

Additional comments from Table 1 of Invensys Systems October 31, 2011 comment letter that were not cited in the body of the comment letter:

Comment IS #22: For purposes of evaluating risks to aquatic biota, dissolved concentrations (rather than totals) should be used for all of the monitored metals (i.e., copper, lead, zinc, cadmium, aluminum and iron).

Response IS #22: Massachusetts's Surface Water Quality Standards provide: "The Department shall use the water quality criteria for the protection of aquatic life expressed in terms of the dissolved fraction of metals when EPA's 304(a) recommended criteria provide for use of the dissolved fraction. The EPA recommended criteria based on total recoverable metals shall be converted to dissolved metals using EPA's published conversion factors. Permit limits will be written in terms of total recoverable metals. Translation from dissolved metals criteria to total recoverable metals permit limits will be based on EPA's conversion factors or other methods approved by the Department." 314 CMR 4.05(5)(e).

The reasonable potential analyses here were based on total metals concentrations because the available discharge data were in terms of total metals. Discharge metals were not compared to dissolved metals criteria but rather to the total metal equivalent of the dissolved criteria. The permit limits are written in terms of total metals in accordance with the Massachusetts Surface Water Quality Standards.

Comment IS #23: Metals back-up data contained in the quarterly whole effluent toxicity testing reports should also satisfy a metals monitoring event required by the permit.

Response IS #23: Yes, metals data from the whole effluent toxicity testing can be used to satisfy a metals monitoring event. Footnote #10 of the permit for outfalls 001 and 002 has been revised to reflect this.

Comment IS #24: Numeric average monthly limits for lead and cadmium that are lower than the ML are unreasonable.

Response IS #24: Consistent with water quality based permitting regulations, limits are established to ensure that applicable criteria will be met and are not based on the current limitations of analytical quantification levels, which can change over the life of the permit. Compliance with the limits is assumed if discharge levels are below the applicable ML.

Comment IS #25: The Remediation General Permit contains a monthly average effluent limitation for cadmium of 0.2 ug/l based on a hardness of 50 mg/l. The monthly average effluent limitation for cadmium in the draft permit is calculated based on the same assumptions but is 0.16 ug/l.

Response IS #25: EPA rechecked the criteria calculation using the most current hardness based equation, as adopted by MassDEP in its surface water quality standards. The equation is found in Attachment B and D and derives from the Massachusetts Surface Water Quality Standards at

314 CMR 4.05(5)(e). Using this equation, the correct value for the chronic cadmium criteria is 0.16 ug/l.

Comment IS #26: The requirement to measure sump pump discharges on a continuous basis and report time, duration, and estimated discharge volume for each sump pump activation is unnecessary and overly burdensome, and is inconsistent with the other monitoring requirements present in the draft permit.

Response IS #26: There is very little available data on sump pump discharges and what data there is indicates that the pollutant loads discharged from sump pumps may be significant. Collecting this data is critical to determining the significance of these discharges as well as whether the effluent monitoring requirements in the permit are adequately capturing the effect of the sump pump discharges. The comment does not provide sufficient information (e.g., cost or time estimates) to support the claim that continuous measurement of sump pump discharges is overly burdensome. Flow recorders are commonly used to provide the required information on frequency, volume, and duration of discharges.

Comment IS #27: All of the discharges from the Cocasset Facility discharge to Robinson Brook downstream of the Outfall 002 headwall. The Cocasset Facility is covered by a No Exposure Certification for Exclusion from NPDES Storm Water Permitting. The discharges to outfall 002 are from the southern portion of the Neponset Facility. Only discharges which discharge at the Outfall 002 headwall will be covered by this site-specific NPDES permit.

Response IS #27: The clarification is noted for the record.

Comment IS #28: The Gudgeon Brook headwall contains two separate discharges: Outfall 001 and a second outfall pipe which is owned by the Town of Foxborough and discharges stormwater from Chestnut Street and nearby (non-Invensys) neighborhoods. EPA's explanation for why the municipal stormwater outfall was not taken into account in the development of limits for Outfall 001 is unconvincing because it is not Invensys' fault that there is insufficient information about the quantity, timing or water quality of the additional flow, and – under EPA's established policies – such uncertainties in storm water permits weigh in favor of BMPs, not numeric limits, particularly not numeric limits tied to extremely onerous weekly monitoring requirements.

