedures.	Road construction, including drainage installation and operation inspections have been performed. Review of drainage system operation reviewed before Houghton Lane public acceptance article was placed on the ATM Warrant.	Same as Year 1.
Revised					

5.B	Propose amendments to existing regulations or propose a new Stormwater Control Bylaw where existing regulations are deficient in addressing post construction stormwater management.	CC, PB, BOH	Adopt or amend procedures.	Reviewed post-construction stormwater procedures with town's consulting engineer.	
Revised					

5a. Additions

5.C	Review existing Well Regulations	BOH	Propose amendments to protect water quality.	Board of Health adopted revised Regulations. New Regulations posted on the town website.	Review other health regulations for updating/modification.

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
6.A	Minimize the use of road salt.	DPW	Miles of public road where a reduced salt mix has been used.	DPW used a reduced salt mix ratio: (25%NaCL to 75% Sand) for FY04.	Continue to use a reduced salt mixture for winter of 2004-2005.
Revised					
6.B	Sweep all streets and town building parking lots annually by June 1st.	DPW	Miles of streets swept.	Spring street sweeping has begun scheduled completion date: June 1, 2004.	Sweep all streets by June 1, 2005.
Revised					
6.C	Clean all town catch basins annually.	DPW	Number of catch basins cleaned	Spring catch basin cleaning has begun scheduled completion date: June 30, 2004: 430 structures cleaned in FY04.	Clean all town catch basins by June 30, 2005.
Revised					
6.D	Pump all building septic systems once every 3-5 years.	DPW	Number of times municipal buildings septic systems pumped.	Town Hall septic system last pumped in June 2000.	Schedule Town Hall septic system pumping in 2005.
Revised					
6.E	Hold a minimum of one hazardous waste day/year.	DPW	Number of hazardous waste days scheduled/year.	Hazardous waste collection is planned for FY05.	Hazardous Waste Day planned in FY06.
Revised					
6.F	Cover salt storage	DPW	Whether salt storage areas have been covered.	The town has installed a salt shed to cover salt storage.	Project complete.
Revised					

6a. Additions

6.G	Test Water Quality in municipal buildings once every two years.	BOH	Number of tests performed.	Town Hall water tested in Dec. 2000. Blanchard Memorial School/ Fire/Police water tested on a regular basis as a Community Water Supply.	Schedule water quality test at Town buildings.
6.H	Municipal employee training.	BOS, DPW	Establish procedures to train municipal employees on using BMPs for all municipal operations	Draft employee training manual.	Adopt employee training procedures
6.I	Monitor 21E sites and their clean up.	BOH	Number of sites monitored.	Continue to monitor all open 21E Sites.	Same as Year 1
6.J	Track failed septic systems on GIS	BOH,GIS Consultant	Number of failed systems mapped.	No failed systems mapped to date.	Begin failed septic system failure mapping on GIS.
6.K	Continue groundwater monitoring program along with Site Plan Approval and continue to monitor groundwater quality reports prepared by the Littleton Water Department. Track results on GIS.	BOH, PB, GIS Consultant	Require groundwater monitoring for all commercial operations requiring Site Plan Approval from the Planning Board.	Commercial Site Plans groundwater monitoring was conducted by Littleton Water Department.	Put Groundwater Monitoring information on GIS.

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) *<<if applicable>>*
(Not Applicable in Boxborough)

See attached water quality information collected in Permit Year 1.

Thorstensen Laboratory, Inc.

CC: Natalie Cushman

66 LITTLETON ROAD, WESTFORD, MA 01886
(978) 692-8395 FAX (978) 692-0023 1-800-649-TEST

Report Number 52449

Report Date: 12/11/00

Client:

Nashoba Associated Boards of Health
30 Central Ave
Ayer MA 01432

Sample Information:
0720
Boxboro BOH
Town Hall

2001 JUN -4 A 12: 26

Sampled by: NBOH Staff Date Received: 12/7/00 Date Sampled: 12/6/00

Certificate of Analysis

Test Parameter	EPA Limit	Results	Units
Total Coliform (P)	0	0	per100ml
Fecal Coliform/ E.coli (P)	0	0	per100ml
Arsenic (P)	0.05	<0.002	mg/L
Calcium	No Limit	71.0	mg/L
Copper (S)	1.3	0.02	mg/L
Iron (S)	0.3	0.09	mg/L
Lead (P)	0.015	<0.001	mg/L
Magnesium	No Limit	12.7	mg/L
Manganese (S)	0.05	0.02	mg/L
Potassium	No Limit	2.4	mg/L
Sodium	See Note	15.1	mg/L
Alkalinity (S)	No Limit	89.5	mg/L
Ammonia-N	No Limit	<0.03	mg/L
Chloride (S)	250	99.5	mg/L
Chlorine	No Limit	<0.02	mg/L
Color (S)	15	0	CPU
Conductivity	No Limit	452	umhos/cm
Fluoride (S)	4.0	0.2	mg/L
Hardness	No Limit	230	mg/L
Nitrate-N (P)	10	1.9	mg/L
Nitrite-N (P)	1	<0.01	mg/L
Odor	3	0	TON
pH (S)	6.5-8.5	7.4	SU
Sulphate (S)	250	16.5	mg/L
Turbidity	Not Spec.	0.62	NTU
Sediment	pos/neg	neg	

Legends:
(P)=Primary EPA Standard, (S)=Secondary EPA Standard, #=Exceeds EPA Limit, TNTC=Too Numerous to Count, *=Background Bacteria Noted, ' = Exceeds Advisory Limit Sodium Advisory Limits, Mass.=20, NH=250.

This water sample as submitted, meets EPA/FHA guidelines for the paramaters listed above. The quality of this water is accepted as POTABLE according to EPA/FHA standards.

RECEIVED DEC 12 2000

12/18/00

Massachusetts Certification # MA048
New Hampshire Certification # 2739

Michael P. Carlson, for
Thorstensen Laboratory Inc.

