

# Zenon Performance Appraisal

## Executive Summary

### For the Zenon Treatment Technologies Incorporated in an On-site Wastewater Treatment and Renovation System

Pursuant to Connecticut General Statutes 22a-430 and Regulations of State Agencies 22a-430 (1) – (8) the Commissioner in part issues water discharge permits for large-scale (> 5,000 gallons per day) on-site wastewater treatment and renovation systems. Prior to issuing a permit the Department determines if the proposed system to treat the discharge will protect the waters of the state from pollution. The pollutants of concern in domestic sewage being discharged to groundwaters include: nitrogen, bacteria, virus, and phosphorus. Sometimes alternative treatment technology (ATT) needs to be incorporated into a site specific design. In some instances the reason for including ATT are: the level of development, the soils, the hydrogeologic setting, or the requirement to recycle a portion of the treated wastewater.

One of the technologies that consultants have incorporated into an on-site wastewater treatment and renovation system is the Zenon Wastewater Treatment System. This treatment consists of pretreatment using trash traps, equalization followed by aerobic and anoxic bioreactors and membrane filters. Chemical addition can be employed for phosphorus removal and ultraviolet disinfection or ozone is used for pathogen reduction.

Presently in Connecticut 12 permitted facilities utilize the Zenon technology. The technology is used for treatment or treatment and recycle. Permit limitations are established on a site-specific application.

#### Zenon Treatment Facilities

For Treatment:	Salisbury School, Salisbury The Hearth, Madison Joel Barlow High School, Redding
For Treatment and Recycle:	Kensington Green, Southbury Westbrook Factory Stores, Westbrook Goose Lane Medical, LLC, Guilford Whitby School, Greenwich Weston Schools, Weston Water's Edge, Westbrook Clinton Crossing, Clinton Mallory Brook Plaza, Barkhamsted Brunswick School, Greenwich

A review of the data shows that facilities with the exception of Mallory Brook Plaza provide excellent BOD, TSS, and pathogen removal. The Brunswick School and Kensington Green fecal analysis is inconclusive due to reporting errors. The operator at Brunswick School has been advised and the testing methodology has been corrected. This issue has also been discussed with the Kensington Green operator.

Four facilities (Kensington Green, Weston Schools, Mallory Brook Plaza, and Brunswick School) show significant violations for total nitrogen. Three facilities (Goose Lane Medical, LLC, Water's Edge, and Mallory Brook Plaza) show significant violations for total phosphorus. Enforcement action was taken on these facilities, with Notices of Violation issued on November 30, 2006.

Groundwater monitoring located within the zone of influence of the permitted systems consistently shows levels of total nitrogen, total phosphorus and fecal coliform that are suitable for drinking and other domestic uses without treatment, and do not appear to be a cause for concern.

In general these violations could be attributed to one or more of the following: operation and maintenance, equipment failure, design, or introduction of a toxic substance.

As a result of this evaluation the following recommendations are being made.

1) Concerning DEP approval of Plans & Specifications:

a) As part of the approval process, recommend that the certified operator review plans and specifications prior to submittal to DEP for review and approval.

b) Modify approval language to include the following (new language in bold type):

The engineer shall prepare record drawings of the installed systems showing all component locations and elevation. **Such record drawings shall include a statement signed by a duly authorized representative of the treatment system supplier that the system has been installed in substantial compliance with the approved plans and specifications.** These drawings shall be submitted to the Assistant Director, Bureau of Materials Management and Compliance Assurance, Water Permitting and Enforcement Division and the local director of health as the required verification of proper installations.

c) Modify approval language to include the following (new language in bold type):

The applicant shall submit an Operation and Maintenance Manual to the Assistant Director, Bureau of Materials Management and Compliance Assurance, Water Permitting and Enforcement Division for review and approval prior to issuance of a discharge permit. **Such manual shall be reviewed by the applicant's certified operator and the applicant shall obtain written concurrence from the operator that he is satisfied with the manual's content to ensure the proper operation and maintenance of the wastewater treatment facility.**

2) The following Terms and Conditions of the permit will be amended or added.

a) In the permit template under 5 (B):

The results of chemical analysis and treatment facilities monitoring required by Section 4 shall be entered on the Discharge Monitoring Report (DMR), provided by this office, and reported to the Bureau of Materials Management and Compliance Assurance, at the following address, by the end of the month following the month in which the samples are taken. **The report shall also include a detailed explanation of any violations of the limitations specified and corrective actions performed, and a schedule for the completion of any corrective actions remaining.**

Bureau of Materials Management and Compliance Assurance  
Water Permitting and Enforcement Division (Attn: DMR Processing)  
Connecticut Department of Environmental Protection  
79 Elm Street  
Hartford, CT 06106-5127

b) Proposed Audit Language:

**Every two years, on or before the anniversary date of the issuance of this permit, the Permittee shall submit the results of a detailed permit compliance audit to the Commissioner. Such audits shall be performed within sixty (60) days prior to the anniversary date. The compliance audits shall be performed by a qualified professional engineer licensed to practice in Connecticut with the appropriate education, experience and training which is relevant to the work required.**

**Each audit shall evaluate compliance with all permit terms and conditions for the preceding two-year period. The evaluation shall review all pertinent records and documents as necessary, including Discharge Monitoring Reports (DMRs); laboratory**

**reports; operations and maintenance plans and performance logs/records; equipment specifications and maintenance schedules; engineering drawings; and spare parts inventory.**

**Each audit report shall include a description of all records and documents used in the evaluation, a summary of compliance with permit terms and conditions, and detailed descriptions of all remedial actions taken or proposed to address each violation or deficiency discovery.**

This audit will be sent concurrently to the local health department and those systems that employ a community system the audit will be sent concurrently to the local water pollution control authority.

- c) **On or before three (3) months after issuance of this permit the Permittee shall verify in writing to the Commissioner that the alternative treatment technology is operating in accordance with the approved plans and specifications and is achieving compliance with all permit limits and conditions. The Permittee shall obtain written concurrence for the design engineer, the technology provider, and the wastewater treatment facility operator who is responsible for the operation of the wastewater treatment facility.**
  
- 3) The Department will continue to improve on its DMR review, compliance assurance, and enforcement program for on-site treatment and renovation systems that utilize alternative treatment technology.

## Compliance Summary Pollutant

Facility	Summary Period	<u>Total Nitrogen</u>	<b>Total Phosphorus</b>	<b>Fecal Coliform</b>	<b>BOD</b>	<b>TSS</b>	<b>Comments</b>	<b>Groundwater Comments</b>
Kensington Green	1/03 - 6/06	63%	90%	Inconclusive. Reporting errors.	100%	95%	Fecal coliform tests inconclusive-reporting errors. Data not submitted 01/04 - 10/05.	Total nitrogen, total phosphorus and fecal coliform results for reported monitoring data indicate that groundwater quality is consistently within a range that is suitable for drinking without treatment, and do not appear to be a cause for concern. For those facilities submitting data with reporting errors, the appropriate permittees will be advised to initiate proper reporting measures.
Westbrook Factory Stores	1/03 – 6/06	73%	100%	100%	100%	100%	Infrequent violations of TN after 2/04.	
Goose Lane Medical, LLC	2/05 – 8/06	82%	5%	100%	100%	100%	Infrequent minor TN violations since 6/05. Phosphorus treat. initiated.	
Whitby School	1/03 – 6/06	91%	100%	95%	100%	100%	No comment.	
Weston Schools	1/05 – 8/06	15%	95%	100%	95%	100%	Serious inflow/infiltration issues.	
The Hearth	1/03 – 5/06	100%	89%	No permit limit	100%	100%	No comment.	
Water's Edge	1/04 - 8/06	94%	72%	100%	100%	100%	Phosphorous removal not provided.	
Salisbury School	12/03 – 8/06	92%	No permit limit	97% E.coli limit	100%	97%	No TN violations after 1/05.	
Clinton Crossing	1/03 – 8/06	87%	100%	100%	100%	100%	No comment.	
Mallory Brook Plaza	1/03 – 8/06	17%	25%	89%	80%	98%	Phosphorous treatment not provided	
Brunswick School	1/05 – 8/06	43%	90%	Inconclusive. Reporting error	100%	100%	Serious inflow/infiltration issues.	
Joel Barlow High School	1/03 – 6/06	70%	99%	100%	100%	100%	No violations for TN since 4/05.	

Compliance Rate % based upon Violation/Test or Violation/Test Month.

For more detailed explanations of violations, see individual facility summaries.

# SUMMARY OF ALTERNATIVE TREATMENT TECHNOLOGY USED WITH ON-SITE WASTEWATER RENOVATION SYSTEMS

**Facility:** Brunswick School, Greenwich, CT

**Permit Issuance Date:** 02/07/01; modified on 12/22/04

**Treatment Technology:** Zenon

**Pollutants Treated:** BOD<sub>5</sub>    TSS    Nitrogen    Phosphorus    Fecal Coliform

**Application:** Institutional

**Type:** Treatment/Recycle

**Class:** New      Modification

**Pretreatment discharge type:** Constructed Fill

**Point of Environmental Concern:** Toe of slope

**Comments:**

<u>Compliance summary (1/05 – 8/06)</u>		<u>Compliance Rate (%)</u>
Total nitrogen (max limit = 10 mg/l)	23 violations/40 tests	43
Total phosphorus (max limit = 15 mg/l)	4 violations/40 tests	90
Fecal coliform (avg limit = 4 col/100 ml)	Inconclusive results (reporting errors)	---
BOD (avg. limit = 20 mg/l)	0 violations/20 test months	100
TSS (avg. limit = 20 mg/l)	0 violations/20 test months	100

## Issues

- Serious inflow/infiltration problems are suspected as a likely significant factor in poor nitrogen removal performance.
- There were no phosphorus violations since August 2005.
- A new Zenon treatment system was installed 12/04.

## Recommendations

- A Notice of Violation is to be issued.

## Groundwater summary

- Groundwater monitoring data has not been submitted to the Department.

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

**Facility:** Brunswick School  
**Permit No.:** UI0000332  
**Permit Issuance Date:** 12/22/2004  
**Treatment Type:** Zenon/Recycle

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	15200	12400	30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily	Daily	2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Apr-01	3080	1068	3*	2.8*	7	4*	<b>13.7</b>	<b>32</b>	0
Apr-01								<b>23</b>	
May-01	3470	1296	6*	3.5*	5	3*	<b>36</b>	<b>20.3</b>	<b>2.5*</b>
May-01							<b>34</b>	<b>18</b>	
Jun-01	3250	652	1*	1*	4	2.5*	<b>13.4</b>	<b>46.5</b>	0
Jun-01								<b>24</b>	
Jul-01	1270	670	1*	1*	3	2.5	1.34	<b>17.8</b>	0
Jul-01								<b>17</b>	
Aug-01	1050	564	1*	1*	2	1.5*	1.79	14.3	0
Sep-01	1420	950	1.18	1.09*	25	13*	6.92	<b>17.3</b>	0
Oct-01	4780	1305	4.19	2.6*	11	7.5	10	<b>24</b>	0
Oct-01								<b>21</b>	
Nov-01	2150	1322	2.61	1.8*	6	3.5	8.6	<b>48.5</b>	0
Nov-01								<b>31</b>	
Dec-01	2660	1181	7.51	4.25*	1*	1*	<b>34</b>	<b>28</b>	0
Dec-01								<b>24</b>	
Jan-02	2210	1096	3.27	2.13*	9	5*	<b>17.89</b>	<b>37.8</b>	0
Jan-02								<b>35</b>	
Feb-02	3120	1385	6.45	3.73*	3	2*	9.95	<b>47.5</b>	0
Feb-02								<b>31</b>	
Jan-03	2780	1344	<b>39</b>	<b>20.5</b>	5*	5*	3	<b>20</b>	<b>0</b>

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	15200	12400	30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily	Daily	2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Feb-03	2640	1422	10*	6*	5*	5*	1.7	<b>26</b>	
								<b>16</b>	
Mar-03	2260	868	10*	6*	5*	5*	1*	<b>32</b>	0
Mar-03								<b>28</b>	
Apr-03									
May-03	2130	1166	5*	3.5*	7.4	6.2*	2.5	<b>25</b>	0
May-03								<b>25</b>	
Jun-03	740	291	6	4	5*	5*	4.4	<b>25</b>	0
Jun-03								<b>22</b>	
Jul-03	690	417	6	6	5*	5*	2.8	<b>19</b>	0
Jul-03								<b>18</b>	
Aug-03	900	561	3	2.5	5*	5*	8.56	<b>26</b>	0
Aug-03								<b>20.2</b>	
Sep-03	3000	1357	4	3	5*	5*	<b>13.04</b>	<b>28.2</b>	0
Sep-03								<b>17</b>	
Oct-03									
Nov-03	2330	1237	3*	2.5*	5*	5*	4.85	<b>27</b>	0
Nov-03								<b>26</b>	
Dec-03									
Jan-04	2725	1717	2*	2*	5*	5*	5.63	<b>17</b>	0
Feb-04	2685	1383	2.5	2.25*	5*	5*	6.3	<b>13</b>	0
Mar-04									
Apr-04	3390	1766	12	10	7.5	6.25*	6.1	<b>17</b>	0
Apr-04								<b>17</b>	
May-04									
Jun-04									
Jul-04									
Aug-04									
Sep-04									

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**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	15200	12400	30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily	Daily	2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Oct-04									
Nov-04									
Dec-04									
Jan-05	<b>22540</b>	3964	1*	1*	2.5	1.75*	<b>11.1</b>	4.18	RE
Feb-05	<b>20780</b>	4673	2.65	1.8	1	1	<b>20.7</b>	7.32	RE
Feb-05							<b>19.2</b>		
Mar-05	<b>18070</b>	4486	1.1	1	1	1	<b>11.9</b>	3.22	RE
Apr-05	<b>27330</b>	5925	1*	1*	1.5	1.25*	<b>20.1</b>	6.45	RE
Apr-05							<b>12.5</b>		
May-05	<b>23950</b>	3762	1.23	1.12*	1*	1*	<b>63.6</b>	<b>16.5</b>	RE
Jun-05	6340	1438	6*	3.5*	4*	2.5*	6.3	4.8	RE
Jul-05	13180	2247	2.72	1.86	2	1.5	9.58	<b>16.5</b>	RE
Aug-05	<b>17020</b>	2855	3.2	2.75	3.33	2.16*	<b>26.4</b>	<b>18.3</b>	RE
Aug-05								<b>15.9</b>	
Sep-05	13360	4689	1*	1*	2	1.5	<b>15.54</b>	7.69	RE
Oct-05	<b>29220</b>	5957	1.23	1.18	1*	1*	<b>30.8</b>	6.4	RE
Oct-05							<b>12.7</b>		
Nov-05	<b>22600</b>	4235	1.27	1.14*	1*	1*	<b>23.66</b>	9.05	RE
Dec-05	<b>23950</b>	5290	6	3.5*	24	12.5*	<b>24</b>	11.8	RE
Jan-06	<b>36550</b>	6877	1.3	1.15*	2	2	<b>10.8</b>	5.58	RE
Feb-06	<b>23640</b>	4754	1*	1*	4	2.5*	<b>14</b>	9	RE
Feb-06							<b>14</b>		
Mar-06	<b>15440</b>	3175	3*	2*	1*	1*	<b>12.2</b>	7.21	RE
Apr-06	12670	2954	1.01	1*	1*	1*	<b>13</b>	11.4	RE
Apr-06							<b>20</b>		
May-06	<b>23950</b>	3762	1.5	1.25*	1	1	<b>15.6</b>	10.8	RE
Jun-06	12750	2350	1*	1*	1	1*	8.01	8.31	RE
Jul-06	5810	1604	1*	1*	1*	1*	<b>23</b>	12.6	RE
Jul-06							<b>27</b>		

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
 WATER PERMITTING AND ENFORCEMENT DIVISION

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

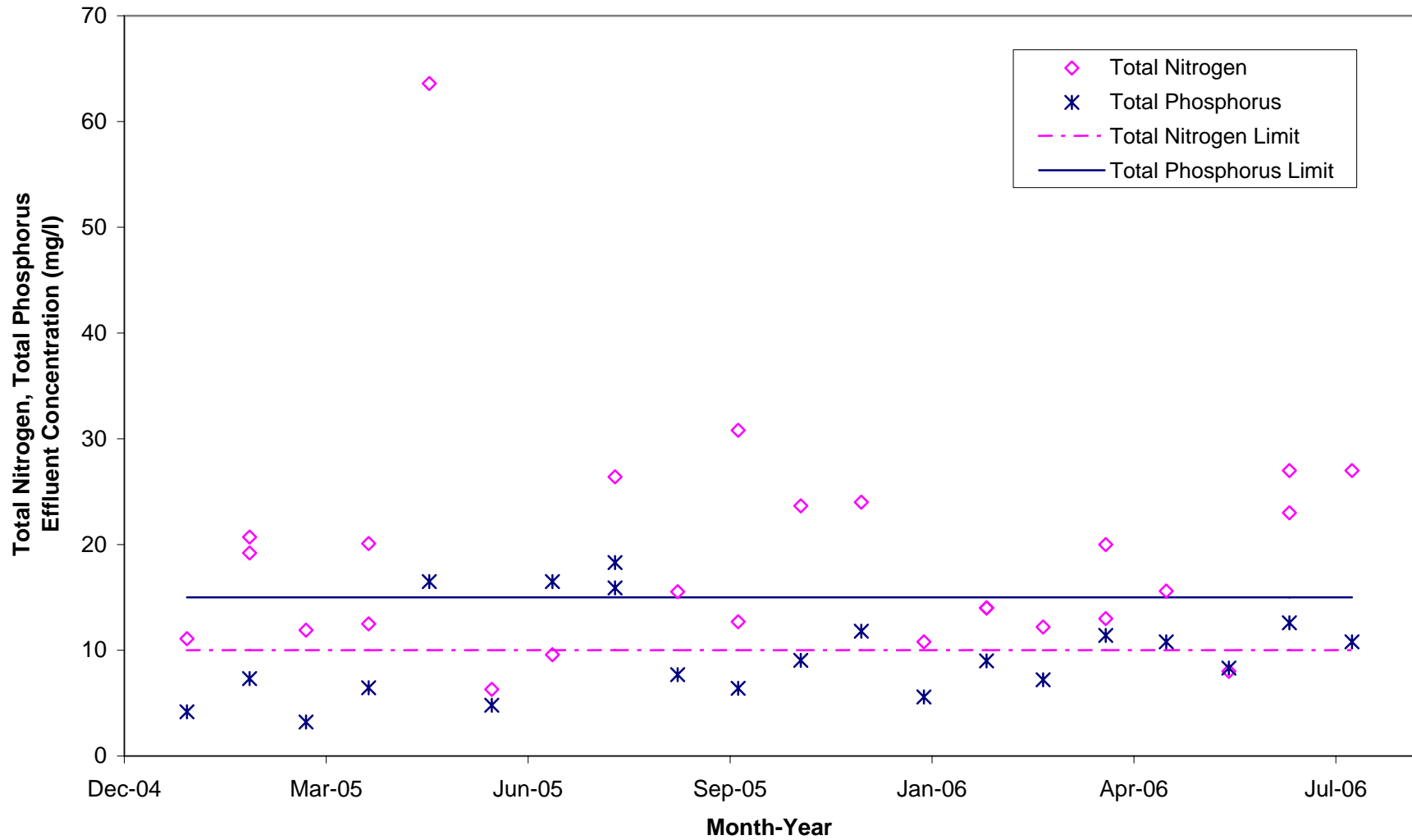
Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	15200	12400	30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily	Daily	2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Aug-06	8090	1886	1*	1*	2	1.5*	<b>27</b>	10.8	RE

\* Means less than the reported value.