Response IS #28: Outfall 001 conveys flows from Invensys only and the reasonable potential analyses and water quality based limits apply to Outfall 001 only. Allowing some benefit of dilution as a result of the additional storm water discharges is not appropriate given the high levels of pollutants typically found in urban runoff and the lack of site specific data for this particular municipal storm water discharge. In particular, urban runoff typically contains high levels of many heavy metals, including several heavy metals found in the Invensys discharges, e.g., cadmium, copper, lead, and zinc. The fact that there is another discharge into the headwaters of Gudgeon Brook does not change our conclusions relative to the need for numeric limits to adequately address water quality standards violations resulting from discharges by Invensys. In addition to being contaminated with a variety of urban runoff pollutants, stormwater runoff provides no dilution during the worst case low flow conditions under which the water quality standards are required to be met (7Q10 flow).

Exhibit 5



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 4, 1991

Mr. Richard Mannion
Manager of Environmental Services
The Foxboro Company
33 Commercial Street No 5-2A
Foxboro, Massachusetts 02035

Re: NPDES Application No. MA0004120

Dear Mr. Mannion:

Enclosed is your final National Pollutant Discharge Elimination system (NPDES) permit issued pursuant to the Clean Water Act (the "Federal Act"), as amended, and the Massachusetts Clean Waters Act (the "State Act"), 21 M.G.L. §§43-45, as amended. The Environmental Permit Regulations, at 40 C.F.R. §124.15, 48 Fed. Reg. 14271 (April 1, 1983), require this permit to become effective on the date specified in the permit.

Also enclosed is a copy of the Agency's response to the comments received on the draft permit and information relative to hearing requests and stays of NPDES permits. Should you desire to request a formal hearing, your request should be submitted to the Agency as outlined in the enclosure and a similar request should also be filed with the Director of the Massachusetts Division of Water Pollution Control in accordance with the provisions of the Massachusetts Administrative Procedures Act, the Division's Rules for the Conduct of Adjudicatory Proceedings and the Timely Action Schedule and Fee Provisions (see enclosure).

We appreciate your cooperation throughout the development of this permit. Should you have any questions concerning the permit, feel free to contact Jay Brolin of my staff at 617/565-3590.

Sincerely,

Edward K. McSweeney, Chief
Wastewater Management Branch

Enclosures

cc: State Water Pollution Control Agency
All Interested Parties



**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

The Foxboro Company
(Neponset Plant)

is authorized to discharge from the facility located at

38 Neponset Avenue
Foxboro, MA

to receiving waters named

Neponset Reservoir

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

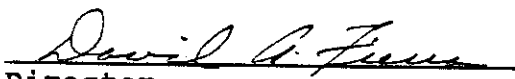
This permit shall become effective 30 days from the date of signature.

This permit and the authorization to discharge expires at midnight, five years from the effective date.


This permit supersedes the permit issued on June 20, 1984

This permit consists of 7 pages in Part I including effluent limitations, monitoring requirements, etc., and 19 pages in Part II including General Conditions and Definitions.

signed this *30th* day of *September, 1991*



Director
Water Management Division
Environmental Protection Agency
Region I
Boston, MA



Director, Division of Water
Pollution Control
Department of Environmental
Protection
Commonwealth of Massachusetts
Boston, MA

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date the permittee is authorized to discharge from outfall serial number 001, non-contact cooling water and stormwater. Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic, units</u>	<u>Discharge Limitations</u> Average <u>Monthly</u>	<u>Maximum</u> <u>Daily</u>	<u>Monitoring Requirements</u> Measurement Sample <u>Frequency</u> <u>Type</u>
Flow, MGD	1	(Monitor and Report)	Daily Estimate
pH, S.U.	see Part A.1.a. (below)		
Fecal Coliform, #/100 ml ²	200	400	2/Quarter 2-Grabs
Volatile Organic Compounds, mg/l ³	(Monitor and Report)		2/Quarter ⁴ Grab
Whole Effluent Toxicity: Acute ⁵		LC 50 ≥ 100 %	1/Quarter Attachment A

- a. The pH shall be in the range of 6.5 - 8.3 s.u. but not more than 0.5 units outside of the naturally occurring background range in the receiving water and shall be monitored 1/Week by four grab samples per sampling event.
- b. There shall be no discharge of floating, suspended and settleable solids that would cause aesthetically objectionable conditions or impair the benthic biota or degrade the chemical composition of the bottom.
- c. The discharge shall be free from oil and grease, petrochemicals and other volatile or synthetic organic pollutants.
- d. Representative samples taken in compliance with the monitoring requirements specified above shall be taken at the point of discharge into the Neponset Reservoir. A representative sample should reflect the presence of water treatment chemicals (corrosion inhibitors and biocides).