LITTLETON LWD WATER DEPARTMENT

39 Ayer Road, P. O. Box 2406
Littleton, MA 01460-3406
Telephone (978) 486-3104
Fax (978) 486-8549
www.lelwd.com

Savas C. Danos, General Manager

June 26, 2003

Boxborough Board of Health
Town Hall
29 Middle Road
Boxborough, MA 01719

Re: Boxborough Transfer Station
Semi-annual Groundwater Monitoring

Dear Board Members:

The Littleton Water Department sampled the monitoring well network at the Boxborough Transfer Station on May 14, 2003. Four monitoring wells (BLF-1 through BLF-4) were sampled and analyzed for volatile organic compounds (VOCs) via EPA method 524.2, Safe Drinking Water Act (SDWA) heavy metals and general water quality parameters. A surface water sample (SW-1) was collected from the wetland located on the southern side of the landfill and sampled for VOCs. A copy of the laboratory report is provided in Appendix A and field measurements with groundwater elevations are included in Appendix B.

Arsenic was detected in wells BLF-3 and BLF-4 at concentrations of 0.075 milligrams per liter (mg/L) and 0.08 mg/L, respectively. These concentrations exceed the US EPA standard of 0.05 mg/L. MTBE was detected in the groundwater sample from BLF-3 at a concentration of 0.54 micrograms per liter (ug/L). Toluene was detected in the groundwater sample from BLF-2 at a concentration of 0.54 ug/L. All other tested parameters were found to be within acceptable levels for both groundwater and surface water samples at the site.

The next scheduled sampling event is in the Fall of 2004 and will include general water quality parameters, SDWA heavy metals and VOCs. Please call me at (978) 486-3104 with any questions or concerns.

Sincerely,

Gregory A. Woods, PG.
Environmental Analyst

Enclosures
cc: Paul Anderson, DEP, DSWM
Boxborough Planning Board
Nashoba Associated Boards of Health

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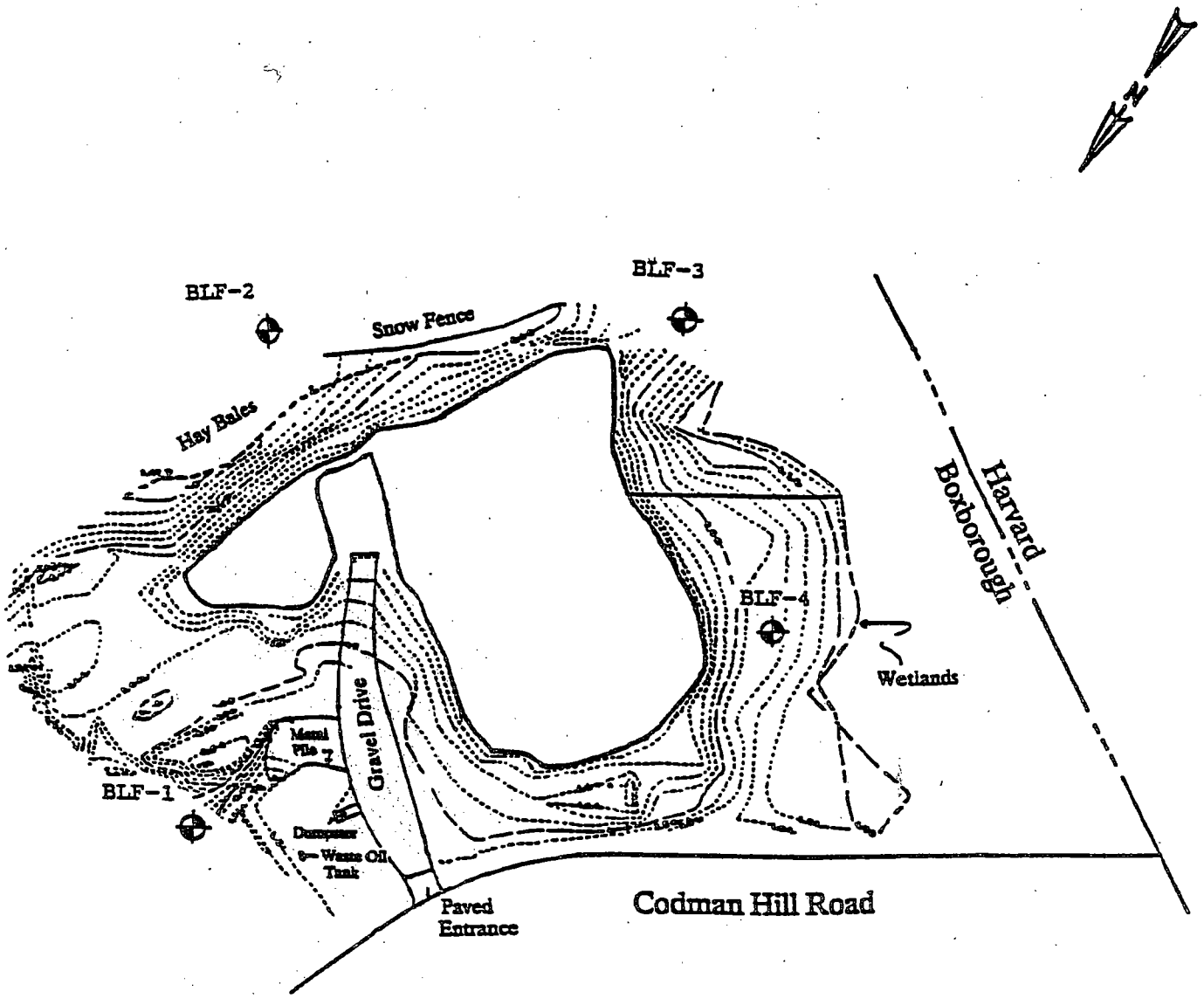

LEGEND:

MONITORING WELL

(Figure not to scale)

Monitoring Well Network
Boxborough Landfill/Transfer Station

LITTLETON
LWD
WATER DEPARTMENT

39 Ayer Road, P. O. Box 2406
Littleton, MA 01460-3406
Telephone (978) 486-3104
Fax (978) 486-8549
www.lelwd.com

Savas C. Danos, General Manager

June 26, 2003

Mr. Charles Nasser
National Technical Systems
1146 Massachusetts Avenue
Boxboro, MA 01719

Re: Groundwater Monitoring Program

Dear Mr. Nasser:

In compliance with the Town of Boxborough's Zoning Bylaws and the occupancy permit issued to this facility, the Littleton Water Department sampled the monitoring well network surrounding NTS on May 9, 2003. Four monitoring wells (NTS-1 through NTS-4) were sampled and analyzed for volatile organic compounds (VOCs) via EPA method 524.2, Safe Drinking Water Act (SDWA) heavy metals and general water quality parameters. The cooling tower effluent was tested for SDWA heavy metals. A copy of the laboratory report is provided in Appendix A.