RE Means reporting error. Results inconclusive.

**Bold type** means a violation of permit limit.

**UI PERFORMANCE DATA: SUMMARY OF EFFLUENT MONITORING**  
**JANUARY 2005 - AUGUST 2006**  
**PERMIT NO. UI0000332 - BRUNSWICK SCHOOL**



**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

**Facility:** Brunswick School  
**Permit No.:** UI0000332  
**Sampling Frequency:**  
**No. of Monitoring Wells:**  
**Review Period:** 1/05-8/06

Sampling Month-Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
Jan-05	MW A			
	MW C			
	MW D			
	MW F			
Feb-05	MW A			
	MW C			
	MW D			
	MW F			
Mar-05	MW A			
	MW C			
	MW D			
	MW F			
Mar-05	MW A			
	MW C			
	MW D			
	MW F			
Apr-05	MW A			
	MW C			
	MW D			
	MW F			
May-05	MW A			
	MW C			
	MW D			
	MW F			
Jun-05	MW A			
	MW C			
	MW D			
	MW F			
Jul-05	MW A			
	MW C			
	MW D			
	MW F			
Aug-05	MW A			
	MW C			
	MW D			
	MW F			
Sep-05	MW A			
	MW C			
	MW D			
	MW F			
Oct-05	MW A			

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

Sampling Month-Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
	MW C			
	MW D			
	MW F			
Nov-05	MW A			
	MW C			
	MW D			
	MW F			
Dec-05	MW A			
	MW C			
	MW D			
	MW F			
Jan-06	MW A			
	MW C			
	MW D			
	MW F			
Feb-06	MW A			
	MW C			
	MW D			
	MW F			
Mar-06	MW A			
	MW C			
	MW D			
	MW F			
Apr-06	MW A			
	MW C			
	MW D			
	MW F			
May-06	MW A			
	MW C			
	MW D			
	MW F			
Jun-06	MW A			
	MW C			
	MW D			
	MW F			
Jul-06	MW A			
	MW C			
	MW D			
	MW F			
Aug-06	MW A			
	MW C			
	MW D			
	MW F			

# SUMMARY OF ALTERNATIVE TREATMENT TECHNOLOGY USED WITH ON-SITE WASTEWATER RENOVATION SYSTEMS

**Facility:** Clinton Crossing, Clinton, CT

**Permit Issuance Date:** 09/11/96

**Treatment Technology:** Zenon

**Pollutants Treated:** BOD<sub>5</sub>    TSS    Nitrogen    Phosphorus    Fecal Coliform

**Application:** Commercial

**Type:** Treatment/Recycle

**Class:** New

**Pretreatment discharge type:** Constructed Fill  
Liner

**Point of Environmental Concern:** Toe of slope

**Comments:**

<b>Compliance summary (1/03 – 8/06)</b>	<b>Compliance Rate (%)</b>
Total nitrogen (max limit = 10 mg/l)    11 violations/84 tests	87
Total phosphorus (max limit = 15 mg/l)    0 violations/84 tests	100
Fecal coliform (avg limit = 4 col/100 ml)    0 violations/33 test months	100
BOD (avg. limit = 20 mg/l)    0 violations/33 test months	100
TSS (avg. limit = 20 mg/l)    0 violations/33 test months	100

Issues

- There were only occasional (3) minor violations of the total nitrogen limit since August 2005.

Recommendations

- A letter is to be sent which cites the violations, requests that an explanation be provided, and reminds the permittee of violation reporting requirements.

Groundwater summary

- Total nitrogen, total phosphorus & fecal coliform results indicate that groundwater is consistently within levels that are suitable for drinking without treatment. There were reporting issues with several monitoring periods that need to be addressed with the permittee.

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

**Facility:** Clinton Crossing  
**Permit No.:** UI0000296  
**Permit Issuance Date:** 9/11/1996  
**Treatment Type:** Zenon/Recycle with Phosphorus Removal

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	4800		30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Jan-03	290	40	1.11	1.05	3	2	<b>14.01</b>	3.35	0
Feb-03	480	81	1	1	7	6.5	6.27	3.53	0
Mar-03	1350	257	1.02	1.01	1	1	<b>10.8</b>	1.4	0
Apr-03									
May-03	4320	436	0	0	0	0	9.6	1.5	0
Jun-03	2400	837	9.3	6.25	0	0	8.9	1.2	0
Jul-03	<b>6275</b>	1980	0	0	0	0	9.58	2.1	0
Aug-03									
Sep-03	4170	1488	0	0	0	0	<b>14</b>	14	0
Oct-03	<b>6265</b>	1653	18	9	6.4	3.2	6.8	3.6	0
Nov-03	<b>6497</b>	1371	2.8	1.4	0	0	8.1	2	0
Dec-03	<b>6497</b>	1768	0	0	0	0	6.5	1.6	0
Jan-04	3695	771	0	0	10	5	6.8	2.6	0
Feb-04	1707	609	0	0	8	7	5.1	0.19	0
Mar-04	1955	529	0	0	1	0.5	4.2	0.17	0
Apr-04	3000	1057	0	0	2	1	<b>35.7</b>	0.95	0
Apr-04							<b>11.9</b>		
May-04	1715	633	0	0	2	1	6.55	0.95	0
Jun-04	3860	965	4*	4*	0	0	<b>17</b>	0.08	RE
Jul-04	2450	1129	4*	4*	0	0	7.7	0.053	RE

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION

UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (units) (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
Permit Limit	4800		30	20	30	20	10	15	4
Sample Freq.	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Aug-04	3145	1084	4*	4*	4	2	<b>20</b>	0.032	RE
Sep-04	2223	445	4*	4*	6	3	<b>14</b>	0.34	RE
Oct-04	1930	554	4*	4*	5	2.5	7.9	0.38	RE
Nov-04	1660	208	4*	4*	3	2	8.2	0.505	RE
Dec-04	<b>11640</b>	852	4*	4*	2	1*	7.8	5.8	RE
Jan-05	75	8	4*	4*	1	1*	6.3	5.2	0
Feb-05	3213	799	4*	4*	1	1	<b>11</b>	0.35	0
Mar-05	827	182	4*	4*	5	3.5	4	0.035	0
Apr-05	3180	177	4*	4*	1	1	8.2	0.089	0
May-05	1300	206	4*	4*	1	1	7.3	0.17	0
Jun-05	2027	267	4*	4*	1	1	9.8	0.066	0
Jul-05	1183	367	4*	4*	9	4.5	9.4	3.4	0
Aug-05	1683	898	4*	4*	11	5.5	8	8	0
Sep-05	<b>11400</b>	1361	4*	4*	21	11	7.7	11	0
Oct-05	3375	678	4*	4*	5	2.5	9.7	15	0
Nov-05	<b>6415</b>	1255	4*	4*	4	2	<b>14</b>	0.36	0
Dec-05	4500	859	4*	4*	7	4.5	9.4	0.13	0
Jan-06	4775	588	4*	4*	4	2.5	3.2	2	0
Feb-06	4775	816	4*	4*	6	3.5	<b>10.6</b>	6	0
Mar-06	1685	861	4*	4*	8	7	10	2.1	0
Apr-06									
May-06									
Jun-06	<b>5053</b>	2068	2*	2*	10	7.5	7	0.098	0
Jul-06	9781	2864	2*	2*	10	7	6.7	0.11	0.25
Aug-06	<b>19407</b>	5166	2*	2*	5	4	5	2.1	0

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
 WATER PERMITTING AND ENFORCEMENT DIVISION

UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING

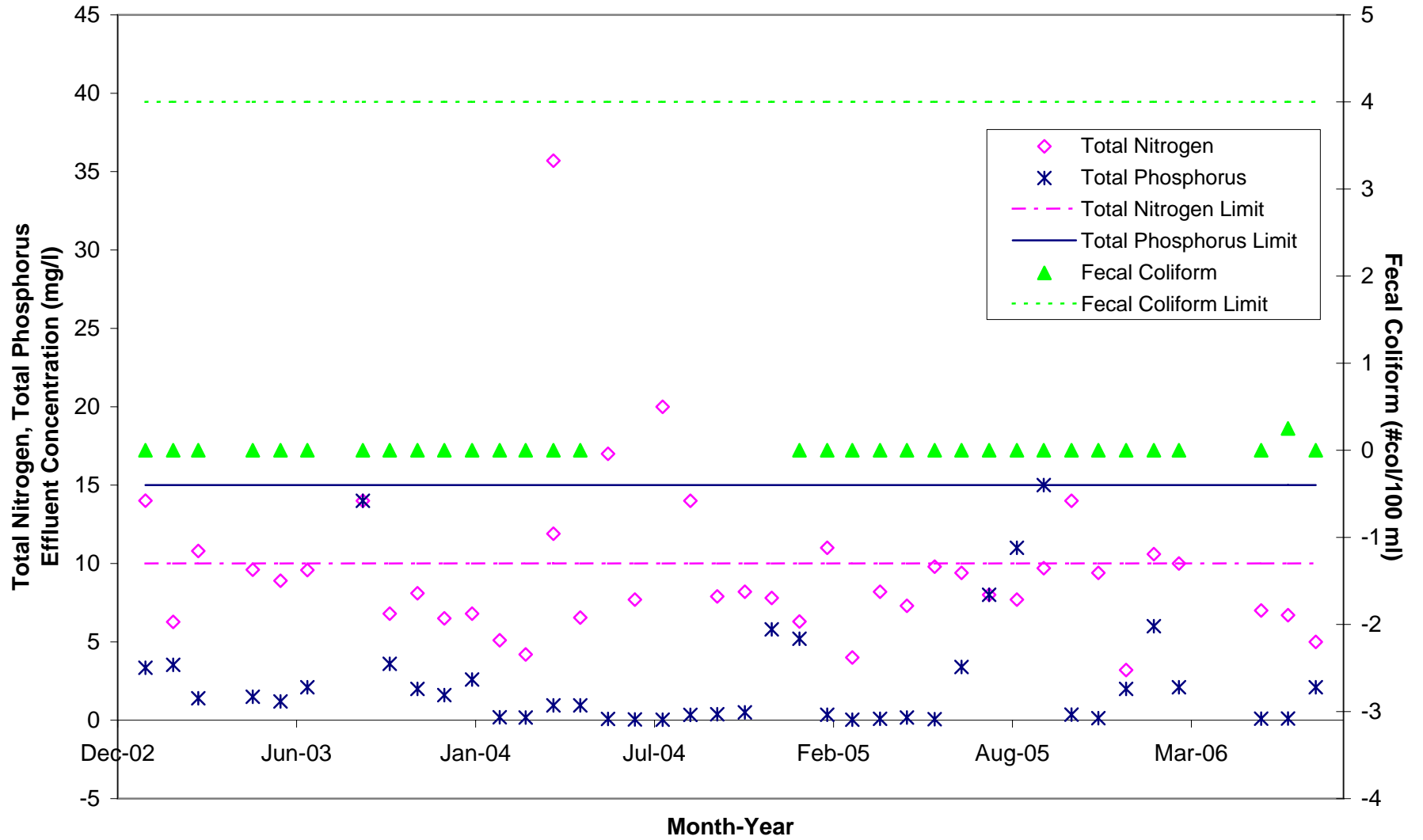
Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	4800		30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.

\* Means less than the reported value.

RE Means reporting error. Results inconclusive.

**Bold type** means a violation of permit limit.

**UI PERFORMANCE DATA: SUMMARY OF EFFLUENT MONITORING**  
**JANUARY 2003 - AUGUST 2006**  
**PERMIT NO. UI0000296 - CLINTON CROSSING**



**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

**Facility:** Clinton Crossing  
**Permit No.:** UI0000296  
**Sampling Frequency:** Quarterly  
**No. of Monitoring Wells:** 4  
**Review Period:** 1/03-8/06

Sampling Month-Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
Mar-03	MW 1	1.2	0.15	10*
	MW 2	1*	0.04	10*
	MW 3	1*	0.12	10*
	MW4	6	14.1	10*
Jun-03	MW 1	1.9	ND	86
	MW 2	ND	ND	2
	MW 3	ND	ND	2
	MW 4	7.5	120	0
Nov-03	MW 1	0.39	0.57	36
	MW 2	ND	ND	0
	MW 3	ND	21	0
	MW 4	15.9	ND	0
Feb-04	MW 1	DRY	DRY	DRY
	MW 2	0.03	0	0
	MW 3	0.03	0	0
	MW 4	DRY	DRY	DRY
Jun-04	MW 1	ND	ND	0
	MW 2	ND	ND	0
	MW 3	ND	ND	0.02
	MW 4	ND	ND	0.06
Nov-04	MW 1	6.53	ND	0
	MW 2	4.19	ND	2
	MW 3	6.74	1.2	0
	MW 4	DRY	DRY	DRY
Mar-05	MW 4	ND	1.1	0
Apr-05	MW 1	20	0.81	0
	MW 2	ND	ND	0
	MW 3	ND	ND	2
	MW 4	0.48	ND	1
Oct-05	MW 1	1.6	0.68	168
	MW 2	ND	2.8	0
	MW 3	2.5	0.54	2
	MW 4	3.9	0.26	0
Feb-06	MW 1	2.21	0.48	2
	MW 2	0.57	0.12	0
	MW 3	0.98	0.17	0
	MW 4	4.09	0.18	0
Aug-06	MW 1	DRY	DRY	DRY
	MW 2	0.51	0.1	9
	MW 3	0.95	0.22	0
	MW 4	6.06	4.6	0

ND = Non Detect  
 \* = Less than Reported Level

# SUMMARY OF ALTERNATIVE TREATMENT TECHNOLOGY USED WITH ON-SITE WASTEWATER RENOVATION SYSTEMS

**Facility:** Goose Lane Medical, LLC, Guilford, CT

**Permit Issuance Date:** 07/09/04

**Treatment Technology:** Zenon

**Pollutants Treated:** BOD<sub>5</sub>    TSS    Nitrogen    Phosphorus    Fecal Coliform

**Application:** Commercial

**Type:** Treatment /Recycle

**Class:** New

**Pretreatment discharge type:** Fill  
Natural Soils

**Point of Environment Concern:** Property line

**Comments:**

<u>Compliance summary (2/05 – 8/06)</u>			<u>Compliance Rate (%)</u>
Total nitrogen	(max limit = 10 mg/l)	7 violations/38 tests	82
Total phosphorus	(max limit = 15 mg/l)	36 violations/38 tests	5
Fecal coliform	(avg limit = 4 col/100 ml)	0 violations/19 test months	100
BOD	(avg. limit = 20 mg/l)	0 violations/19 test months	100
TSS	(avg. limit = 20 mg/l)	0 violations/19 test months	100

## Issues

- There were infrequent minor violations (3) of the total nitrogen limit since June 2005.
- Treatment for phosphorus removal was started approximately October 2006.

Recommendations

- A Notice of Violation is to be issued.

Groundwater summary

- Total nitrogen, total phosphorus & fecal coliform results indicate that groundwater is consistently within levels that are suitable for drinking without treatment.