Nitrate levels were low across the site and no VOC's were detected. Groundwater samples from monitoring well NTS-2 exhibited elevated concentrations of sodium and chloride, which is likely the result of road salt on the driveway and Massachusetts Avenue. All other groundwater quality parameters measured remain at acceptable levels. No SDWA metals were detected in the cooling tower effluent.

The next sampling event at this site will take place in the spring of 2004 and will include general water quality parameters and VOCs. Please call me at (978) 486-3104 with any questions or concerns and again, we thank you for your continued cooperation.

Sincerely,

Gregory A. Woods

Gregory A. Woods, PG.
Environmental Analyst

Enclosures

cc: Boxborough Board of Health
Boxborough Planning Board
Nashoba Associated Boards of Health

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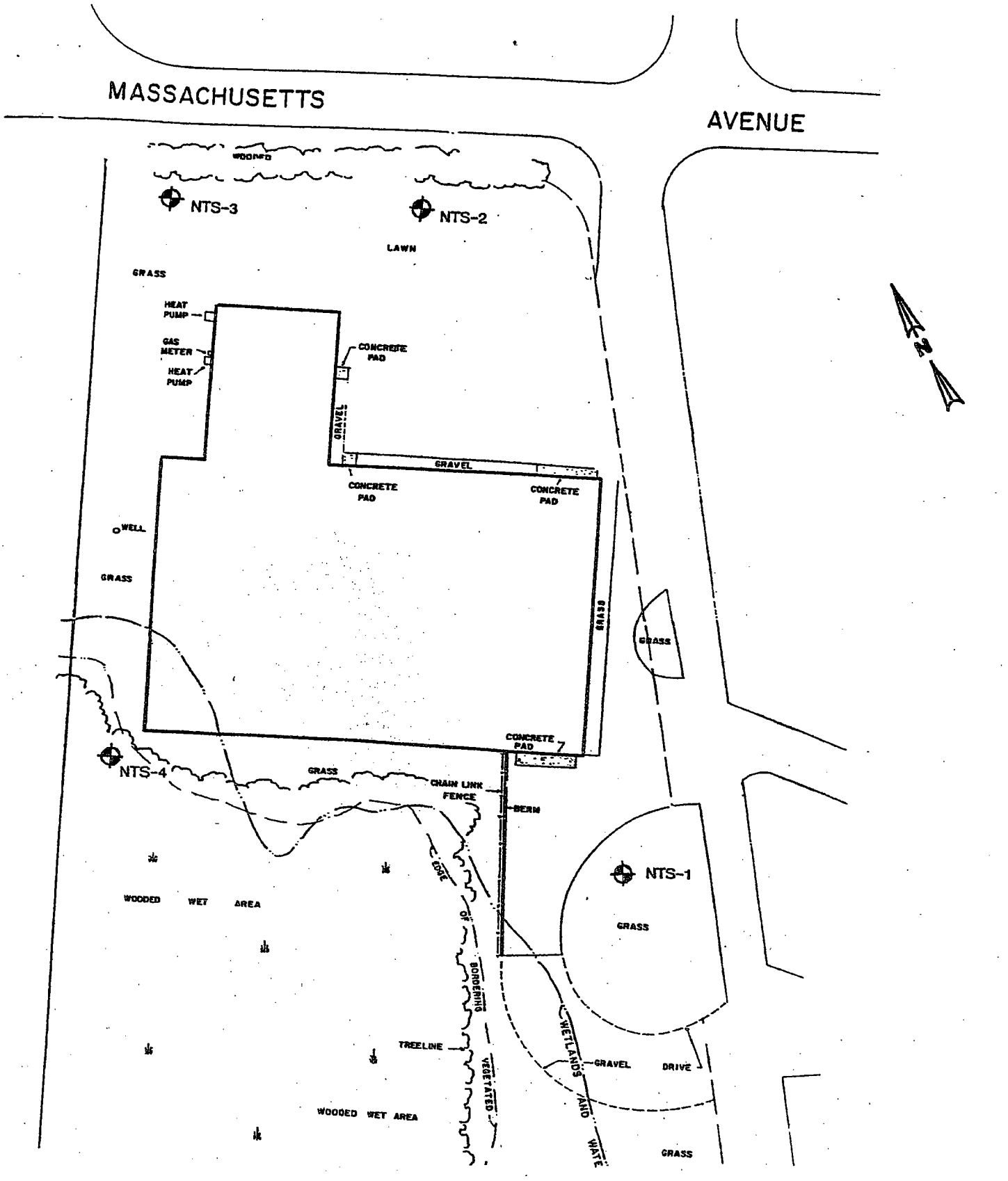

LEGEND:

Monitoring Well

(Figure not to scale)

National Technical Systems
Ground-Water Monitoring Well Network

LITTLETON
LWD
WATER DEPARTMENT

39 Ayer Road, P. O. Box 2406
Littleton, MA 01460-3406
Telephone (978) 486-3104
Fax (978) 486-8549
www.lelwd.com

Savas C. Danos, General Manager

June 25, 2003

Mr. Greg Sullivan
Winstanley & Associates
150 Baker Avenue, Suite #303
Concord, Massachusetts 01742

Re: Groundwater Monitoring Program - 70 Codman Hill Road

Dear Mr. Sullivan:

In compliance with the Town of Boxborough's Zoning Bylaws and the special permit granted to 70 Codman Hill Road, the Littleton Water Department sampled the two monitoring wells on this property on May 12, 2003. Monitoring wells: 70CH-1 and 70CH-2 were sampled and analyzed for volatile organic compounds (VOCs) via EPA method 524.2, Safe Drinking Water Act metals and general water quality parameters. A copy of the laboratory report is provided in Appendix A.

Elevated nitrate levels were detected in monitoring well 70CH-1 at a concentration of 20 parts per million (ppm). This concentration is over twice the allowable level of 10 ppm. Nitrate concentrations have been detected in this well at, or above, the 20 ppm level since 1999. A trace amount of VOCs was identified in 70CH-2. All other groundwater quality parameters measured remain at acceptable levels.

The next scheduled sampling event for this facility is the Spring of 2004 and will include VOCs and general water quality parameters. Thank you again for your continued participation in this important program. Please call this office at (978) 486-3104, with any questions or comment.

Sincerely,

Gregory A. Woods

Gregory A. Woods, PG.
Environmental Analyst

Enclosures

cc: Boxborough Board of Health
Boxborough Planning Board
Nashoba Associated Boards of Health

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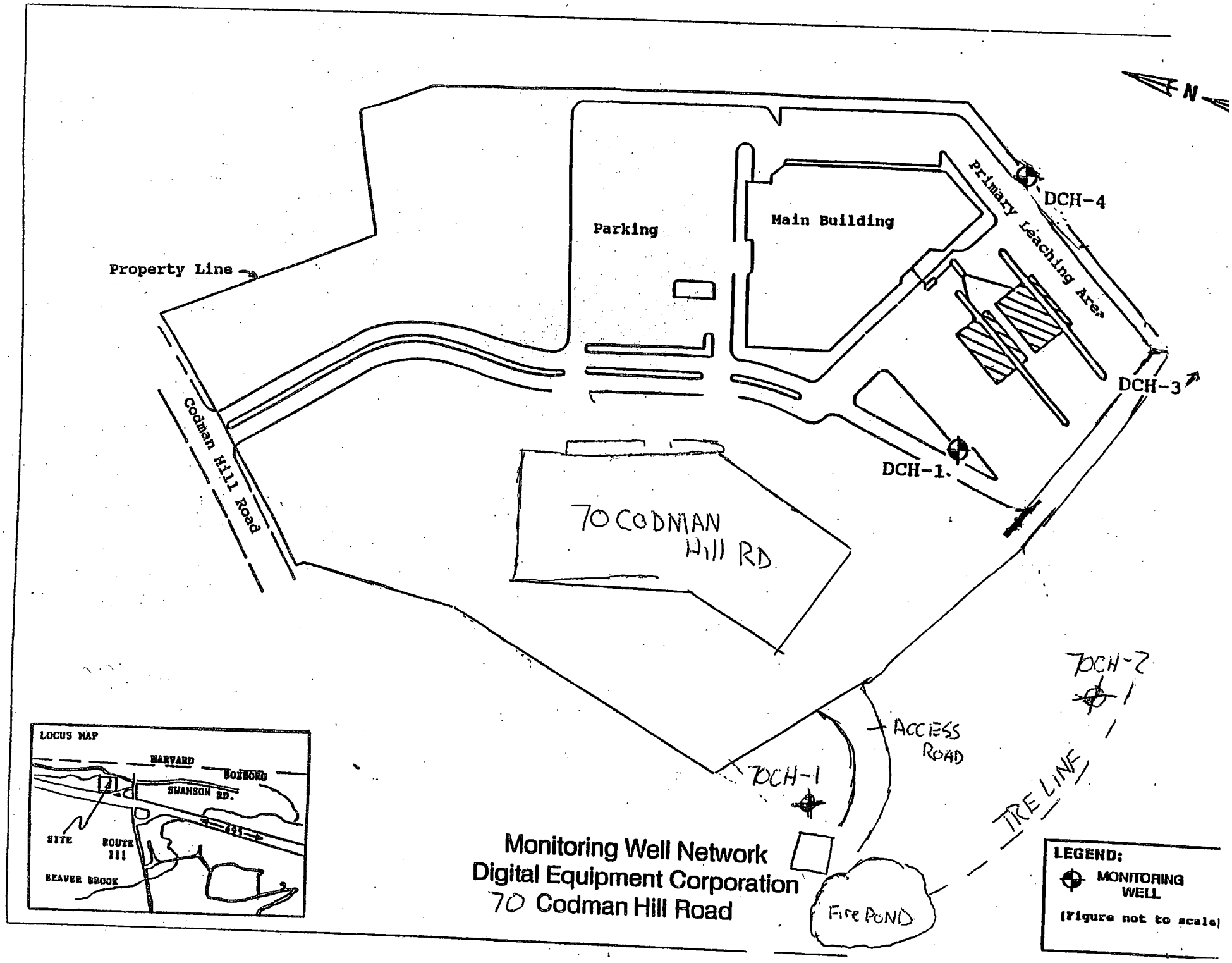

Monitoring Well Network
Digital Equipment Corporation
70 Codman Hill Road

LITTLETON LWD WATER DEPARTMENT

39 Ayer Road, P. O. Box 2406
Littleton, MA 01460-3406
Telephone (978) 486-3104
Fax (978) 486-8549
www.lelwd.com

Savas C. Danos, General Manager

June 25, 2003

Mr. Mike Cheney
Berkeley Management
100 Ames Pond Drive
Tewksbury, MA 01876

Re: Groundwater Monitoring Program, 330 Codman Hill Road

Dear Mr. Cheney:

In compliance with the Town of Boxborough's Zoning Bylaws and the groundwater monitoring program established for this facility, the Littleton Water Department sampled the monitoring well network at 330 Codman Hill Road on May 12, 2003. Monitoring wells CHRT-1, CHRT-2, CHRT-3 and CHRT-4 were sampled and analyzed for volatile organic compounds (VOCs) via EPA method 524.2, Safe Drinking Water Act metals and general water quality parameters. A copy of the laboratory report is provided in Appendix A

Nitrate levels were again very low across the site and no VOCs were identified in any of the wells. Sodium levels were elevated in wells CHRT-3 and CHRT-4 and most likely due to nearby road salting activities.

The groundwater-sampling program for this facility remains on an annual schedule. The next sampling event will be conducted in the Spring of 2004 and will include VOCs and general water quality parameters. Thank you for your continued cooperation with this important program; please call me at (978) 486-3104 with any questions or concerns.