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Facility: Goose Lane Medical LLC  
 Permit No.: UI0000400  
 Permit Issuance Date: 7/9/2004  
 Treatment Type: Zenon/Recycle

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Monthly	Avg. Daily	Max. Monthly	Avg. Daily	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	4800		30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily		2/Mo.		2/Mo.		2/Mo.	2/Mo.	1/wk.
Feb-05	<b>9660</b>	2544	0	0	0	0	<b>16.96</b>	<b>43.39</b>	0
Feb-05								<b>42.74</b>	0
Mar-05	<b>23418</b>	2651	1.5	0.75	0	0	<b>23.4</b>	<b>39.26</b>	0
Mar-05								<b>17.58</b>	
Apr-05	<b>11788</b>	648	6.4	4.1	1	1	3.14	<b>38.75</b>	0
Apr-05								<b>45.18</b>	
May-05	2204	245	4	2	1	1	2.79	<b>76.68</b>	0
May-05								<b>27.49</b>	
Jun-05	<b>6000</b>	1483	1.2	0.6	0	0	<b>38.15</b>	<b>29.9</b>	0
Jun-05								<b>56</b>	
Jul-05	<b>6000</b>	1967	0	0	4	2	5.97	<b>17.36</b>	0
Jul-05								<b>60.93</b>	
Aug-05	<b>5000</b>	1800	1	1	0	0	8.33	<b>31.67</b>	0
Aug-05								<b>36.56</b>	
Sep-05	<b>8000</b>	1700	2.2	1.7	0	0	5.26	<b>46.5</b>	0.5
Sep-05								<b>83.28</b>	
Oct-05	<b>8000</b>	2000	4.9	3	2	1	6.28	<b>34.53</b>	0
Oct-05								<b>64.69</b>	
Nov-05	<b>5000</b>	1733	3.5	1.75	1	1	4.81	<b>46.09</b>	0
Nov-05								<b>45</b>	
Dec-05	3500	1800	1	1	1	1	<b>10.2</b>	<b>51</b>	0

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
 WATER PERMITTING AND ENFORCEMENT DIVISION

UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING

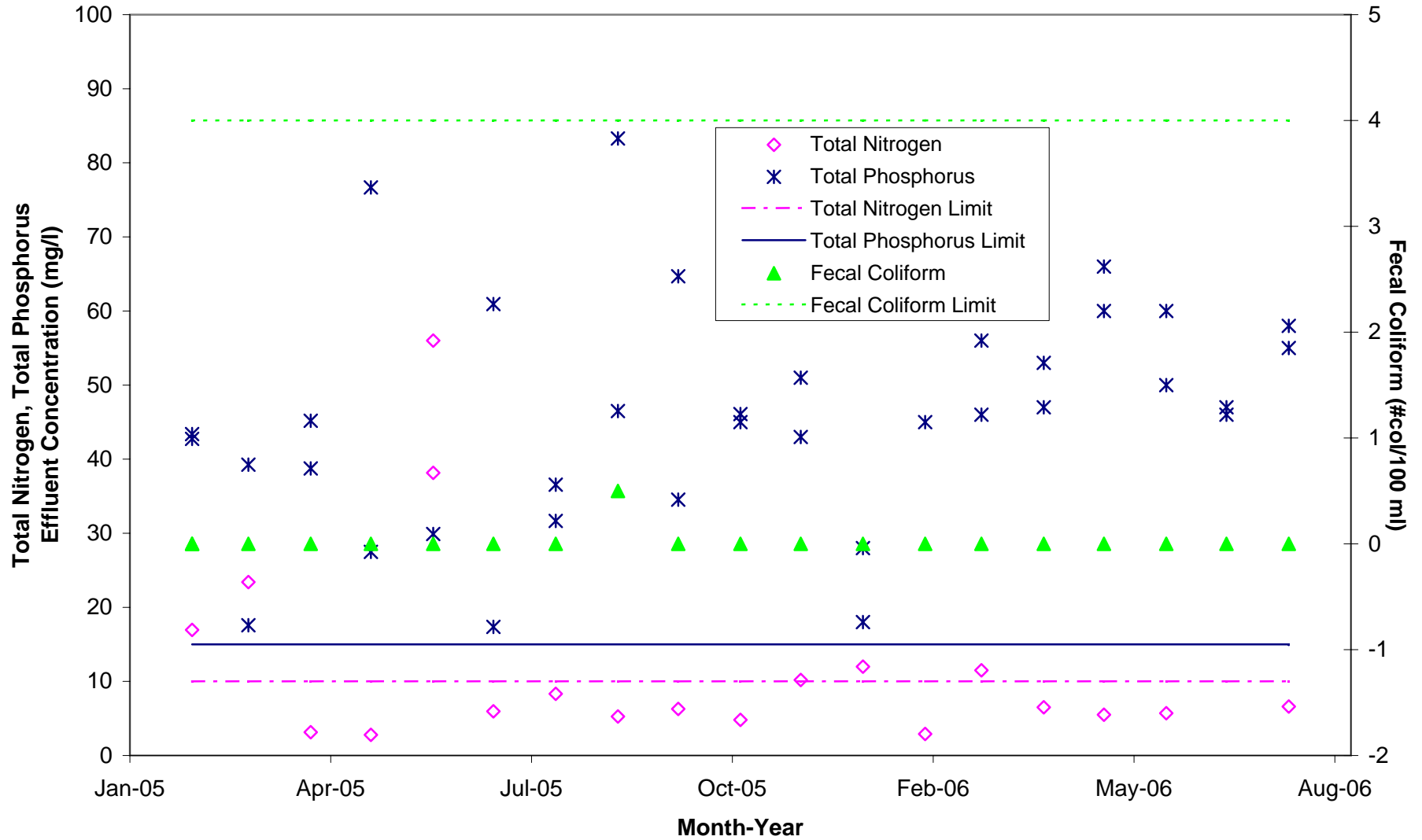
Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Monthly	Avg. Daily	Max. Monthly	Avg. Daily	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
Permit Limit	4800		30	20	30	20	10	15	4
Sample Freq.	Daily		2/Mo.		2/Mo.		2/Mo.	2/Mo.	1/wk.
Dec-05								<b>43</b>	
Jan-06	3000	1100	3	2	2	1.5	<b>12</b>	<b>28</b>	0
Jan-06								<b>18</b>	
Feb-06	2500	1800	23	13	2	2	2.9	<b>45</b>	0
Mar-06	3000	1900	2	1.5	1	1	<b>11.5</b>	<b>46</b>	0
Mar-06								<b>56</b>	
Apr-06	3000	1900	2	2	1	1	6.5	<b>53</b>	0
Apr-06								<b>47</b>	
May-06	4000	1900	2.6	2.5	2	1.5	5.5	<b>66</b>	0
May-06								<b>60</b>	
Jun-06	3000	2200	2.5	2.3	1	1	5.7	<b>60</b>	
Jun-06								<b>50</b>	0
Jul-06	3000	1800	2*	2*	2	1.5		<b>46</b>	0
Jul-06								<b>47</b>	
Aug-06	3000	1700	3.2	2.4	2	1	6.6	<b>58</b>	0
Aug-06								<b>55</b>	

\* Means less than the reported value.

RE Means reporting error. Results inconclusive.

**Bold type** means a violation of permit limit.

**UI PERFORMANCE DATA: SUMMARY OF EFFLUENT MONITORING  
 FEBRUARY 2005 - AUGUST 2006  
 PERMIT NO. UI0000400 - GOOSE LANE MEDICAL LLC**



**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

**Facility: Goose Lane Medical LLC**  
**Permit No.: UI0000400**  
**Sampling Frequency: Quarterly**  
**No. of Monitoring Wells: 3**  
**Review Period: 2/05 - 8/06**

Sampling Month-Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
May-05	MW 1	4.31	0.86	0
	MW 2	1.34	0.42	0
	MW 3	4.81	1.6	0
Aug-05	MW 1	3.04	6.02	0
	MW 2	3.12	0.64	0
	MW 3	NS	NS	NS
Nov-05	MW 1	8.75	ND	0
	MW 2	2.53	ND	0
	MW 3	5.79	0.53	0
Aug-06	MW 1	3	ND	0
	MW 2	2.12	ND	0
	MW 3	4.9	ND	0

ND = Non Detect  
 NS = No Sample

# SUMMARY OF ALTERNATIVE TREATMENT TECHNOLOGY USED WITH ON-SITE WASTEWATER RENOVATION SYSTEMS

**Facility:** Joel Barlow High School, Redding, CT

**Permit Issuance Date:** 11/06/02

**Treatment Technology:** Zenon

**Pollutants Treated:** BOD<sub>5</sub>    TSS    Nitrogen

**Application:** Institutional

**Type:** Treatment

**Class:** New    Upgrade

**Pretreatment discharge type:** Constructed Fill  
Liner  
Natural Soils

**Point of Environment Concern:** Toe of slope

## Comments:

<u>Compliance summary (1/03 – 6/06)</u>	<u>Compliance Rate (%)</u>
Total nitrogen (max limit = 10 mg/l)    26 violations/88 tests	70
Total phosphorus (max limit = 15 mg/l)    1 violations/80 tests	99
Fecal coliform (avg limit = 4 col/100 ml)    0 violations/40 test months	100
BOD (avg limit = 20 mg/l)    0 violations/40 test months	100
TSS (avg limit = 20 mg/l)    0 violations/40 test months	100

## Issues

- There have been no violations of total nitrogen limit since April 2005.
- Facility started operations during construction & upgrade of existing school.

## Recommendations

- A letter is to be sent which cites the violations, requests that an explanation be provided, and reminds the permittee of violation reporting requirements.

## Groundwater summary

- Total nitrogen, total phosphorus & fecal coliform results indicate that groundwater is consistently within levels that are suitable for drinking without treatment. Fecal coliform detection levels are an issue in many tests however and needs to be addressed with the permittee.

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

**Facility:** Joel Barlow High School  
**Permit No.:** UI0000371  
**Permit Issuance Date:** 7/9/2004  
**Treatment Type:** Zenon, No Recycle

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
<b>Permit Limit</b>	12535	8350	30	20	30	20	10	15	200
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Jan-03	15355	8380	2*	2*	1*	1*	28		0
Jan-03							12		
Jan-03							32	1.7	
Feb-03	13347	8716	2*	2*	3	2*	60	9.7	0
Feb-03							16		
Mar-03	17448	8951	2*	2*	3	2*	13	3.3	0
Mar-03							15		
Apr-03	19586	9658	2	2*	2	2*	3	26	0
May-03	8041	6081	2*	2*	5*	5*	13	0.86	10*
Jun-03	20911	8339	16	8*	5*	3*	25	7	5*
Jul-03	6761	4597	2*	2*	5*	5*	7.7	3.8	10*
Aug-03	12414	5536	2*	2*	5*	5*	2.2	1.1	10*
Sep-03	13673	7662	2*	2*	5*	5*	16	0.24	10*
Oct-03	15782	7621	2*	2*	5*	5*	19	3.6	10*
Oct-03							14		
Oct-03							27		
Nov-03	11996	6826	2*	2*	5*	5*	10.2	0.04	10*
Nov-03							18		
Dec-03	8135	5549	2*	2*	5*	5*	27	1.5	10*
Dec-03							37		
Jan-04	7401	5645	2*	2*	5*	5*	21	2.4	10*
Jan-04							25		

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	12535	8350	30	20	30	20	10	15	200
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Feb-04									
Mar-04	10839	6049	2*	2*	5*	5*	<b>13</b>	0.38	10*
Apr-04	6203	5089	2	2	6	5.5	8	0.78	10*
May-04	10600	6564	2	2	5	5	8.7	0.18	10*
Jun-04	18715	7052	2*	2*	5*	5*	4.1	0.34	10*
Jul-04	11918	3327	2*	2*	5*	5*	<b>22</b>	9.7	10*
Aug-04									
Sep-04	6370	1501	2*	2*	5*	5*	8.4	2.5	10*
Oct-04	6475	3382	2*	2*	5*	5*	6.6	1.2	10*
Nov-04	6513	2790	2*	2*	5*	5*	<b>18</b>	2.6	10*
Dec-04	5009	2641	2*	2*	5*	5*	<b>21</b>	3.5	10*
Dec-04							<b>20</b>		
Jan-05	4459	2402	2*	2*	5*	5*	3.1	6.7	10*
Feb-05	4847	2892	7	4*	7	6*	<b>24</b>	9.6	10*
Mar-05	5680	8668	2*	2*	5*	5*	4.7	0.85	10*
Apr-05	9737	3456	2*	2*	5*	5*	<b>16</b>	0.24	10*
May-05	6477	3784	2*	2*	5*	5*	8.7	0.33	10*
Jun-05	5259	2463	2*	2*	16	3*	6.8	9.7	10*
Jul-05	873	194	-	-	-	-	-	-	10*
Aug-05	6785	948	2*	2*	5*	5*	1.6	7.8	10
Sep-05	14407	4729	5*	2*	5*	5*	3.9	2.7	10*
Oct-05	13476	3990	2*	2*	5*	5*	14	3.2	10*
Nov-05	15742	3326	2*	2*	5*	5*	12	7	10*
Dec-05	13258	3580	2*	2*	5*	5*	3	0.43	10*
Jan-06	5134	2480	2*	2*	5*	5*	7	6.2	10*
Feb-06	9767	2727	2*	2*	5*	5*	3	0.79	10*
Mar-06	8731	3612	2*	2*	5*	5*	8.3	0.16	10*
Apr-06	7097	2969	2*	1*	5*	4*	0.7	0.05	10*
May-06	-	3543	2*	2*	5*	5*	0.5	0.22	10*

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
 WATER PERMITTING AND ENFORCEMENT DIVISION

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

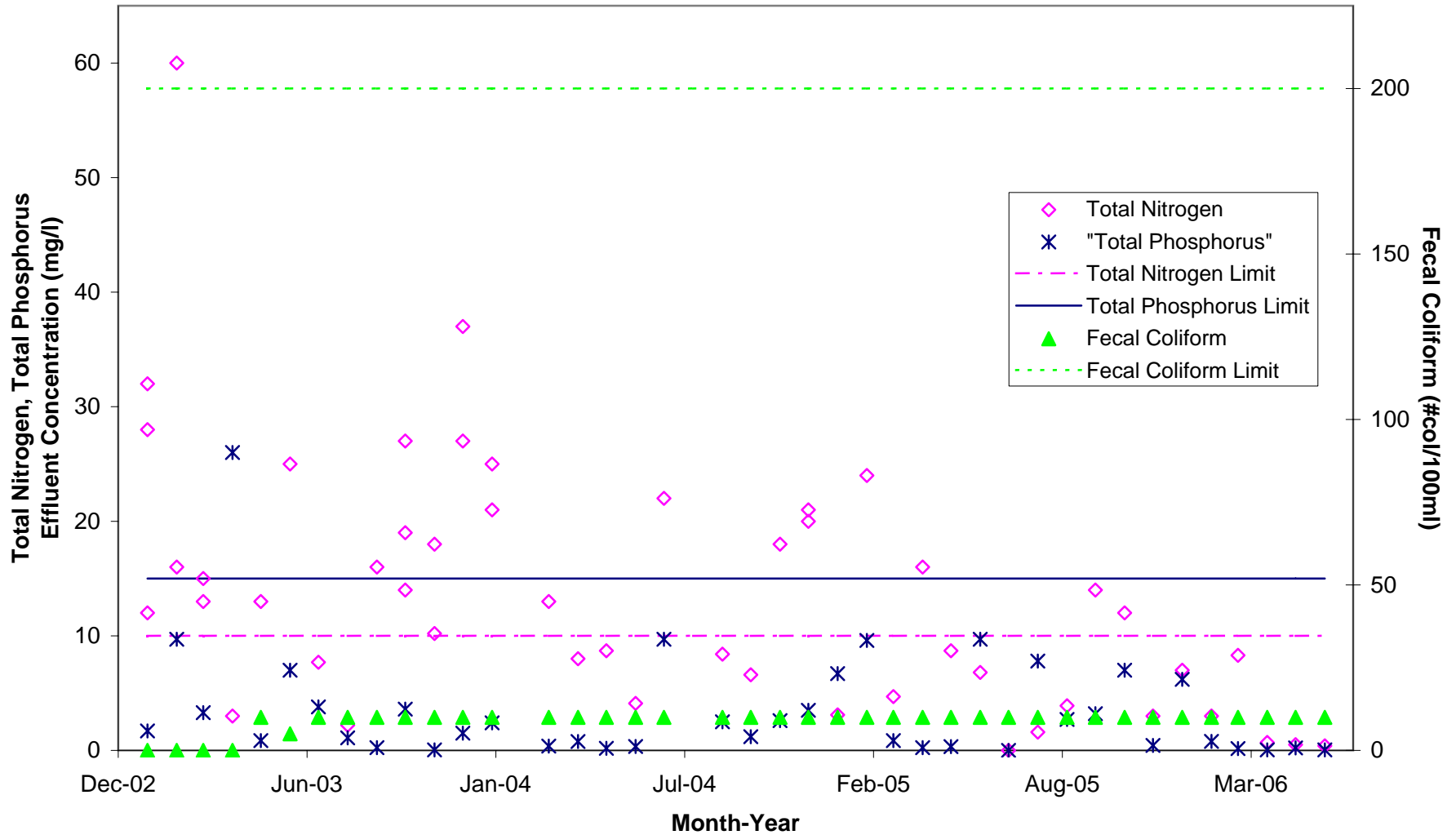
Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	12535	8350	30	20	30	20	10	15	200
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Jun-06	6928	3930	2*	2*	5*	5*	0.4	0.04	10*

\* Means less than the reported value.