Sincerely,

Gregory A. Woods

Gregory A. Woods, PG.
Environmental Analyst

Enclosures
cc: Robert King, Berkley Investments
Boxborough Board of Health
Boxborough Planning Board
Nashoba Associated Boards of Health

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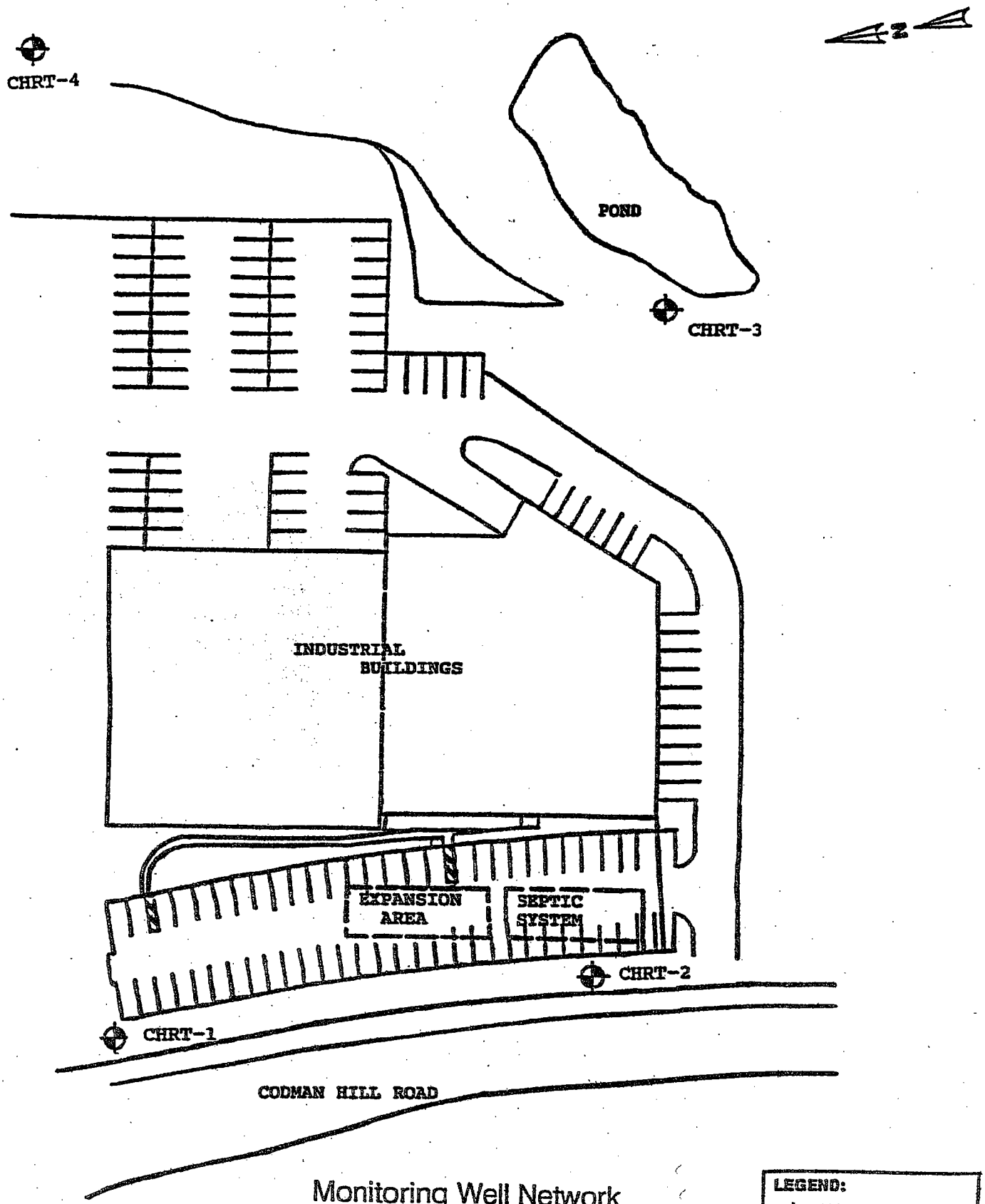

Monitoring Well Network
Codman Hill Realty Trust
Codman Hill Road

LEGEND:
MONITORING WELL
(Figure not to scale)

LITTLETON LWD WATER DEPARTMENT

39 Ayer Road, P. O. Box 2406
Littleton, MA 01460-3406
Telephone (978) 486-3104
Fax (978) 486-8549
www.lelwd.com

Savas C. Danos, General Manager

June 25, 2003

David Campbell, Facilities Manager
CB Richard Ellis/Whittier Partners
111 Powder Mill Road
Maynard, MA 01754

Re: Groundwater Monitoring Program: Tech-Com Corporation

Dear Mr. Campbell:

In compliance with the Town of Boxborough's Zoning Bylaws, and the groundwater-monitoring program established for this facility, the Littleton Water Department sampled the monitoring well network at 80 Central Street on May 13, 2003. Three monitoring wells (DC-1, DC-2 and DC-3) were sampled and analyzed for volatile organic compounds (VOCs) via EPA method 524.2, Safe Drinking Water Act metals and general water quality parameters. A copy of the laboratory report is provided in Appendix A.

This sampling round found nitrate concentrations at acceptable levels in all three wells. No VOCs were detected in the monitoring wells and the remaining general water quality parameters were within normal ranges.

The next scheduled sampling event in the Spring of 2004 and will include VOCs and general water quality parameters. Thank you for your continued cooperation with this important program. Please call me at (978) 486-3104 with any questions or comments.

Sincerely,

Gregory A. Woods

Gregory A. Woods, PG.
Environmental Analyst

Enclosures

cc: The Boxborough Board of Health
The Boxborough Planning Board
Nashoba Associated Boards of Health

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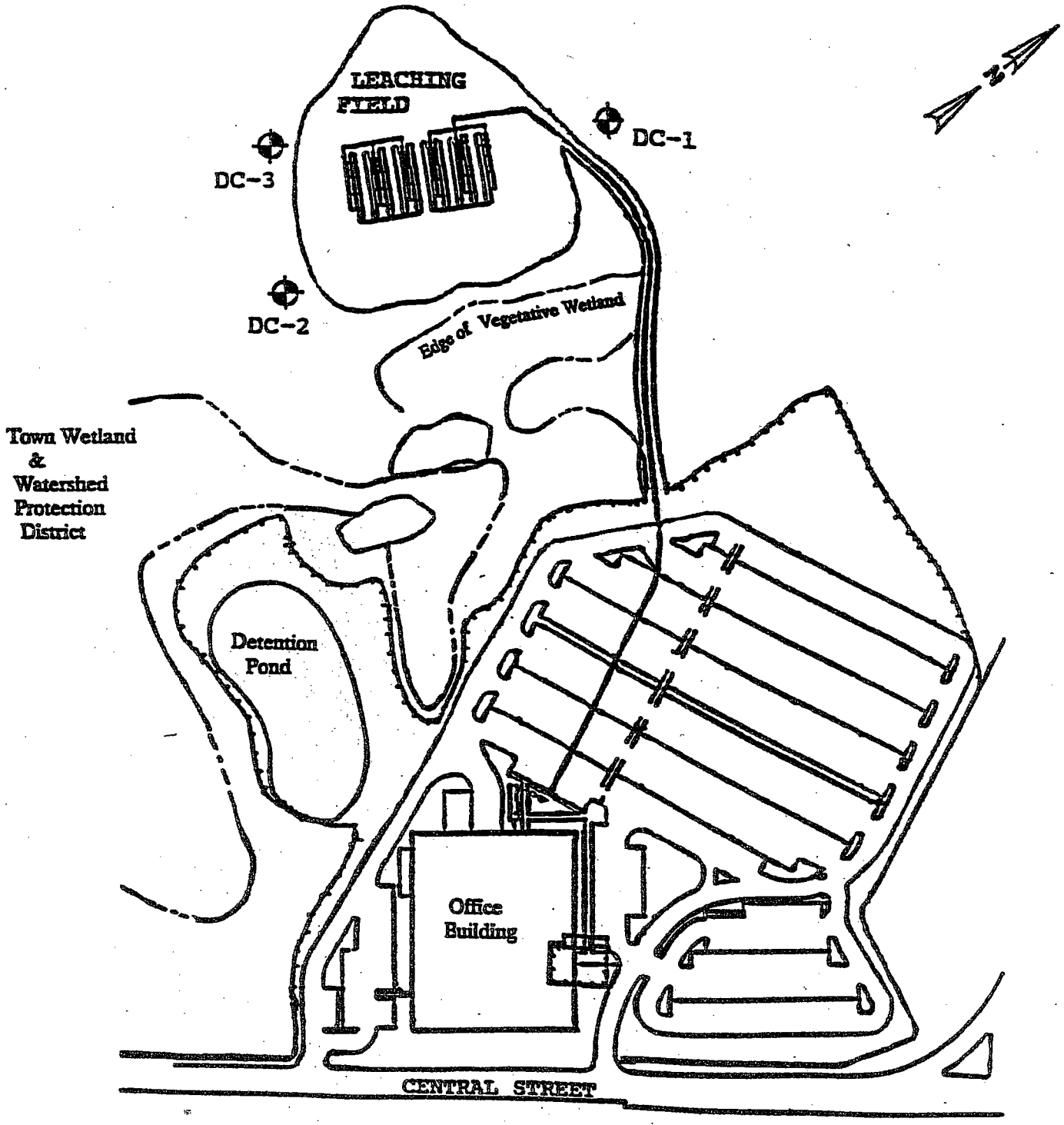

Monitoring Well Network
Digital Equipment Corporation
Central Street

LEGEND:
MONITORING WELL
(Figure not to scale)

LITTLETON LWD WATER DEPARTMENT

39 Ayer Road, P. O. Box 2406
Littleton, MA 01460-3406
Telephone (978) 486-3104
Fax (978) 486-8549
www.lelwd.com

Savas C. Danos, General Manager

June 26, 2003

Mr. Mike Cheney
Berkeley Management
100 Ames Pond Drive
Tewksbury, MA 01876

Re: Groundwater Monitoring Program, 1300 Mass. Avenue

Dear Mr. Cheney,

In compliance with the Town of Boxborough's Zoning Bylaws, the Littleton Water Department sampled the groundwater monitoring well network at 1300 Mass Avenue on May 9, 2003. Four monitoring wells (NC13-1, NC13-2, NC13-3, and NC13-4) were sampled and analyzed for volatile organic compounds (VOCs) via EPA method 524.2, Safe Drinking Water Act (SDWA) heavy metals and general water quality parameters. A copy of the laboratory report is provided in Appendix A

Laboratory data of groundwater samples collected from the site indicate that all groundwater quality parameters measured remain at acceptable levels. No VOCs were detected in any of the four groundwater monitoring wells and nitrate levels are below the allowable limit of 10 milligrams per liter (mg/L).

The next sampling event at this site will take place in the spring of 2004 and will include general water quality parameters and VOCs. Please call me at (978) 486-3104 with any questions or concerns and again, we thank you for your continued cooperation.

Sincerely,

Gregory A. Woods

Gregory A. Woods, PG.
Environmental Analyst

Enclosures

cc: Robert King, Berkley Investments
Boxborough Board of Health
Boxborough Planning Board
Nashoba Associated Boards of Health

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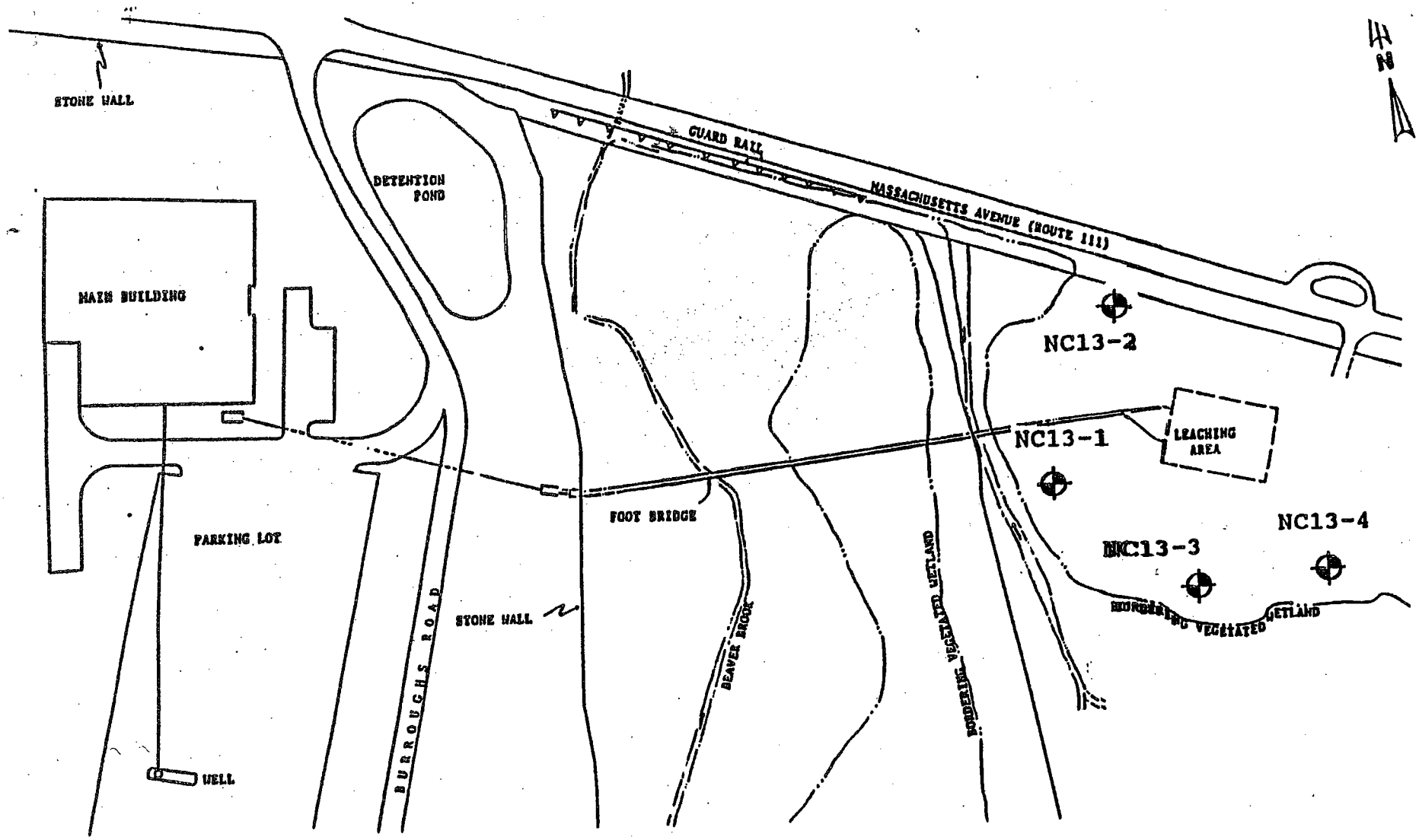