**RE** Means reporting error. Results inconclusive.

**Bold type** means a violation of permit limit.

**UI PERFORMANCE DATA: SUMMARY OF EFFLUENT MONITORING  
 JANUARY 2003 - JUNE 2006  
 PERMIT NO. UI0000400 - JOEL BARLOW HIGH SCHOOL**



**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

**Facility:** Joel Barlow High School  
**Permit No.:** UI0000371  
**Sampling Frequency:** Quarterly  
**No. of Monitoring Wells:** 2  
**Review Period:** 2/05 - 8/06

Sampling Month- Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
Jan-03	MW 1	1.2	NR	0
	MW 2	0.7	NR	0
Feb-03	MW 1	1.7	.5*	0
	MW2	0.3	.5*	0
Mar-03	MW1	0.9	NR	0
	MW2	1.1	NR	0
Apr-03	MW 1	3.9	NR	0
	MW 2	2.5	NR	0
May-03	MW 1	9.4	0.51	0
	MW2	4.8	0.29	0
Jun-03	MW1	11.5	NR	10*
	MW2	6.2	NR	10*
Jul-03	MW1	10.5	NR	10*
	MW2	8.9	NR	10*
Aug-03	MW1	10.4	0.14	10*
	MW2	7.8	0.21	10*
Sep-03	MW1	11.2	NR	10*
	MW2	4.9	NR	10*
Oct-03	MW1	9.3	NR	10*
	MW2	3.1	NR	10*
Nov-03	MW1	7.9	0.32	3*
	MW2	1.6	0.07	4*
Dec-03	MW1	5.9	NR	10*
	MW2	2.2	NR	10*
Jan-04	MW1	4.3	NR	10*
	MW2	1.7	NR	10*
Mar-04	MW1	2.8	NR	10*
	MW2	0.9	NR	10*
Apr-04	MW1	2.4	NR	10*
	MW2	1	NR	10*
May-04	MW1	4.1	0.06	10*
	MW2	9	0.04	10*
Jun-04	MW1	2	NR	10*
	MW2	2.5	NR	10*
Jul-04	MW1	2.8	NR	10*
	MW2	1.4	NR	10*
Sep-04	MW1	2	NR	>600
	MW2	1.5	NR	10*

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**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

Sampling Month- Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
Oct-04	MW1	3	NR	>10000
	MW2	1.1	NR	180
Nov-04	MW1	3.6	NR	10*
	MW2	1.3	NR	10*
Dec-04	MW1	3.1	NR	10*
	MW2	1	NR	10*
Jan-05	MW1	2.6	.01*	10*
	MW2	0.6	.01*	10*
Feb-05	MW1	2.5	0.14	10*
	MW2	0.8	0.08	10*
Mar-05	MW1	1.7	NR	10*
	MW2	0.9	NR	10*
Apr-05	MW1	2.3	NR	10*
	MW2	0.7	NR	10*
May-05	MW1	3	0.05	10*
	MW2	0.6	0.04	10
Jun-05	MW1	2.1	NR	10*
	MW2	1	NR	10
Jul-05	MW1	1.7	NR	10*
	MW2	1.8	NR	10*
Aug-05	MW1	5.8	NR	10
	MW2	1.7	NR	10*
Sep-05	MW1	1.8	0.24	10*
	MW2	1	0.13	10*
Oct-05	MW1	1.3	NR	10*
	MW2	0.9	NR	10
Nov-05	MW1	1.3	0.46	10
	MW2	0.7	0.03	10*
Dec-05	MW1	1.8	NR	10*
	MW2	0.47	NR	10*
Jan-06	MW1	1.3	NR	10*
	MW2	0.3	NR	10*
Feb-06	MW1	1	NR	10*
	MW2	0.4	NR	10*
Mar-06	MW1	1.7	NR	10*
	MW2	0.3	NR	10*
Apr-06	MW1	0.7	NR	10*
	MW2	8.2	NR	10*
May-06	MW1	0.4	NR	10*
	MW2	0.3	NR	10*
Jun-06	MW1	0.5	NR	10*
	MW2	0.3	NR	10*

NR = Non Report  
\* = Less than Reported Level

# SUMMARY OF ALTERNATIVE TREATMENT TECHNOLOGY USED WITH ON-SITE WASTEWATER RENOVATION SYSTEMS

**Facility:** Kensington Green, Southbury, CT

**Permit Issuance Date:** 06/27/01

**Treatment Technology:** Zenon

**Pollutants Treated:** BOD<sub>5</sub>    TSS    Nitrogen    Fecal Coliform

**Application:** Residential

**Type:** Treatment/Recycle

**Class:** New

**Pretreatment discharge type:** Fill  
Natural Soils

**Point of Environment Concern:** Wetland boundary

## Comments:

<u>Compliance summary (1/03 – 6/06)</u>			<u>Compliance Rate (%)</u>
Total nitrogen (max limit = 10 mg/l)	15 violations/40 tests		63
Total phosphorus (max limit = 15 mg/l)	4 violations/40 tests		90
Fecal coliform (avg. limit = 4 col/100 ml)	3 violations/3 test months		0
BOD (avg. limit = 20 mg/l)	0 violations/20 test months		100
TSS (avg. limit = 20 mg/l)	1 violation/20 test months		95

## Issues

- All other fecal coliform test results were inconclusive due to reporting errors.
- Missing DMRs are being sought.

## Recommendations

- A Notice of Violation is to be issued.

## Groundwater summary

- Missing DMRs are being sought.

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Facility: Kensington Green  
Permit No.: UI0000343  
Permit Issuance Date: 6/27/2001  
Treatment Type: Zenon/Recycle

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	14400	11100	30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Feb-02	1570	1407	1*	1*	1*	1*	7.39	<b>36.2</b>	0
Mar-02	2900	1594	4*	2.5*	3	2*	6.68	<b>31</b>	0
Mar-02								<b>27</b>	
Apr-02	2900	1633	1*	1*	8	8	8.5	<b>16</b>	0
May-02	3500	1572	2*	2*	5*	5*	2	11	RE
Jun-02	4200	1852	2*	2*	5*	5*	2.6	<b>17</b>	RE
Jul-02	3200	2048	2*	2*	5*	5*	1.3	13	RE
Aug-02	3900	2206	2*	2*	5*	5*	2.5	<b>28</b>	RE
Sep-02	4000	2480	2*	2*	10*	8*	3.2	13	RE
Oct-02	3800	2426	2*	2.*	5.5	5.25*	3.7	6.2	RE
Nov-02	4400	2707	2*	2*	5*	5*	1.28	<b>18</b>	RE
Dec-02	7850	3998	2*	2*	5*	5*	2.4	8.8	RE
Jan-03	4700	2713	2*	2*	13	9*	1.51	6.2	RE
Feb-03	4600	2763	6.8	4.4*	5*	5*	1.59	<b>16</b>	RE
Feb-03								13	
Mar-03	4800	2945	5	3.5*	5*	5*	3.34	9.7	RE
Apr-03	4700	2900	2*	2*	5*	5*	2.15	9.8	RE
May-03	5800	3158	2*	2*	7	6*	2.9	14	RE
Jun-03	5300	3226	2*	2*	5*	5*	1.93	9.7	RE
Jul-03	9000	3048	2*	2*	5*	5*	2.25	15	RE
Aug-03	6930	3708	5*	3.5*	8	6.5*	8.06	5.2	RE

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WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
<b>Permit Limit</b>	14400	11100	30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Sep-03	12500	3674	2*	2*	7	6*	2.5	11	RE
Oct-03	5400	3013	2*	2*	29	17*	8.4	13	RE
Nov-03	5600	2767	5*	5*	2*	2*	8.25	11	RE
Dec-03	14800	4385	2*	2*	5*	5*	7.55	<b>16</b>	RE
Jan-04									
Feb-04									
Mar-04									
Apr-04									
May-04									
Jun-04									
Jul-04									
Aug-04									
Sep-04									
Oct-04									
Nov-04									
Dec-04									
Jan-05									
Feb-05									
Mar-05									
Apr-05									
May-05									
Jun-05									
Jul-05									
Aug-05									
Sep-05									
Oct-05									
Nov-05	4200	2873	2*	2*	11	8.25	<b>27</b>	14	RE
Nov-05							<b>26</b>		

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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WATER PERMITTING AND ENFORCEMENT DIVISION

UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING

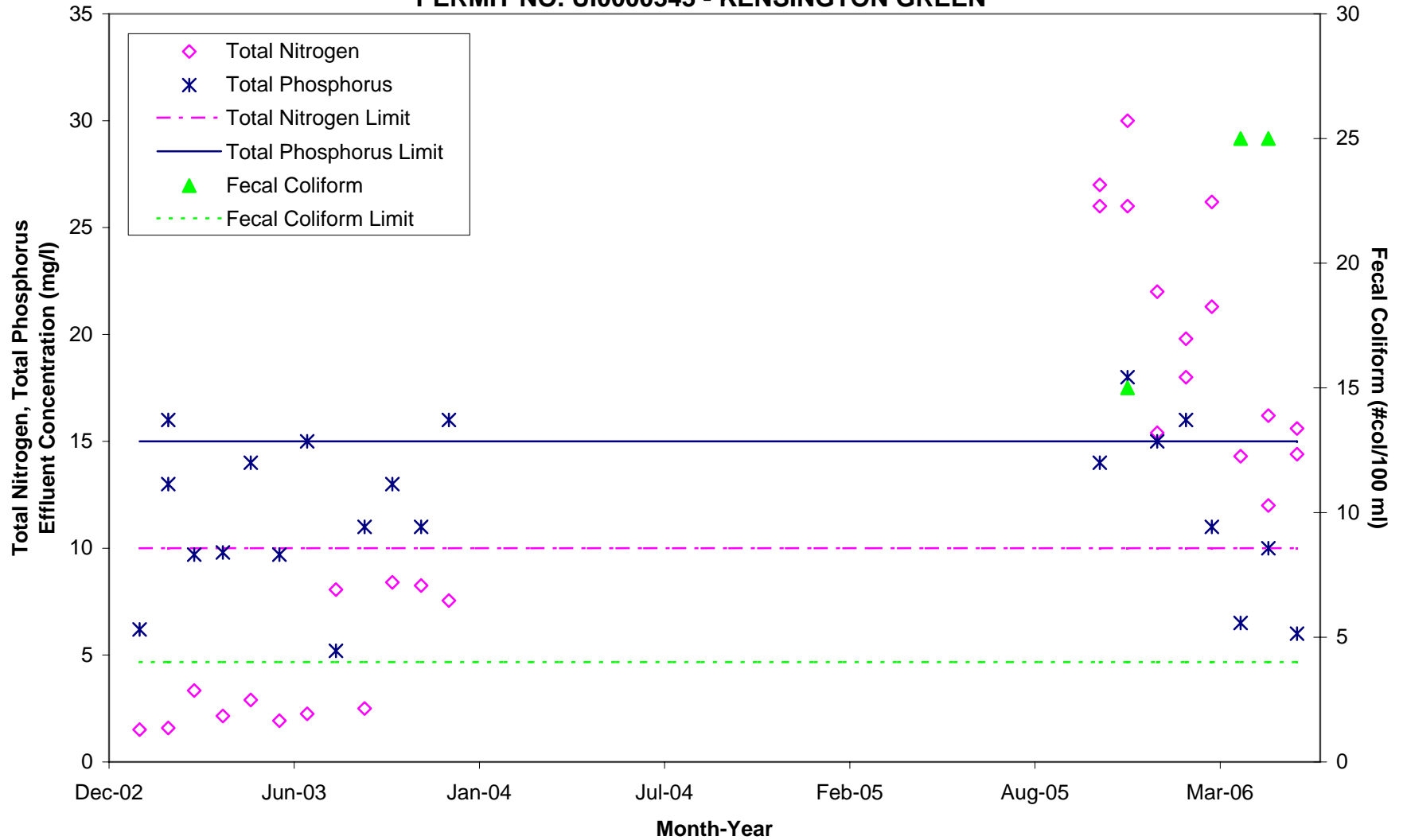
Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
<b>Permit Limit</b>	14400	11100	30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Dec-05	11150	2965	2*	2*	13	10.75	<b>30</b>	<b>18</b>	<b>15*</b>
Dec-05							<b>26</b>		
Jan-06	4400	2897	2*	2*	5*	5*	<b>22</b>	15	RE
Jan-06							<b>15.4</b>		
Feb-06	4100	2821	2*	2*	<b>59</b>	<b>32.5</b>	<b>18</b>	<b>16</b>	RE
Feb-06							<b>19.8</b>		
Mar-06	7050	3045	2*	2*	10	8.25	<b>26.2</b>	11	RE
Mar-06							<b>21.3</b>		
Apr-06	4800	2710	2*	2*	12	9	<b>14.3</b>	6.5	<b>25*</b>
May-06	3800	2811	2*	2*	12	8.75	<b>12</b>	10	<b>25*</b>
May-06							<b>16.2</b>		
Jun-06	8950	3325	2*	2*	14	10.75	<b>15.6</b>	6	RE
Jun-06							<b>14.4</b>		

\* Means less than the reported value.

RE Means reporting error. Results inconclusive.

**Bold type** means a violation of permit limit.

**UI PERFORMANCE DATA: SUMMARY OF EFFLUENT MONITORING**  
**JANUARY 2003 - JUNE 2006**  
**PERMIT NO. UI0000343 - KENSINGTON GREEN**



**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

**Facility:** Kensington Green  
**Permit No.:** UI0000343  
**Sampling Frequency:** Quarterly  
**No. of Monitoring Wells:** 1  
**Review Period:** 1/03-6/06

Sampling Month-Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
Feb-03	MW 1	0.39	0.14	10*
May-03	MW 1	0.52	0.06	10
Aug-03	MW 1	6.35	30	NR
Nov-03	MW 1	0.19	0.02	10*
Nov-05	MW 1	0.21	0.23	10*
Feb-06	MW 1	4.95	.01*	10*
May-06	MW 1	2	0.21	10*

\* = below reported value  
NR = Non Report

# SUMMARY OF ALTERNATIVE TREATMENT TECHNOLOGY USED WITH ON-SITE WASTEWATER RENOVATION SYSTEMS

**Facility:** Mallory Brook Plaza, Barkhamsted, CT

**Permit Issuance Date:** 7/1/97

**Treatment Technology:** Zenon

**Pollutants Treated:** BOD<sub>5</sub>      TSS      Nitrogen      Fecal Coliform

**Application:** Commercial

**Type:** Treatment/Recycle

**Class:** Upgrade      Modification      Repair

**Pretreatment discharge type:** Fill  
Natural Soils

**Point of Environment Concern:** Surface water body

## Comments:

<u>Compliance summary (1/03 – 8/06)</u>			<u>Compliance Rate (%)</u>
Total nitrogen (max limit = 10 mg/l)	73 violations/88 tests		17
Total phosphorus (max limit = 15 mg/l)	66 violations/88 tests		25
Fecal coliform (avg limit = 4 col/100 ml)	5 violations/44 test months		89
BOD (avg. limit = 20 mg/l)	9 violations/44 test months		80
TSS (avg. limit = 20 mg/l)	1 violation/ 44 test months		98

## Issues

- Phosphorus removal treatment is not currently provided.

## Recommendations

- A Notice of Violation is to be issued.

## Groundwater summary

- Groundwater monitoring is not required.

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Facility: Mallory Brook Plaza

Permit No.: UI0000129

Permit Issuance Date: 7/1/1997

Treatment Type: Zenon/Recycle

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
<b>Permit Limit</b>	2000		30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Jan-03			4.5	3.75*	5*	5*	100	15	0
Jan-03							100		
Feb-03			3*	3*	5*	5*	18	9	0
Feb-03							17		
Mar-03			7	5.25	5*	5*	27	24	0
Mar-03							26	22	
Apr-03			33	27.5	6	6	44	35	5
Apr-03							43		
May-03			3*	3*	6	6	51	34	3.5
May-03							33		
Jun-06			3*	3*	5*	5*	52	45	0
Jun-03							51		
Jul-03			3*	3*	5*	5*	120	65	0
Aug-03			700	455	30	25	180	17.5	32.75
Aug-03							187		
Sep-03			3*	3*	7	6	72.4	26	0
Sep-03							51		
Oct-03			3*	3*	5*	5*	59.4	18	0
Nov-03			3*	3*	5*	5*	1.72	24.2	0
Dec-03			3*	3*	5*	5*	77.4	39.4	0
Dec-03								35.8	

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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WATER PERMITTING AND ENFORCEMENT DIVISION

UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (units) (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
Permit Limit	2000		30	20	30	20	10	15	4
Sample Freq.	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Jan-04			3*	3*	5*	5*	48.8	24.2	0
Jan-04							28.3		
Feb-04			3*	3*	5*	5*	0.88	26.4	0
Feb-04							26.1		
Mar-04			26	22	5*	5*	14.4	19.2	0
Mar-04							28.2	23.2	
Apr-04			12.8	8.3	5*	5*	61.4	37.3	0.8
Apr-04							65.3	39.7	
May-04			11.1	7.1	5*	5*	75.6	39.6	0
May-04							71.2	46.9	
Jun-04			77	60	9	7	91.8	45.2	0
Jun-04			42				102	47.6	
Jul-04			105	69	8	7.5	85.1	24.9	0
Jul-04			32.5				122	32.6	
Aug-04			3*	3*	5*	5*	164	50.8	0
Aug-04							156	53.2	
Sep-04			7	5	10	8	145	46.5	0
Sep-04							126	51.4	
Oct-04			3	3	6	6	2.81	26.8	0
Oct-04							26.6		
Nov-04			49	26	46	26	25.3	27.8	1
Nov-04							19.3	31.8	
Dec-04			3*	3*	5*	5*	38.6	38.6	0
Dec-04							40		
Jan-05			3	3	5*	5*	24.2	53.6	0
Jan-05							54.2		

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (units) (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
Permit Limit	2000		30	20	30	20	10	15	4
Sample Freq.	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Feb-05			3*	3*	6	6	2.74	35.5	0
Feb-05								40.5	
Mar-05			7	6	5*	5*	38.5	49.8	0
Mar-05							27.1	29.8	
Apr-05			3*	3*	5*	5*	48.3	46.4	0
Apr-05							48	51.8	
May-05			3*	3*	5*	5*	71.4	54.8	0
May-05							88.9	49.6	
Jun-05			3*	3*	5*	5*	187	47.5	0
Jun-05							182	57	
Jul-05			3*	3*	5*	5*	176	66.5	0
Jul-05							165	62.1	
Aug-05			7	5	6	6	126	39	0
Aug-05							120		
Sep-05			7	5	5*	5*	95.8	33.7	17
Sep-05							77.1	29.8	
Oct-05			25	14	5	5	70.2	26.6	5
Oct-05							78.1	30.8	
Nov-05			11	7	5*	5*	101	34.4	0
Nov-05							107	37	
Dec-05			3*	3*	20	16	75.1	81	0
Dec-05							139	43.2	
Jan-06			15	11	6	6	108	48	0
Jan-06							108	44.5	
Feb-06			16	10	7	6	78.6	38	2
Feb-06							75.9	30.7	
Mar-06			3*	3*	5*	5*	92.5	32.5	1*

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
 WATER PERMITTING AND ENFORCEMENT DIVISION

UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
Permit Limit	2000		30	20	30	20	10	15	4
Sample Freq.	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Mar-06								<b>31.8</b>	
Apr-06			12*	7.5*	16	9	<b>140</b>	13.9	1
Apr-06							<b>140</b>		
May-06			10	8.75	22	12.5	<b>160</b>	<b>15.4</b>	1.5
May-06							<b>130</b>		
Jun-06			<b>65</b>	<b>34</b>	30	18.8	<b>100</b>	12.8	9
Jun-06							<b>88</b>		
Jul-06			<b>60</b>	<b>48</b>	23	17	<b>87</b>	12	1*
Jul-06			<b>35</b>				<b>85</b>		
Aug-06			<b>60</b>	<b>32</b>	6	4	<b>78</b>	12.9	<b>20</b>
Aug-06							<b>79</b>		

\* Means less than the reported value.

RE Means reporting error. Results inconclusive.

**Bold type** means a violation of permit limit.

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Facility: Mallory Brook Plaza

Permit No.: UI0000129

Permit Issuance Date: 7/1/1997

Treatment Type: Zenon/Recycle

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (units) (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
Permit Limit	2000		30	20	30	20	10	15	4
Sample Freq.	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Jul-97			1*	1*	4.5	2.75*	21.3	7.69	0
Aug-97			1*	1*	3	2	46	2.48	0
Aug-97							12		
Sep-97			1*	1*	1	1.0*	19.5	7.01	0.5
Oct-97			2.1	1.27*	1.9	1.25*	24	2.98	0
Oct-97							15		
Oct-97							17		
Nov-97			13.1	4.1*	4	1.75*	12.77	4.5	0
Dec-97			3.6	2.35	1*	1*	6.28	2.29	0
Jan-98			1*	1*	2	2	5.09	1.87	0
Feb-98			5*	5*	14	13	173	111	10
Feb-98							13	25	
Mar-98			11	8*	0	0	25	29	0.25
Mar-98							24	25	
Apr-98			5*	5*	6	6	75	27	1*
Apr-98							36	27	
May-98			5*	5*	4	2.5*	149	34	4*
May-98							122	29	
Jun-98			5*	5*	2	1.5*	122	29	3*
Jun-98							28.4	29.9	
Jul-98			5*	4.3*	8	7.5	21.4	43.7	2*

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION

UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING

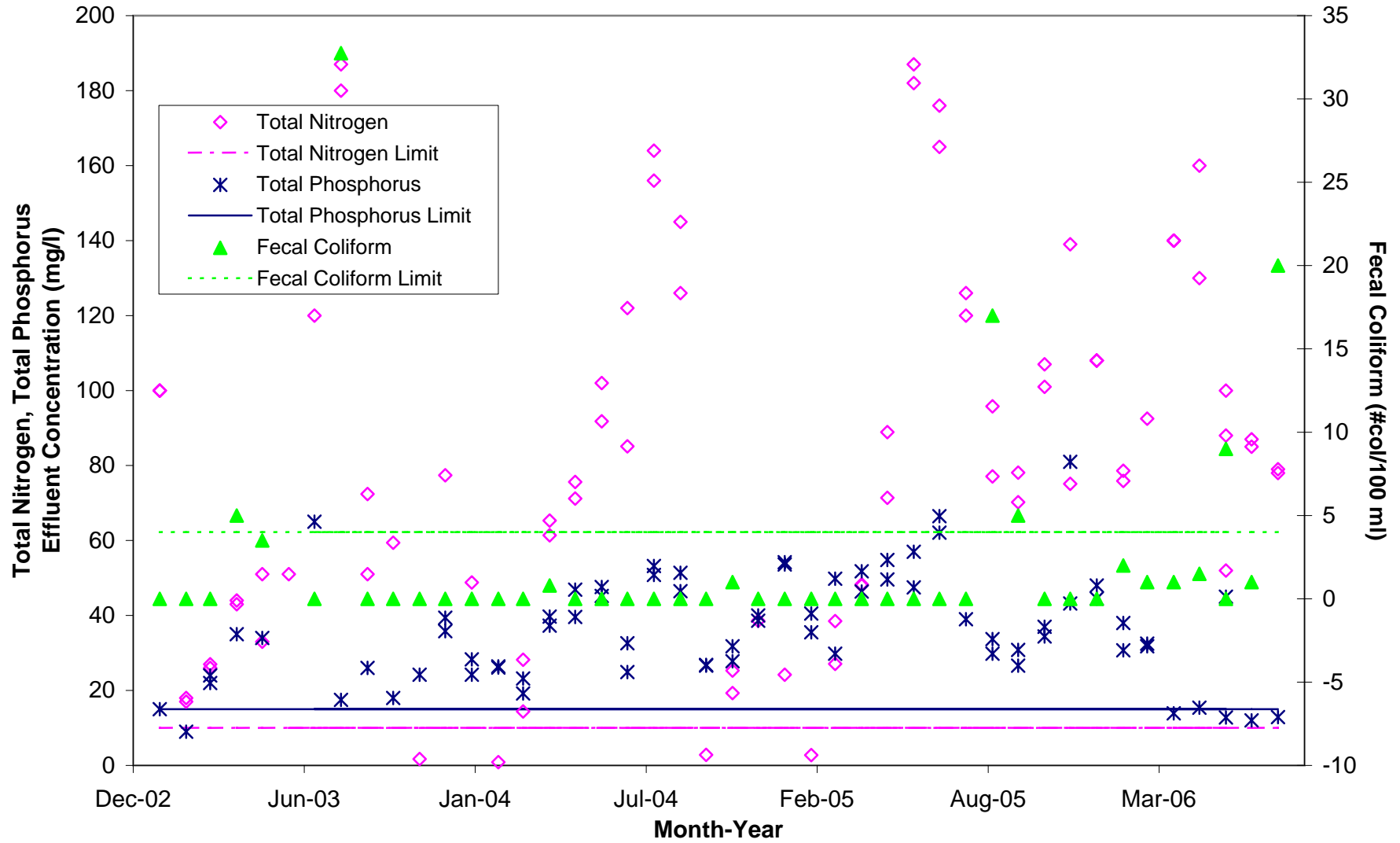
Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (units) (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
Permit Limit	2000		30	20	30	20	10	15	4
Sample Freq.	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Jul-98							<b>15.6</b>	<b>31</b>	
Aug-98			9.1	7.1	2	2	<b>122</b>	<b>37</b>	3*
Aug-98							<b>60</b>	<b>38</b>	
<b>NOTE: MISSING DMRs 9/98-11/01</b>									
Dec-01			3*	3*	5*	5*	0.92	12.4	0
Jan-02			3*	3*	5*	5*	0.97	8.3	2
Feb-02			6*	5*	5*	5*	0.59	8.74	0
Mar-02			3*	3*	8	6.5*	<b>28</b>	13	0
Mar-02							<b>32</b>		
Apr-02			3*	3*	5*	5*	<b>15.3</b>	11.8	0
May-02			3*	3*	5*	5*	<b>13.5</b>	<b>18</b>	0
May-02								<b>17</b>	
Jun-02			3*	3*	5*	5*	2.06	<b>34</b>	0
Jun-02								<b>29</b>	
Jul-02			3*	3*	5*	5*	<b>26</b>	<b>42</b>	0
Jul-02							<b>18</b>	<b>40</b>	
Aug-02			4	3.5	5*	5*	<b>58</b>	<b>19</b>	0
Aug-02							<b>25</b>		
Sep-02			3*	3*	5*	5*	<b>61</b>	9.9	0
Sep-02							<b>17</b>		
Oct-02			3*	3*	5*	5*	4.1	6.4	0
Nov-02			17	15	5*	5*	<b>20</b>	8.6	0

\* Means less than the reported value.

RE Means reporting error. Results inconclusive.

**Bold type** means a violation of permit limit.

**UI PERFORMANCE DATA: SUMMARY OF EFFLUENT MONITORING**  
**JANUARY 2003 - AUGUST 2006**  
**PERMIT NO. UI0000129 - MALLORY BROOK PLAZA**



# SUMMARY OF ALTERNATIVE TREATMENT TECHNOLOGY USED WITH ON-SITE WASTEWATER RENOVATION SYSTEMS

**Facility:** Salisbury School, Salisbury, CT

**Permit Issuance Date:** 11/26/03

**Treatment Technology:** Zenon

**Pollutants Treated:** BOD<sub>5</sub>    TSS    Nitrogen    Fecal Coliform

**Application:** Institutional

**Type:** Treatment

**Class:** Repair

**Pretreatment discharge type:** Constructed Fill  
Liner

**Point of Environment Concern:** Wetland boundary

## Comments:

<u>Compliance summary (12/03 – 8/06)</u>			<u>Compliance Rate (%)</u>
Total nitrogen (max limit = 10 mg/l)	5 violations/66 tests		92
Total phosphorus (no permit limit)	----		---
Escherichia coli (avg limit = 10 col/100 ml)	1 violation/33 test months		97
BOD (avg. limit = 20 mg/l)	0 violations/33 test months		100
TSS (avg. limit = 20 mg/l)	1 violation/33 test months		97

## Issues

- There were no violations of the total nitrogen limit since January 2005.

## Recommendations

- A letter is to be sent which cites the violations, requests that an explanation be provided, and reminds the permittee of violation reporting requirements.

## Groundwater summary

- Total nitrogen, total phosphorus & fecal coliform results indicate that groundwater is consistently within levels that are suitable for drinking without treatment.

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

**Facility:** Salisbury School  
**Permit No.:** UI0000396  
**Permit Issuance Date:** 11/26/2003  
**Treatment Type:** Zenon, No Recycle

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Escherichia Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	36800	24500	30	20	30	20	10		10
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Dec-03	35530	24500	3*	3*	1*	1*	9.5	15.1	1*
Jan-04	25930	16348	3*	3*	1*	1*	9.3	34.7	1
Feb-04	23250	16174	3*	3*	1*	1*	<b>12</b>	26.9	1*
Feb-04							<b>11</b>		
Mar-04	22130	9421	3*	3*	1.8	1.6	<b>15</b>	31.7	1*
Mar-04							<b>11</b>		
Apr-04	34160	24009	3*	3*	1*	1*	7.8	37.8	1*
May-04	26200	20204	3*	3*	1*	1*	9.1	31.5	1*
Jun-04	17230	7915	3*	3*	5.8	3.7	6.4	16.4	
Jul-04	17900	11290	3*	3*	1.6	1.4	7	6.2	1*
Aug-04	16350	6704	3*	3*	5.8	3.4	8.4	10.9	1*
Sep-04	35060	16877	3*	3*	1*	1*	5.9	21	1*
Oct-04	34270	22030	3*	3*	1*	1*	8.5	12.9	1*
Nov-04	31710	16804	3*	3*	1*	1*	8.2	21.9	1*
Dec-04	30150	15945	3*	3*	1.4	1.2	8.5	38.4	1*
Jan-05	31940	24052	3*	3*	1*	1*	<b>10.5</b>	14.1	1*
Feb-05	31640	22945	3*	3*	1*	1*	6.4	16.6	1*
Mar-05	31350	15813	3*	3*	1*	1*	2.9	21.5	1*
Apr-05	33820	19541	3*	3*	3.2	2.1	4.7	12.6	1*
May-05	20075	16239	3*	3*	1*	1*	6.6	23.7	1*
Jun-05	17230	7915	3*	3*	2.2	1.8	5.5	55.6	1*

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION

UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING

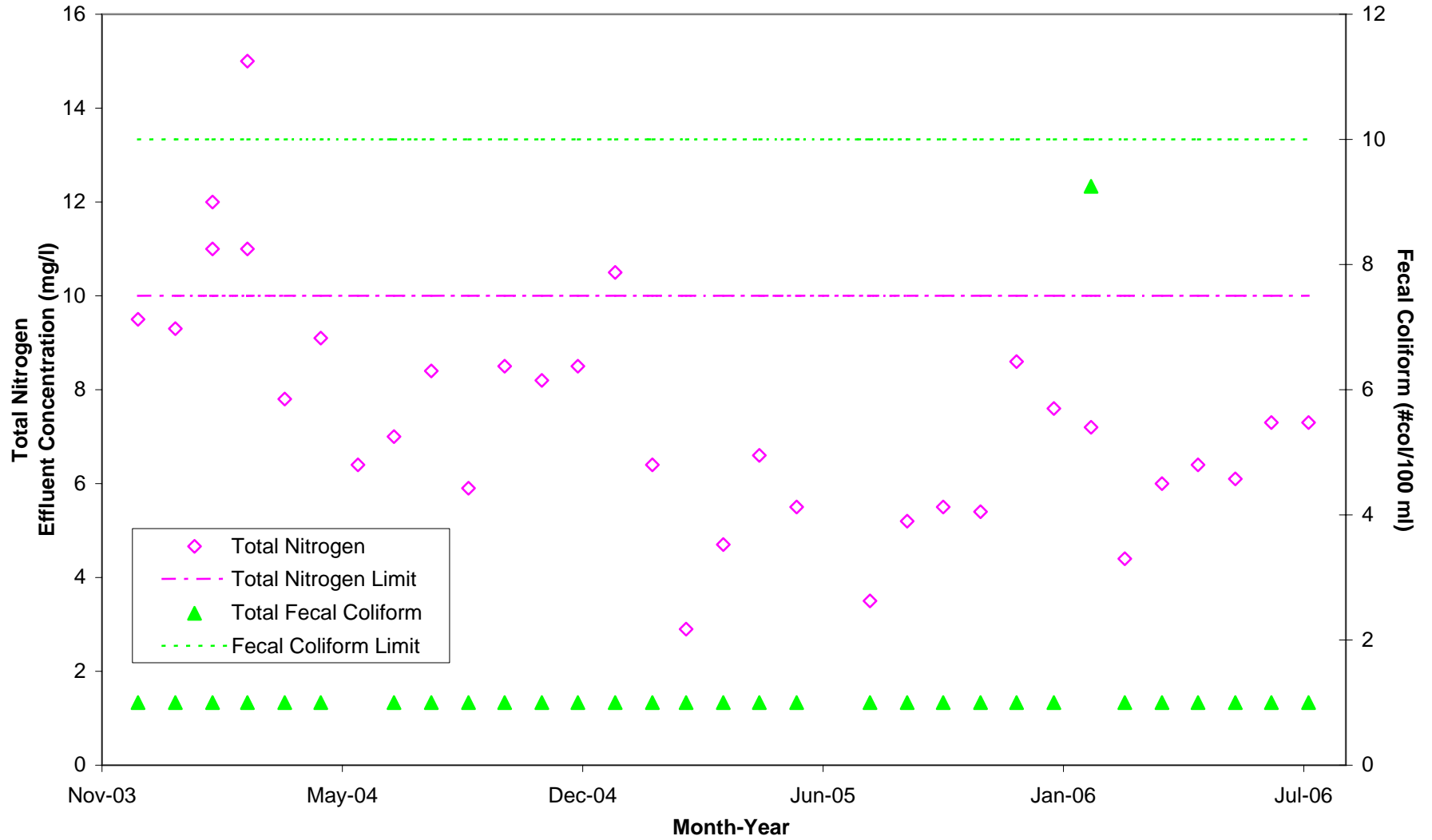
Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Escherichia Coliform
	Max. Daily (units) (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
Permit Limit	36800	24500	30	20	30	20	10		10
Sample Freq.	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Jul-05									
Aug-05	11130	5256	3*	3*	5.8	3.4	3.5	27.4	1*
Sep-05	25751	13853	3*	3*	1*	1*	5.2	8.9	1*
Oct-05	35777	<b>25085</b>	3*	3*	1*	1*	5.5	23.7	1*
Nov-05	28000	15931	3*	3*	1*	1*	5.4	20	1*
Dec-05	33071	17433	3*	3*	1.4	1.2	8.6	15.8	1*
Jan-06	32930	22319	3*	3*	4.3	2.2	7.6	8.02	1*
Feb-06	29030	17864	3*	3*	1*	1*	7.2	13.2	9.25
Mar-06	18610	7556	3*	3*	1*	1*	4.4	15.7	1*
Apr-06	22490	15539	3*	3*	5.7	5.3	6	12.6	1*
May-06	33170	18819	3*	3*	1*	1*	6.4	17.4	1*
Jun-06	23193	11129	3*	3*	3.8	3.3	6.1	22.9	1*
Jul-06	17345	13098	3*	3*	<b>49</b>	<b>35.9</b>	7.3	24.3	1*
Aug-06	16940	9196	3*	3*	5.8	3.4	7.3	8.1	1*

\* Means less than the reported value.

RE Means reporting error. Results inconclusive.