Monitoring Well Network
Renaissance Technology Building
1300 Massachusetts Avenue

Kurian Ltd. Partnership

LEGEND:
MONITORING WELL

(Figure not to scale)

LITTLETON
LWD
WATER DEPARTMENT

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www.lelwd.com

Savas C. Danos, General Manager

June 25, 2003

Mr. Richard Hunt
Setra Systems
159 Swanson Road
Boxborough, MA 01719

Re: Groundwater Monitoring Program
Boxborough Technical Park: 155 & 159 Swanson Road

Dear Mr. Hunt:

In compliance with the Town of Boxborough's Zoning Bylaws and the Special Permit granted to the Boxborough Technical Park (decision #84-18), the Littleton Water Department sampled a subset of the groundwater monitoring network on this property on May 12, 2003. Monitoring wells BTP-1, BTP-4 and BTP-6 were sampled and analyzed for volatile organic compounds (VOCs) via EPA method 524.2, Safe Drinking Water Act metals and general water quality parameters. A copy of the laboratory report is provided in Appendix A.

Elevated sodium was detected in wells BTP-1 and BTP-4 and most likely attributed to nearby road salting activities. No VOCs were identified in any wells and all other water quality parameters measured remain at acceptable levels.

The next sampling event at this site will take place in the Spring of 2004 and will include general water quality parameters and VOCs.

Please call me at (978) 486-3104 with any questions or concerns and again, we thank you for your continued cooperation.

Sincerely,

Gregory A. Woods

Gregory A. Woods, PG.
Environmental Analyst

Enclosures

cc: Boxborough Board of Health
Boxborough Planning Board
Nashoba Associated Boards of Health

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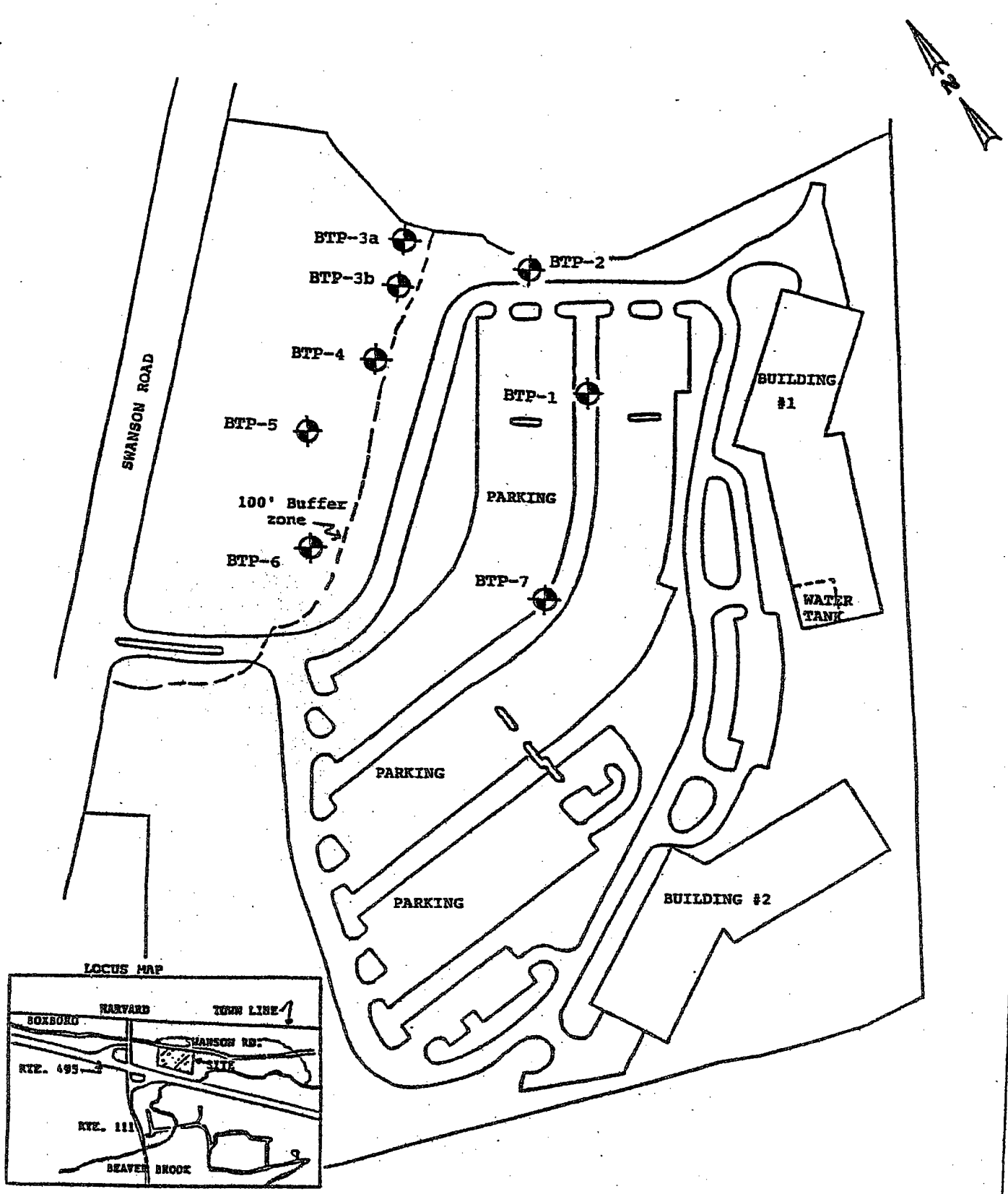