**Bold type** means a violation of permit limit.

**UI PERFORMANCE DATA: SUMMARY OF EFFLUENT MONITORING**  
**DECEMBER 2003 - AUGUST 2006**  
**PERMIT NO. UI0000396 - SALISBURY SCHOOL**



**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

**Facility:** Salisbury School  
**Permit No.:** UI0000396  
**Sampling Frequency:** Quarterly  
**No. of Monitoring Wells:** 2  
**Review Period:** 12/03-8/06

Sampling Month-Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
Feb-03	MW 1	6.3	0.952	4*
	MW 2	3.7	0.327	4*
May-03	MW 1	2.6	0.304	4*
	MW 2	3.8	0.772	4*
Aug-03	MW 1	<b>1.9</b>	0.13	1*
	MW 2	<b>1.8</b>	0.086	1*
Nov-03	MW 1	1.9	0.584	1*
	MW 2	2.7	1.25	1*
Feb-04	MW 1	FROZEN	FROZEN	FROZEN
	MW 2	3	0.05	1*
May-04	MW 1	3.1	0.119	1*
	MW 2	4.3	0.049	1*
Aug-04	MW 1	1.1	0.085	2*
	MW 2	5.1	0.205	2*
Nov-04	MW 1	1*	0.64	2*
	MW 2	2.9	0.594	2*
Feb-05	MW 1	2	0.828	2*
	MW 2	4.4	3.6	2*
May-05	MW 1	2	0.299	2*
	MW 2	3.7	0.217	2*
Nov-05	MW 1	1.1	0.083	6
	MW 2	3.3	0.644	2*
Feb-06	MW 1	1.2	0.395	2*
	MW 2	2.7	0.153	2*
May-06	MW 1	4.7	0.243	2*
	MW 2	3.2	0.266	2*
Aug-06	MW 1	1.1	0.19	2*
	MW 2	1.9	0.443	2*

\* = less than reported value

# SUMMARY OF ALTERNATIVE TREATMENT TECHNOLOGY USED WITH ON-SITE WASTEWATER RENOVATION SYSTEMS

**Facility:** The Hearth, Madison, CT

**Permit Issuance Date:** 03/04/02

**Treatment Technology:** Zenon

**Pollutants Treated:** BOD<sub>5</sub>    TSS    Nitrogen    Phosphorus

**Application:** Residential

**Type:** Treatment

**Class:** New

**Pretreatment discharge type:** Constructed Fill  
Liner

**Point of Environment Concern:** Toe of slope

## Comments:

<u>Compliance summary (1/03 –5/06)</u>			<u>Compliance Rate (%)</u>
Total nitrogen (max limit = 10 mg/l)	0 violations/70 tests		100
Total phosphorus (max limit = 1 mg/l)	8 violations/70 tests		89
Fecal coliform No permit limit			---
BOD (avg. limit = 20 mg/l)	0 violations/ 35 test months		100
TSS (avg. limit = 20 mg/l)	0 violations/ 35 test months		100

## Issues

- No significant issues.

## Recommendations

A letter is to be sent which cites the violations, requests that an explanation be provided, and reminds the permittee of violation reporting requirements.

## **Groundwater summary**

- Total nitrogen, total phosphorus & fecal coliform results indicate that groundwater is consistently within levels that are suitable for drinking without treatment.

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

**Facility:** The Hearth  
**Permit No.:** UI0000354  
**Permit Issuance Date:** 3/4/2002  
**Treatment Type:** Zenon with Phosphorus Removal, No Recycle

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	13125	8750	30	20	30	20	10	1	
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Mar-02	1440	1091	3.28	2.14	9	5	<b>12</b>	<b>13</b>	0
Mar-02							<b>14</b>	<b>11.6</b>	
Apr-02	4590	1349	1.23	2*	6	3.5	10	<b>15.3</b>	1*
Apr-02								<b>4.1</b>	
May-02	1510	1017	1*	1*	2	1.5	6.6	<b>18</b>	0
May-02								<b>12</b>	
Jun-02	3520	1336	2*	1.5*	1	1	2.37	<b>8.5</b>	0
Jun-02								<b>16</b>	
Jul-02	2190	1476	1*	1*	3	2*	1.77	<b>3.7</b>	0
Jul-02								<b>4.3</b>	
Aug-02	7350	1521	1*	1*	1*	1*	3.2	<b>8</b>	1
Aug-02								<b>10.6</b>	
Sep-02	1786	1359	3.9	2*	3	2.5	2.2	<b>4</b>	0
Sep-02								<b>5.7</b>	
Oct-02	1829	1468	1*	1*	1*	1*	2.6	<b>68</b>	0
Oct-02								<b>7.9</b>	
Nov-02	1857	1373	1.7	1.4	5	3*	2.5	<b>7</b>	0
Nov-02								<b>7</b>	
Dec-02	<b>14910</b>	1690	1*	1*	2	1.5*	2	0.2	0
Jan-03	1698	1408	1*	1*	1	1	8.4	<b>1.1</b>	0
Feb-03	1893	1486	1*	1*	6	5	2.4	0.74	0

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (units) (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
<b>Permit Limit</b>	13125	8750	30	20	30	20	10	1	
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Mar-03	1806	1482	1*	1*	8	4.5	3.6	<b>1.5</b>	0
Mar-03								<b>1.9</b>	
Apr-03									
May-03	3891	2274	ND	ND	ND	ND	1.5	0.14	ND
Jun-03									
Jul-03	2713	2208	ND	ND	ND	ND	3.1	0.8	ND
Aug-03	3628	2110	ND	ND	ND	ND	2.2	0.07	ND
Sep-03									
Oct-03	3984	2675	2.1	1.1	ND	ND	1.8	0.4	ND
Nov-03	3873	2927	ND	ND	ND	ND	2.5	<b>1.2</b>	ND
Dec-03									
Jan-04	7062	3404	ND	ND	13	8.5	3.1	0.35	ND
Feb-04	3654	2897	0	0	4	2	4.2	0.19	0
Mar-04	4617	2187	ND	ND	ND	1*	2.03	<b>1.3</b>	ND
Apr-04	5202	2566	ND	ND	ND	1*	0.96	0.31	ND
May-04	4997	2435	4*	4*	4	2	1.1	0.29	10*
Jun-04	2945	2420	4*	4*	2	1	1.5	0.27	10*
Jul-04	3861	2968	4*	4*	10	6	4.1	0.26	10*
Aug-04	5570	3503	4*	4*	1	1*	3	0.15	10*
Sep-04	4358	3148	4*	4*	2	1	2	0.08	10*
Oct-04	3430	2385	4*	4*	5	3	1.8	0.35	10*
Nov-04									
Dec-04	4274	1930	4*	4*	ND	ND	1.1	0.079	10*
Jan-05	4284	1790	4*	4*	3	3	1.5	0.78	10*
Feb-05	2067	1698	4*	4*	6	5.5	2.6	0.42	10*
Mar-05	4252	2335	4*	4*	1	1	4.3	0.79	10*
Apr-05	<b>17075</b>	3637	4*	4*	6	3	2.8	0.5	10*
May-05									

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
 WATER PERMITTING AND ENFORCEMENT DIVISION

UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING

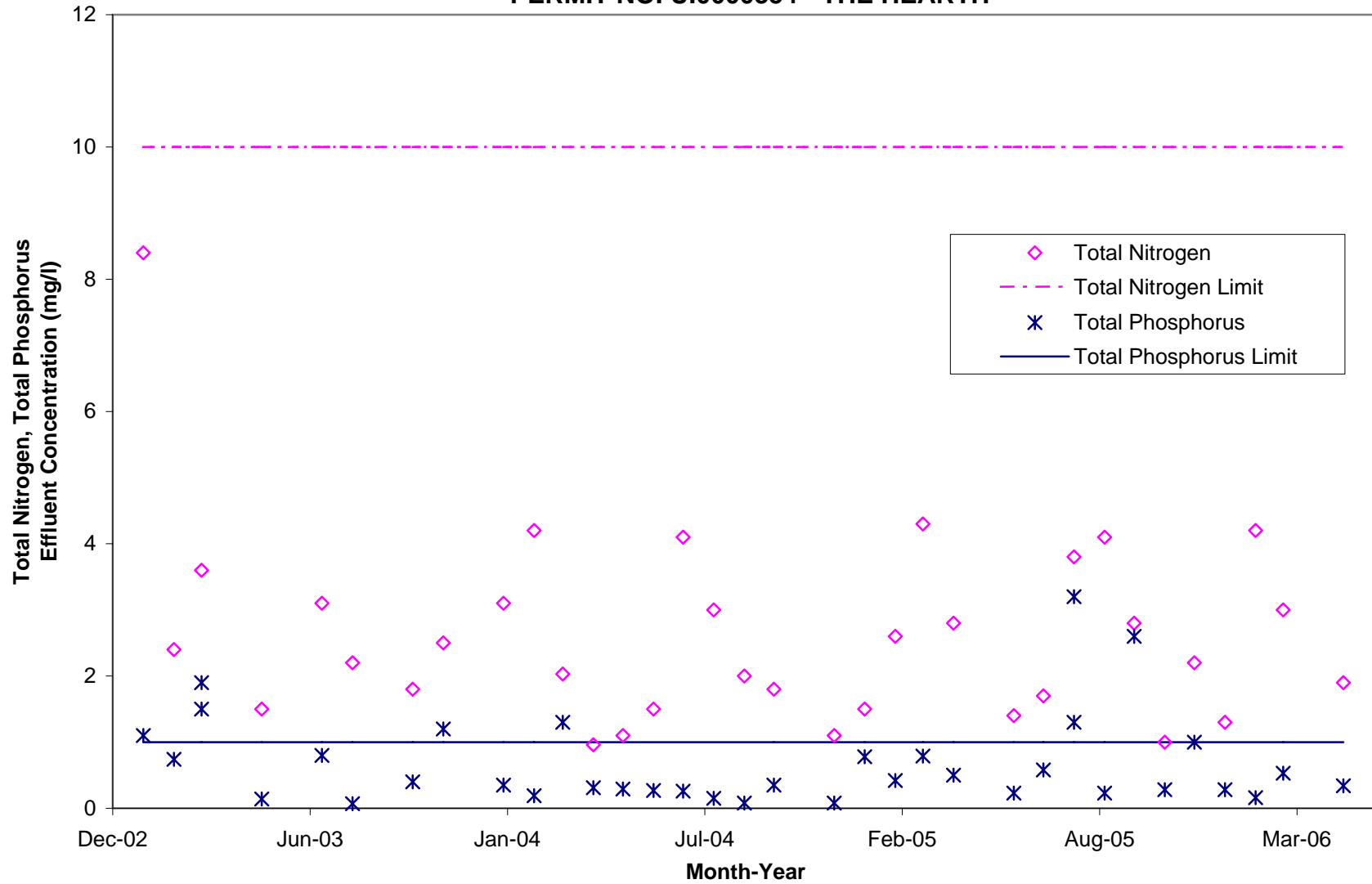
Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (units) (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
Permit Limit	13125	8750	30	20	30	20	10	1	
Sample Freq.	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Jun-05	3775	1574	4*	4*	2	1	1.4	0.23	15*
Jul-05	4920	2748	4*	4*	13	11	1.7	0.58	5*
Aug-05	3704	2603	4*	4*	2	1	3.8	<b>1.3</b>	140
Aug-05								<b>3.2</b>	
Sep-05	7646	2838	4*	4*	22	14	4.1	0.23	10*
Oct-05	2961	2394	4*	4*	10	8	2.8	<b>2.6</b>	5*
Nov-05	6251	2793	4*	4*	1	1	1	0.28	10*
Dec-05	2992	2092	4*	4*	1	1	2.2	1	10*
Jan-06	3184	2663	4*	4*	6	3.5	1.3	0.28	10*
Feb-06	5893	2726	4*	4*	5	4.5	4.2	0.16	10*
Mar-06	4265	2783	4*	4*	25	13	3	0.53	10*
Apr-06									
May-06	9899	8724	4*	3*	5	3	1.9	0.34	10*

\* Means less than the reported value.

RE Means reporting error. Results inconclusive.

**Bold type** means a violation of permit limit.

UI PERFORMANCE DATA: SUMMARY OF EFFLUENT MONITORING  
JANUARY 2003 - MAY 2006  
PERMIT NO. UI0000354 - THE HEARTH



**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

**Facility:** The Hearth  
**Permit No.:** UI0000354  
**Sampling Frequency:** Monthly  
**No. of Monitoring Wells:** 2  
**Review Period:** 1/03-5/06

Sampling Month-Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
Jan-03	MW 1	6.86	2	10*
	MW 2	1.53	0.54	10*
Feb-03	MW 1	2.16	0.98	10*
	MW 2	5.9	0.17	10*
Mar-03	MW 1	1.22	0.53	10*
	MW 2	2.8	1.4	10*
May-03	MW 1	1.78	0.28	ND
	MW 2	4.81	1.4	ND
Jul-03	MW 1	2.09	0.25	ND
	MW 2	3.21	0.41	ND
Aug-03	MW 1	0.11	ND	ND
	MW 2	4	ND	ND
Oct-03	MW 1	3.8	4.5	0
	MW 2	5	5.58	0
Nov-03	MW 1	ND	ND	0
	MW 2	0.67	ND	0
Dec-03	MW 1	DRY	DRY	DRY
	MW 2	7.79	ND	0
Feb-04	MW 1	DRY	DRY	0
	MW 2	7.79	0	0
Mar-04	MW 1	1.86	ND	5
	MW 2	0.61	ND	0
Apr-04	MW 1	3.2	0	0
	MW 2	3.36	0	0
May-04	MW 1	0.54	ND	0
	MW 2	ND	ND	0
Jul-04	MW 1	3.44	ND	0
	MW 2	19.5	0.72	0
Aug-04	MW 1	1.4	ND	1
	MW 2	2.1	0.42	43
Dec-04	MW 1	1	ND	0
	MW 2	1.1	0.78	4
Jan-05	MW 1	7.5	1.4	0
	MW 2	7.49	0.68	0
Feb-05	MW 1	1.37	0.61	0
	MW 2	0.63	0.4	0
Mar-05	MW 1	ND	ND	0
	MW 2	1.9	ND	0
Apr-05	MW 1	1.6	ND	1
	MW 2	1.1	ND	3

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

Sampling Month-Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
Jun-05	MW 1	1.1	3.5	0
	MW 2	1.4	ND	0
Jul-05	MW 1	1.2	0.25	27
	MW 2	0.8	2.3	53
Aug-05	MW 1	1.2	0.25	0
	MW 2	0.8	2.3	0
Sep-05	MW 1	10.11	0.75	2
	MW 2	1	0.75	2
Oct-05	MW 1	0.7	1.4	8
	MW 2	2.1	0.47	3
Nov-05	MW 1	1	ND	0
	MW 2	2.6	ND	27
Dec-05	MW 1	1.5	ND	0
	MW 2	2.29	ND	0
Jan-06	MW 1	1.13	ND	0
	MW 2	1.28	ND	0
Feb-06	MW 1	0.99	0.13	0
	MW 2	1.44	0.03	0
Mar-06	MW 1	1.07	0.3	0
	MW 2	2.48	ND	0
Apr-06	MW 1	2.64	0.25	0
	MW 2	2.73	0.04	0
May-06	MW 1	1.81	0.26	0
	MW 2	2.2	0.1	0

**ND = Non Detect**

\* = Less than reported value

# SUMMARY OF ALTERNATIVE TREATMENT TECHNOLOGY USED WITH ON-SITE WASTEWATER RENOVATION SYSTEMS

**Facility:** Westbrook Factory Stores, Westbrook, CT

**Permit Issuance Date:** 03/11/96

**Treatment Technology:** Zenon

**Pollutants Treated:** BOD<sub>5</sub>    TSS    Nitrogen    Phosphorus    Fecal Coliform

**Application:** Commercial

**Type:** Treatment/Recycle

**Class:** New

**Pretreatment discharge type:** Constructed Fill  
Natural Soils

**Point of Environment Concern:** Toe of slope

## Comments:

<u>Compliance summary (1/03 – 6/06)</u>			<u>Compliance Rate (%)</u>
Total nitrogen (max limit = 10 mg/l)	23 violations/84 tests		73
Total phosphorus (max limit = 15 mg/l)	0 violations/84 tests		100
Fecal coliform (avg limit = 4 col/100 ml)	0 violations/42 test months		100
BOD (avg. limit = 20 mg/l)	0 violations/42 test months		100
TSS (avg. limit = 20 mg/l)	0 violations/42 test months		100

## Issues

- There were infrequent violations (3) of the total nitrogen limit since February 2004.

## Recommendations

- A letter is to be sent which cites the violations, requests that an explanation be provided, and reminds the permittee of violation reporting requirements.

## Groundwater summary

- Total nitrogen, total phosphorus and fecal coliform results indicate that groundwater is consistently within levels that are suitable for drinking without treatment. There were reporting issues with several monitoring periods that need to be addressed with the permittee.

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

**Facility:** Westbrook Factory Stores  
**Permit No.:** UI0000290  
**Permit Issuance Date:** 3/11/1996  
**Treatment Type:** Zenon/Recycle with Phosphorus Removal

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	4126		30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily	Daily	2/mo.		2/mo.	2/mo.		2/mo.	1/wk.
Mar-96			1*	1*	15	3.6	<b>10.52</b>	0.52	0.2
Apr-96			1.6	1.1	8	2*	<b>26.9</b>	0.3	0
May-96			1*	1*	2.8	1.4	<b>13</b>	0.08	1*
Jun-96			1	1	1.4	1.3	9.5	0.13	0
Jul-96			1.8	1.1	4	2.2	10	0.43	0
Aug-96			1.2	1.1	17	3.3	<b>15.2</b>	2.89	0
Sep-96			3.6	1.5	5.5	3.2	<b>22.3</b>	6	0
Oct-96			1*	1*	2.5	1	4.9	1.5	0
Nov-96			1	1	7	4	6.7	2.3	0
Dec-96			1*	1*	1*	1*	6.65	0.68	2
Jan-03	<b>6560</b>	2399	3*	2.5*	3	2	<b>26</b>	9.7	0
Jan-03							<b>11</b>		
Feb-03	3380	1023	1*	1*	4	3	<b>11.35</b>	9.05	0
Mar-03	3290	338	1.52	1*	2	1.5	9	2.85	0
Apr-03									
May-03	4090	1131	ND	ND	ND	ND	<b>21</b>	0.93	ND
May-03							<b>28</b>		
Jun-03	3980	1256	ND	ND	20	10	<b>17</b>	2	ND
Jun-03							<b>33</b>		
Jul-03	1940	1389	ND	ND	ND	ND	<b>39</b>	4.8	ND

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (units) (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
<b>Permit Limit</b>	4126		30	20	30	20	10	15	4
<b>Sample Freq.</b>	Daily	Daily	2/mo.		2/mo.	2/mo.		2/mo.	1/wk.
Jul-03							<b>67</b>		
Aug-03	2060	1079	ND	ND	ND	ND	<b>65</b>	13	ND
Aug-03							<b>46</b>		
Sep-03	2160	1217	0	0	0	0	<b>37</b>	14	0
Sep-03							<b>37</b>		
Oct-03	<b>5430</b>	1346	2.7	1.4	ND	ND	<b>30</b>	5.5	ND
Oct-03							<b>39</b>		
Nov-03	2347	1158	ND	ND	ND	ND	<b>65</b>	7.6	ND
Nov-03							<b>52</b>		
Dec-03	3166	1152	ND	ND	2	1	<b>17</b>	1.7	ND
Dec-03							<b>12</b>		
Jan-04	2016	809	ND	ND	6	3	6.9	0.058	ND
Feb-04	1213	673	0	0	6	4.5	<b>14</b>	0.039	0
Mar-04	1753	727	ND	ND	7	3.5	5.9	0.8	ND
Apr-04	4000	1140	ND	ND	4	3	3.3	2	ND
May-04	3560	1039	4*	4*	4	3	2.84	0.098	ND
Jun-04	2593	1138	4*	4*	2	1	4.3	0.098	RE
Jul-04	3975	1158	4*	4*	10	5	5.4	0.068	RE
Aug-04	2193	1141	4*	4*	6	3	6.8	1.4	RE
Sep-04	4105	1312	4*	4*	7	5	5.3	12	RE
Oct-04	1947	838	4*	4*	5	5	3.3	0.24	RE
Nov-04	<b>5420</b>	1633	4*	4*	7.2	4.1	7.2	0.04	RE
Dec-04	1765	896	4*	4*	9	5	3	0.046	2.5*
Jan-05	1323	585	4*	4*	4	2	8.3	ND	0
Feb-05	1290	719	4*	4*	7	3.5	<b>23</b>	0.043	0
Mar-05	1925	809	4*	4*	6	5.5	4.2	0.023	0.5

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
 WATER PERMITTING AND ENFORCEMENT DIVISION

UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING

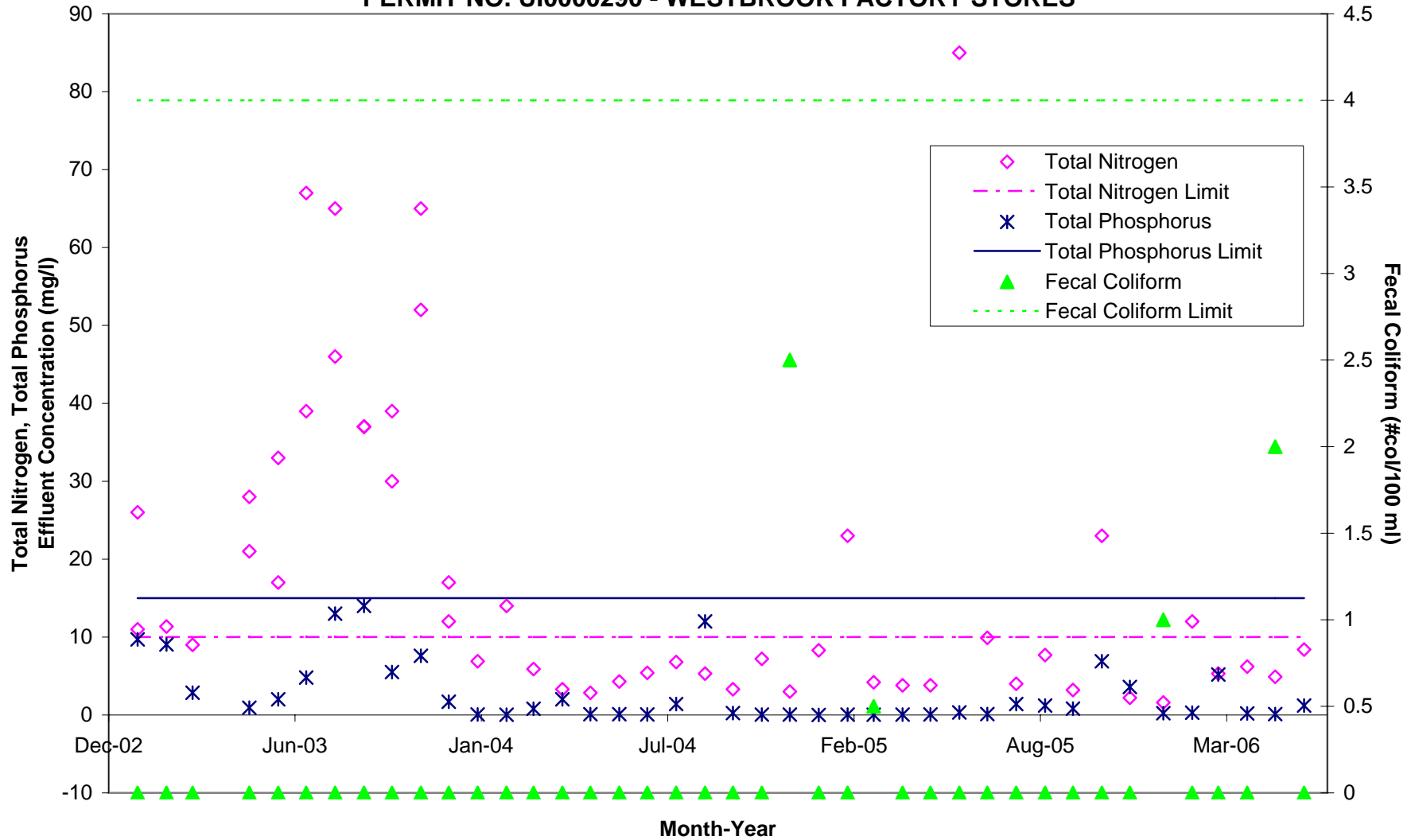
Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (units) (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
Permit Limit	4126		30	20	30	20	10	15	4
Sample Freq.	Daily	Daily	2/mo.		2/mo.	2/mo.		2/mo.	1/wk.
Apr-05	1883	613	4*	4*	13	9	3.8	0.054	0
May-05	1402	526	4*	4*	6	3	3.8	0.058	0
Jun-05	<b>12985</b>	2372	4*	4*	13	7	<b>85</b>	0.33	0
Jul-05	<b>7408</b>	1411	4*	4*	4	2.5	9.9	0.12	0
Aug-05	3635	391	4*	4*	9	6.5	4	1.4	0
Sep-05	<b>5135</b>	1708	4*	4*	9	8	7.7	1.2	0
Oct-05	<b>11613</b>	3253	4*	4*	9	7	3.2	0.81	0
Nov-05	<b>10506</b>	2732	4*	4*	6	4.5	<b>23</b>	6.9	0
Dec-05	<b>5233</b>	2212	4*	4*	8	5	2.2	3.6	0
Jan-06	<b>12111</b>	2049	4*	4*	3	3	1.6	0.22	1*
Feb-06	<b>4584</b>	1458	4*	4*	10	5	12	0.3	0
Mar-06	<b>4355</b>	1583	16	10*	6	6	5.3	5.2	0
Apr-06	<b>5181</b>	1673	4*	4*	6	4	6.2	0.2	0
May-06	<b>6057</b>	1990	4*	3*	8	4.5	4.9	0.11	2*
Jun-06	<b>4464</b>	2400	2*	2*	10	4.7	8.4	1.2	0

\* Means less than the reported value.

RE Means reporting error. Results inconclusive.

**Bold type** means a violation of permit limit.

**UI PERFORMANCE DATA: SUMMARY OF EFFLUENT MONITORING**  
**JANUARY 2003 - JUNE 2006**  
**PERMIT NO. UI0000290 - WESTBROOK FACTORY STORES**



**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

Facility: Westbrook Factory Stores  
Permit No.: UI0000290  
Sampling Frequency: Quarterly  
No. of Monitoring Wells: 2  
Review Period: 1/03-6/06

Sampling Month-Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
Mar-03	MW 1	1.1	0.03	10*
	MW 2	3.08	0.07	10*
Jun-03	MW 1	ND	ND	4
	MW 2	ND	ND	0
Aug-03	MW 1	ND	ND	ND
	MW 2	2.75	ND	ND
Nov-03	MW 1	0.02	ND	0
	MW 2	10	ND	ND
Feb-04	MW 1	Dry	Dry	Dry
	MW 2	Dry	Dry	Dry
Nov-04	MW 1	2.91	ND	0
	MW 2	4.11	ND	2
Jan-05	MW 1	1.1	3.9	0
	MW 2	NR	NR	NR
Mar-05	MW 1	NR	NR	NR
	MW 2	ND	0.29	0
Apr-05	MW 1	3.31	ND	3
	MW 2	4.69	ND	1
Jun-05	MW 1	RE	RE	RE
	MW 2	RE	RE	RE
Oct-05	MW 1	1	0.2	3
	MW 2	1.2	0.2	0
Feb-06	MW 1	3.67	0.07	0
	MW 2	2.87	0.1	0
May-06	MW 1	1.88	0.05	0
	MW 2	6.11	0.04	0

ND = Non Detect  
NR = Non Report  
\* = Less than reported value  
RE = Reporting Error

# SUMMARY OF ALTERNATIVE TREATMENT TECHNOLOGY USED WITH ON-SITE WASTEWATER RENOVATION SYSTEMS

**Facility:** Weston Schools, Weston, CT

**Permit Issuance Date:** 09/07/05

**Treatment Technology:** Zenon

**Pollutants Treated:** BOD<sub>5</sub>    TSS    Nitrogen    Fecal Coliform

**Application:** Institutional

**Type:** Treatment/Partial Recycle

**Class:** Upgrade    Modification    Repair

**Pretreatment discharge type:** Fill  
Natural Soils

**Point of Environment Concern:** Property line

**Comments:**

<u>Compliance summary (1/05 – 8/06)</u>	<u>Compliance Rate (%)</u>
Total nitrogen (max limit = 10 mg/l)    34 violations/40 tests	15
Total phosphorus (max limit = 15 mg/l)    2 violations/40 tests	95
Fecal coliform (avg limit = 200 col/100 ml)    0 violations/20 test months	100
BOD (avg. limit = 20 mg/l)    1 violation/20 test months	95
TSS (avg. limit = 20 mg/l)    0 violations/20 test months	100

## Issues

- Serious inflow/infiltration problems have been identified as a likely significant factor in poor nitrogen removal performance.
- Flow monitoring data is missing and will be sought.

## Recommendations

- A Notice of Violation is to be issued.

Groundwater summary

- No groundwater data has been received by the Department.

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Facility: Weston School  
Permit No.: UI0000392  
Permit Issuance Date: 9/7/2005  
Treatment Type: Zenon/Partial Recycle

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
<b>Permit Limit</b>	16126	10000	30	20	30	20	10	15	200
<b>Sample Freq.</b>	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Jan-05			4*	3.5*	1.5	1.5	54	6.37	10*
Jan-05							48		
Feb-05			2*	1.5*	1*	1*	85	7.9	10*
Feb-05							51		
Mar-05			4.1	3*	1*	1*	46	5.8	10*
Mar-05							55		
Apr-05			2*	2*	1.5	1.3*	32	8	10*
Apr-05							95		
May-05			5.5	3.8*	16	8*	81	16	10*
Jun-05			6*	4.5*	8	4.5*	69	11.4	10*
Jun-05							58		
Jul-05			2.2	1.6	2	1.5	40	6.4	10*
Jul-05							20		
Aug-05			5.4	4.5	2	2	18	3.6	10*
Sep-05			3.57	3.3*	3	2*	16	22	10*
Sep-05							87		
Oct-05			137	69	1	1*	76	10.2	10*
Oct-05							71		
Nov-05			1.55	1.55	3	2	112	9.8	10*
Nov-05							94		
Dec-05	24317	6526	4.7	3.5	2	1.5*	83	9.4	10*

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION

UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING

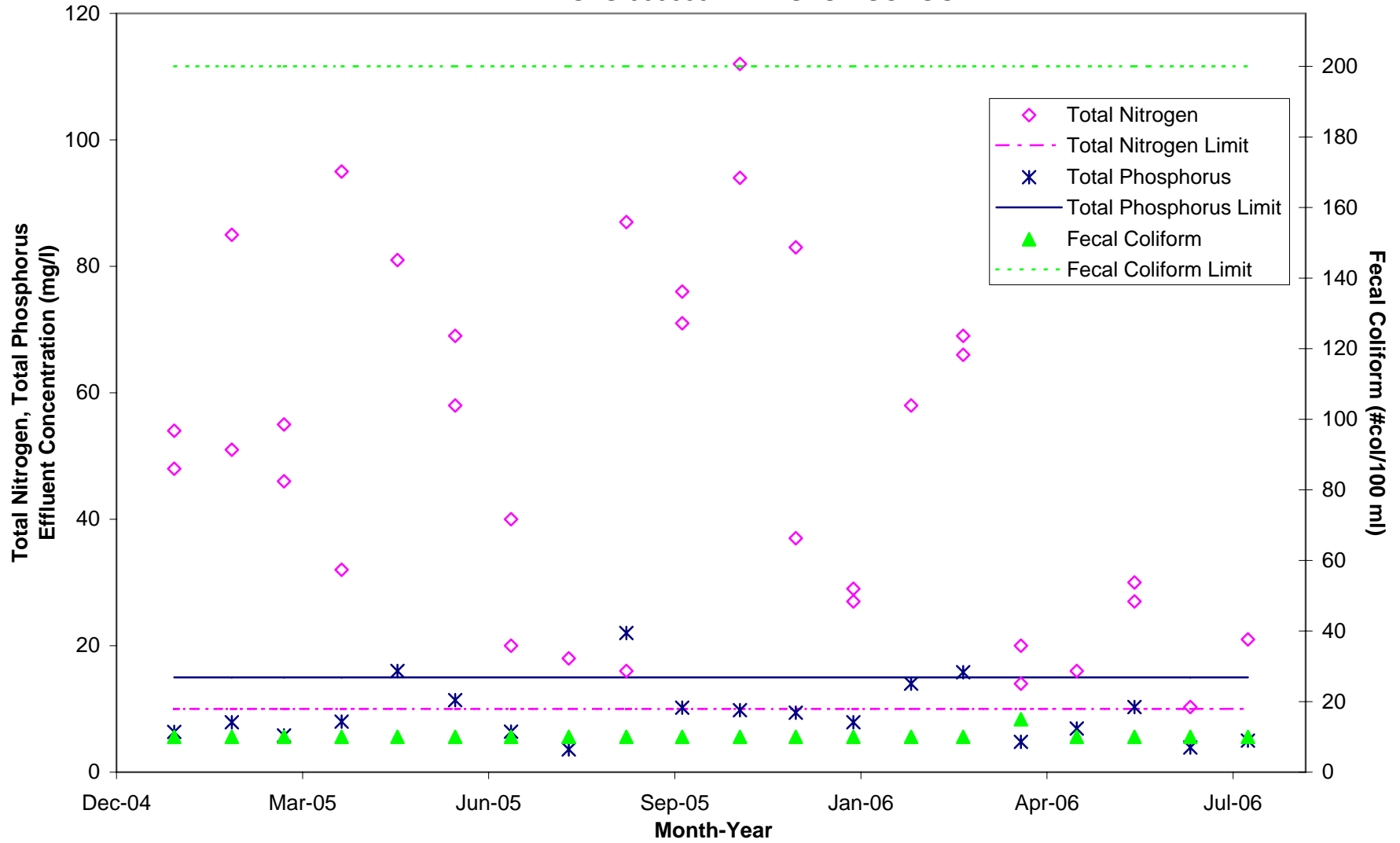
Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (units) (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
Permit Limit	16126	10000	30	20	30	20	10	15	200
Sample Freq.	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Dec-05							<b>37</b>		
Jan-06			4.8	3.7*	4	3.5	<b>29</b>	7.9	10*
Jan-06							<b>27</b>		
Feb-06			1.9	1.5*	5	3	<b>58</b>	14	10*
Mar-06	<b>17162</b>	5822	3*	2*	2	1.5*	<b>69</b>	<b>15.8</b>	10*
Mar-06							<b>66</b>		
Apr-06			1.07	1*	3	2.5	<b>20</b>	4.8	15*
Apr-06							<b>14</b>		
May-06			1.55	1.3*	4	3.5	<b>16</b>	6.9	10*
Jun-06			1*	1*	2	2	<b>30</b>	10.3	10*
Jun-06							<b>27</b>		
Jul-06			1*	1*	3	2*	<b>10.3</b>	3.9	10*
Aug-06			12.3	6.5*	13	7	<b>21</b>	5	10*

\* Means less than the reported value.