Monitoring Well Network
Boxborough Technical Park
Swanson Road

LEGEND:
MONITORING WELL
(Figure not to scale)

June 24, 2003

Mr. Greg Sullivan
Winstanley & Associates
150 Baker Avenue, Suite #303
Concord, MA 01742

Re: Groundwater Monitoring Program - 85 Swanson Road

Dear Mr. Sullivan:

In an attempt to further assess the elevated nitrate concentrations detected in on-site monitoring wells, the Littleton Water Department sampled the monitoring well network at this facility on May 12, 2003. Two monitoring wells, DS-2 and DS-3 were sampled and the groundwater samples were submitted for nitrate analysis via EPA method 300. A copy of the laboratory report is provided in Appendix A.

Groundwater sampling results indicate that nitrate concentrations have decreased in concentration in both wells from levels preciously detected in October 2002. However, nitrate levels in DS-3 continue to exceed the US EPA Maximum Contaminant Limit (MCL) of 10 milligrams per liter (mg/L). Nitrate concentrations decreased from 25.5 mg/L in October 2002 to 12.7 mg/L in May, 2003 (see Figure 1). Comparison of the groundwater levels in the two wells (see Figure 2) to the nitrate concentrations reveals that the highest nitrate concentrations were detected during periods with a low groundwater table elevation. This correlation makes sense since there is less groundwater available to dilute and disperse the nitrate load from the septic system's leaching fields, located hydraulically upgradient of the wells. However, it should be noted that even during periods of record high groundwater table elevations the nitrate concentration in DS-3, located over 300 feet from the leach field, continues to exceed the 10 mg/L MCL.

general correlation between nitrate concentration and water leprovide insight The Groundwater samples from these two wells have exhibited a steady increase in nitrate concentration over the last several years (see Figure 1 below). The most recent sampling events in 2001 and 2002 exhibit nitrate concentrations significantly higher than historical values and indicate a considerable nitrate burden in this area. Several sources could be responsible for this burden, including the on-site septic system, excessive fertilizer use in the area, or an off-site source from a location hydraulically upgradient of the monitoring wells. The Littleton Water Department highly recommends you investigate the potential that on-site facility use, specifically the septic leaching field, is contributing to the elevated nitrate levels at the downgradient property boundary. The

Water Department is willing to provide technical assistance, if necessary, to help identify the nitrate source in the area.

The normal yearly sampling will resume in the Fall of 2003 and will include general water quality parameters and VOCs. Please call me at (978) 486-3395 with any questions or concerns and again, we thank you for your continued cooperation.

Sincerely,

Gregory A. Woods, PG
Environmental Analyst

Enclosures

cc: Boxborough Board of Health
Boxborough Planning Board
Nashoba Associated Boards of Health

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December 3, 2003

Mr. Greg Sullivan
Winstanley & Associates
150 Baker Avenue, Suite #303
Concord, Massachusetts 01742

Re: Groundwater Monitoring Program
60 Codman Hill Road

Dear Mr. Sullivan:

In compliance with the Town of Boxborough's Zoning Bylaws and the special permit granted to 60 Codman Hill Road, the Littleton Water Department sampled the monitoring well network on this property on October 23, 2003. Three monitoring wells (DCH-1, DCH-3 and DCH-4) were sampled and analyzed for volatile organic compounds (VOCs) via EPA method 524.2, Safe Drinking Water Act heavy metals, and general water quality parameters. A copy of the laboratory report is provided in Appendix A.

Elevated levels of sodium and chloride, key elements of road salt, continue to be identified in monitoring wells located adjacent to Route 495. All other parameters measured remain at acceptable levels.

The next round of sampling at this facility will take place in the fall of 2004 and will consist of VOCs and general water quality parameters. We appreciate your cooperation with this important program. Please call me at (978) 486-3104 with any questions or comments, thank you.

Sincerely,

Gregory A. Woods, P.G.
Environmental Analyst

Enclosures

cc: Boxborough Board of Health
Boxborough Planning Board
Nashoba Associated Boards of Health

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December 15, 2003

Mr. Nino Micozzi
Micozzi Management Inc.
159 Cambridge Street
Allston, Massachusetts 02134

Re: Groundwater Monitoring Program, Boxborough Commons

Dear Mr. Micozzi:

In compliance with the Town of Boxborough's Zoning Bylaws the Littleton Water Department sampled the monitoring well network at Boxborough Commons on October 23, 2003. Monitoring wells BC-3 and BC-4 were sampled and analyzed for volatile organic compounds (VOCs) via EPA method 524.2, Safe Drinking Water Act heavy metals, and general water quality parameters. A copy of the laboratory report is provided in Appendix A

No VOC's were detected in either well and nitrate levels were again below 1.0 mg/l. All other parameters tested remain at acceptable levels.

The next round of sampling at this facility will take place in the fall of 2004 and will consist of VOCs and general water quality parameters. We appreciate your cooperation with this important program. Please call me at (978) 486-3104 with any questions or comments.

Sincerely,

Gregory A. Woods, P.G.
Environmental Analyst

Enclosures

cc: Boxborough Board of Health
Boxborough Planning Board
Nashoba Associated Boards of Health

Water Department is willing to provide technical assistance, if necessary, to help identify the nitrate source in the area.

The normal yearly sampling will resume in the Fall of 2003 and will include general water quality parameters and VOCs. Please call me at (978) 486-3395 with any questions or concerns and again, we thank you for your continued cooperation.

Sincerely,

Gregory A. Woods, PG
Environmental Analyst

Enclosures

cc: Boxborough Board of Health
Boxborough Planning Board
Nashoba Associated Boards of Health

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