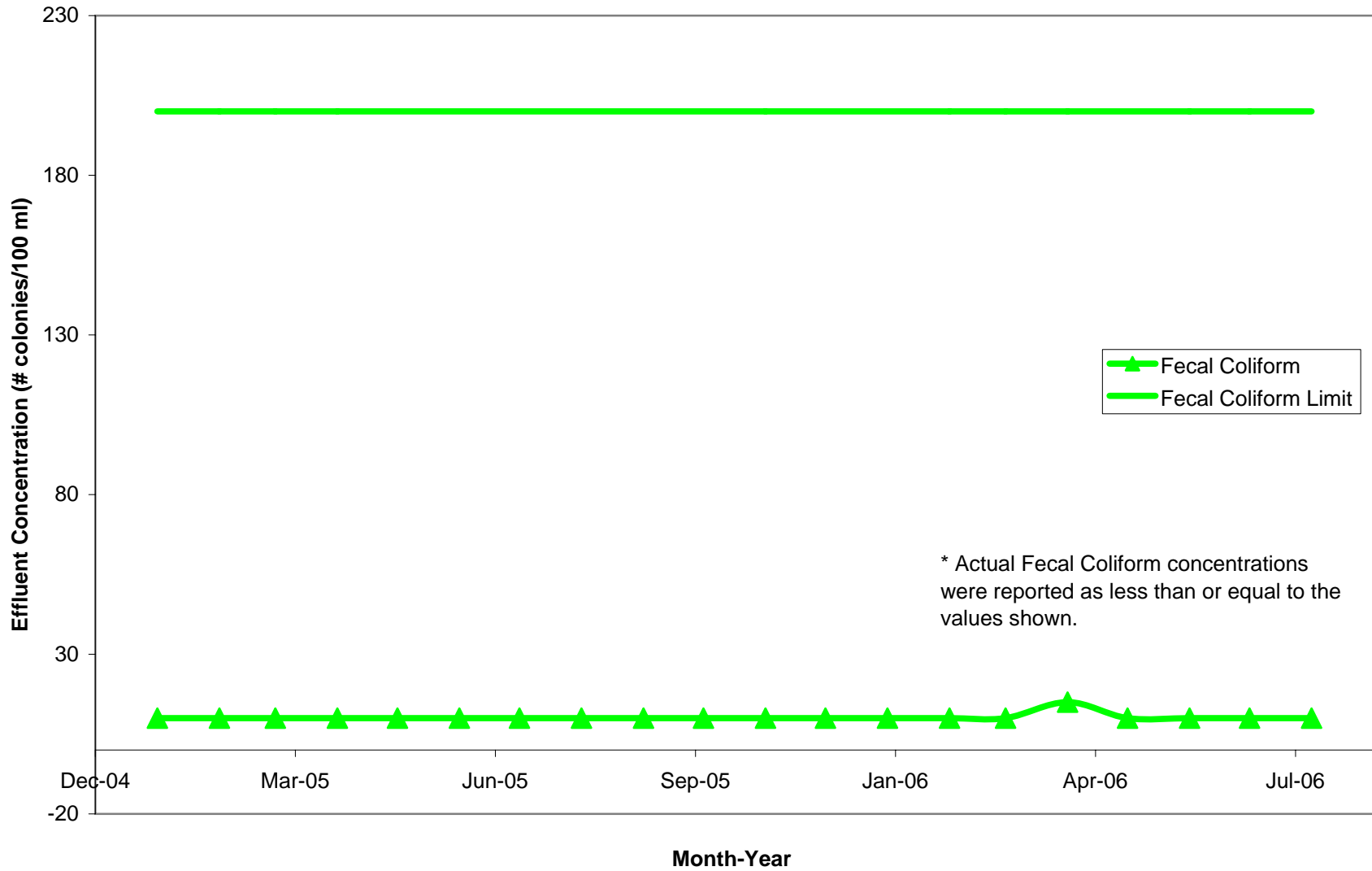
RE Means reporting error. Results inconclusive.

**Bold type** means a violation of permit limit.

**UI PERFORMANCE DATA: SUMMARY OF EFFLUENT MONITORING**  
**JANUARY 2005 - AUGUST 2006**  
**PERMIT NO. UI0000392 - WESTON SCHOOL**



UI PERFORMANCE DATA: SUMMARY OF EFFLUENT MONITORING  
JANUARY 2005 - AUGUST 2006  
PERMIT NO. UI0000392 - WESTON SCHOOL



**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

**Facility:** Weston School  
**Permit No.:** UI0000392  
**Sampling Frequency:**  
**No. of Monitoring Wells:**  
**Review Period:** 1/05-8/06

Sampling Month-Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
Jan-05	MW 8			
	MW 9			
	MW 10			
Feb-05	MW 8			
	MW 9			
	MW 10			
Mar-05	MW 8			
	MW 9			
	MW 10			
Apr-05	MW 8			
	MW 9			
	MW 10			
May-05	MW 8			
	MW 9			
	MW 10			
Jun-05	MW 8			
	MW 9			
	MW 10			
Jul-05	MW 8			
	MW 9			
	MW 10			
Aug-05	MW 8			
	MW 9			
	MW 10			
Sep-05	MW 8			
	MW 9			
	MW 10			
Oct-05	MW 8			
	MW 9			
	MW 10			
Nov-05	MW 8			
	MW 9			
	MW 10			
Dec-05	MW 8			
	MW 9			
	MW 10			
Jan-06	MW 8			
	MW 9			

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

Sampling Month-Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
	MW 10			
Feb-06	MW 8			
	MW 9			
	MW 10			
Mar-06	MW 8			
	MW 9			
	MW 10			
Apr-06	MW 8			
	MW 9			
	MW 10			
May-06	MW 8			
	MW 9			
	MW 10			
Jun-06	MW 8			
	MW 9			
	MW 10			
Jul-06	MW 8			
	MW 9			
	MW 10			
Aug-06	MW 8			
	MW 9			
	MW 10			

# SUMMARY OF ALTERNATIVE TREATMENT TECHNOLOGY USED WITH ON-SITE WASTEWATER RENOVATION SYSTEMS

**Facility:** Whitby School, Greenwich, CT

**Permit Issuance Date:** 12/30/02

**Treatment Technology:** Zenon

**Pollutants Treated:** BOD<sub>5</sub>    TSS    Nitrogen    Phosphorus    Fecal Coliform

**Application:** Institutional

**Type:** Treatment/Recycle

**Class:** New

**Pretreatment discharge type:** Constructed Fill

**Point of Environment Concern:** Toe of slope

## Comments:

<u>Compliance summary (1/03 – 6/06)</u>			<u>Compliance Rate (%)</u>
Total nitrogen (max limit = 10 mg/l)	7 violations/78 tests		91
Total phosphorus (max limit = 15 mg/l)	0 violations/78 tests		100
Fecal coliform (avg limit = 4 col/100 ml)	2 violations/38 test months		95
BOD (avg. limit = 20 mg/l)	0 violations/38 test months		100
TSS (avg. limit = 20 mg/l)	0 violations/38 test months		100

## Issues

- No significant issues.

## Recommendations

- A letter is to be sent which cites the violations, requests that an explanation be provided, and reminds the permittee of violation reporting requirements.

## Groundwater summary

- Total nitrogen and total phosphorus results indicate that groundwater is consistently within levels that are suitable for drinking without treatment. We will review sporadic elevated fecal coliform results as an issue of well construction, and do not believe there is a cause for concern. There were reporting issues with several monitoring periods that need to be addressed with the permittee.

**CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
WATER PERMITTING AND ENFORCEMENT DIVISION**

**UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING**

Facility: Whitby School  
Permit No.: UI0000355  
Permit Issuance Date: 12/30/2002  
Treatment Type: Zenon/Recycle

Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily	Avg. Daily	Max. Daily	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Max. Daily	Avg. Monthly
(units)	(gpd)	(gpd)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(col/100ml)
Permit Limit	6600	4400	30	20	30	20	10	15	4
Sample Freq.	Daily		2/mo.		2/mo.		2/mo.	2/mo.	1/wk.
Jan-03	1	0	10*	6*	5*	5*	13.2	0.05*	0
Feb-03	0	0	2*	2*	5*	5*	11	0.05*	0
Mar-03									
Apr-03									
May-03	0	0	ND	ND	ND	ND	ND	ND	0
Jun-03	0	0	ND	ND	ND	ND	ND	10	0
Jul-03	0	0	ND	ND	ND	ND	17.7	ND	ND
Aug-03	0	0	ND	ND	ND	ND	6.23	ND	ND
Sep-03	0	0	5	2.5	ND	ND	1	0.5	0
Oct-03	84	23	4	2	10	5	2.17	7	ND
Nov-03	204	43	ND	ND	3.75	1.6	7.5	ND	0
Dec-03	751	157	ND	ND	ND	ND	2.45	ND	0
Jan-04	55	30	ND	ND	ND	ND	5.7	ND	0
Feb-04	179	25	0	0	0	0	9.88	0.97	0
Mar-04	25	2	ND	ND	ND	ND	1.8	ND	0
Apr-04	760	62	11	5.5	0	0	1.43	0	0
May-04	6.5	1	20.8	10	ND	ND	5.7	ND	0
Jun-04	26	9	ND	ND	10	5	2.45	ND	ND
Jul-04	40	6	ND	ND	40	25	1.95	1.2	0
Aug-04	26	10	ND	ND	10	5	12.4	8.22	0
Sep-04	215	25	3	3	ND	ND	ND	ND	0

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UI PERFORMANCE DATA - SUMMARY OF EFFLUENT MONITORING

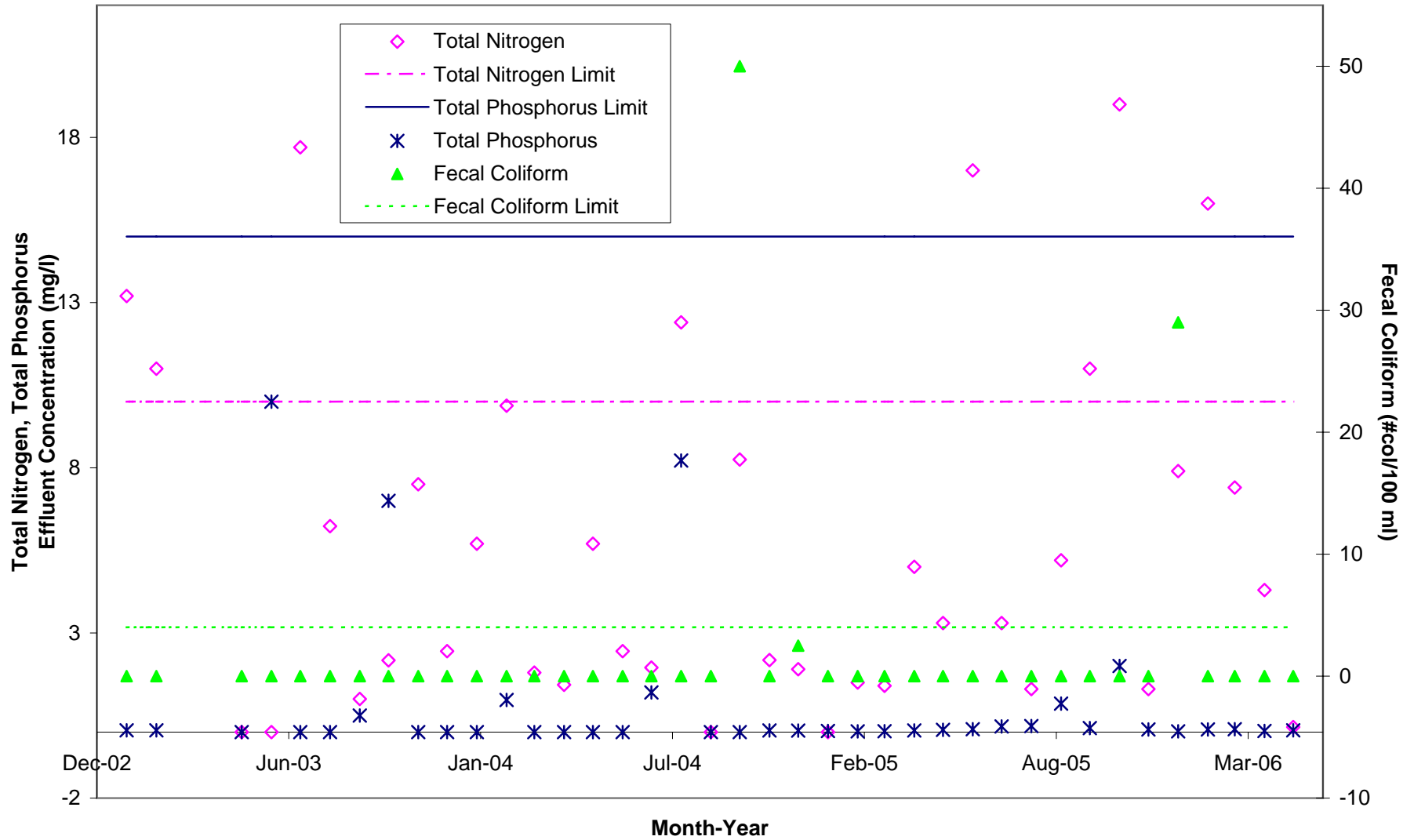
Parameter	Flow		BOD <sub>5</sub>		TSS		Total Nitrogen	Total Phosphorus	Fecal Coliform
	Max. Daily (units) (gpd)	Avg. Daily (gpd)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Avg. Monthly (mg/l)	Max. Daily (mg/l)	Max. Daily (mg/l)	Avg. Monthly (col/100ml)
<b>Permit Limit</b>	6600	4400	30	20	30	20	10	15	4
Oct-04	215	33	ND	ND	ND	ND	8.25	ND	<b>50</b>
Nov-04	29	9	4*	3.9*	5	3.5	2.18	0.047	RE
Dec-04	187	48	4*	4*	2	1	1.9	0.043	2.5*
Jan-05	137	43	4*	4*	1	0.5	ND	0.032	0
Feb-05	237	48	4*	4*	ND	ND	1.5	0.021	0
Mar-05	75	11	4*	4*	1	0.5	1.4	0.025	0
Apr-05	57	10	4*	4*	1	0.5	5	0.047	0
May-05	161	27	9.2	6.5*	7	4.5	3.3	0.065	0
Jun-05	1.5	0	39	21.5*	5	3*	<b>17</b>	0.084	0
Jul-05	0.025	0	4*	4*	5	3.5	3.3	0.17	0
Aug-05	0	0	4*	4*	5	4.5	1.3	0.18	0
Sep-05	0	0	4*	4*	4	4	5.2	0.86	0
Oct-05	145	27	4*	4*	7	7	<b>11</b>	0.12	0
Nov-05	71	20	4*	4*	4	2	<b>19</b>	2	0
Dec-05	161	31	4.9	4.4	2	1.5	1.3	0.079	0
Jan-06	790	163	4*	4*	2	1	7.9	0.022	<b>29</b>
Feb-06	187	17	4*	4*	2	1.5	<b>16</b>	0.076	0
Mar-06	992	138	4*	4*	3	3	7.4	0.086	0
Apr-06	0	0	4*	4*	7	5.5	4.3	0.032	0
May-06	30	16	4*	3*	8	5.5	0.15	0.05	0

\* Means less than the reported value.

RE Means reporting error. Results inconclusive.

**Bold type** means a violation of permit limit.

**UI PERFORMANCE DATA: SUMMARY OF EFFLUENT MONITORING**  
**JANUARY 2003 - MAY 2006**  
**PERMIT NO. UI0000355 - WHITBY SCHOOL**



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**UI PERFORMANCE DATA - SUMMARY OF GROUNDWATER MONITORING RESULTS**

**Facility:** Whitby School  
**Permit No.:** UI0000355  
**Sampling Frequency:** Quarterly  
**No. of Monitoring Wells:** 2  
**Review Period:** 1/03-6/06

Sampling Month-Year	Monitoring Well Identification	Total Nitrogen	Total Phosphorus	Fecal Coliform
		(mg/l)	(mg/l)	(col/100ml)
Jul-03	GWMW 1	ND	0.99	0
	GWMW 2	5.5	ND	0
Aug-03	GWMW 1	ND	ND	ND
	GWMW 2	4.38	ND	ND
Nov-03	GWMW 1	ND	ND	0
	GWMW 2	5.63	ND	0
Feb-04	GWMW 1	DRY	DRY	DRY
	GWMW 2	DRY	DRY	DRY
Mar-04	GWMW 1	ND	ND	0
	GWMW 2	1.9	ND	0
May-04	GWMW 1	0.55	0.76	0
	GWMW 2	2.2	ND	0
Aug-04	GWMW 1	2.35	0.5	0
	GWMW 2	ND	ND	16
Nov-04	GWMW 1	2.85	1.8	12
	GWMW 2	1.66	ND	6
Jan-05	GWMW 1	5.4	4	0
	GWMW 2	3.4	5.1	8
Apr-05	GWMW 1	ND	ND	2
	GWMW 2	1.59	0.29	6
Jul-05	GWMW 1	0.7	ND	0
	GWMW 2	2.2	ND	0
Oct-05	GWMW 1	ND	ND	53
	GWMW 2	1.9	ND	1
Feb-06	GWMW 1	0.21	0.03	0
	GWMW 2	4.35	0.01	0

ND = Non Detect