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on the effective date and lasting through the expiration date the permittee is authorized to discharge from outfall serial number 001A, non-contact cooling water. Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic, units</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow, MGD	-	0.320	Daily	Estimate
pH, S.U.	see Part A.2.a. (below)			
Temperature, °F	-	83	1/Month	Grab

- a. The pH shall be in the range of 6.5 - 8.3 s.u. but not more than 0.5 units outside of the naturally occurring background range in the receiving water and shall be monitored 1/Week by four grab samples per sampling event.
- b. Representative samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge point in Building 30 prior to mixing with any other discharge.

Notes:

1. The permittee shall monitor this flow continuously at the point of discharge.
 2. For purposes of this permit, the average of all grab samples for a given quarter shall be reported as the monthly average for that quarter. The maximum value recorded of all grab samples shall be submitted as the daily maximum.
 3. After at least two years of monitoring data, the permittee may request, in writing, from MA DEP and EPA, relief from monitoring those pollutants which the permittee believes to be absent and which the permittee believes will remain absent. The permittee must submit supporting data with this request which MA DEP and EPA will review to determine whether modification of the permit is justified. This request does not constitute automatic approval.
 4. The permittee shall take two samples per quarter. One sample shall be taken during dry weather (after at least 72 hours of no precipitation) and one sample during a significant storm event (at least 0.1 inches) with one grab sample taken during the first half hour of discharge and a flow weighted composite for each hour up to three hours. The permittee shall submit raw data indicating whether the sample was dry weather or storm related. In the event that no significant storm event has occurred the permittee shall take two dry weather samples.
 5. LC50 is defined as the concentration that is lethal to at least 50% of the test organisms. Effluent samples shall be collected during the following months prior to the 10th day: January, April, July, and October. Toxicity testing results for January, April, June, and October shall be submitted with the DMRs for March, June, September, and December respectively.
3. This permit may be modified, or revoked and reissued, on the basis of new information, to include results of monitoring requirements in this permit.

4. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 ug/l);
 - (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or
 - (4) Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f).
- b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) Five hundred micrograms per liter (500 ug/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or
 - (4) Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f).
- c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or by product any toxic pollutant which was not reported in the permit application.

C. MONITORING AND REPORTING

1. Reporting

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report Forms postmarked no later than the 15th day of the month following the completed reporting period. The first report is due on the 15th day of the month following the effective date of the permit.

Signed copies of these, and all other reports required herein, shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
Permit Processing Operations Section
P.O. Box 8127
Boston, MA 02114

Duplicate signed copies of all monitoring reports except for Toxicity Test Reports shall be submitted to the State at:

Massachusetts Department of Environmental Protection
Massachusetts Division of Water Pollution Control
Southeastern Regional Office
Lakeville Hospital
Lakeville, Massachusetts 02346

Copies of all Toxicity Test Reports only shall be submitted to:

Technical Services Branch,
Massachusetts Department of Environmental Protection
Massachusetts Division of Water Pollution Control
P.O. Box 116
North Grafton, Massachusetts 01536

Signed copies of all other notifications and reports required by this permit shall be submitted to the State at:

Massachusetts Department of Environmental Protection
Massachusetts Division of Water Pollution Control
Regulatory Branch
One Winter Street
Boston, Massachusetts 02108

D. STATE PERMIT CONDITIONS

This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency and the Division of Water Pollution Control under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Director of the Massachusetts Division of Water Pollution Control pursuant to M.G.L. Chap. 21, §43.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this Permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES Permit issued by the U. S. Environmental Protection Agency. In the event this Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this Permit shall remain in full force and effect under State law as a Permit issued by the Commonwealth of Massachusetts.

ATTACHMENT A

Acute Toxicity Test Procedure and Protocol:

- Daphnids (Ceriodaphnia dubia and Daphnia pulex) definitive 48 hour acute test.
- Fathead Minnow (Pimephales promelas) definitive 48 hour acute test.

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable toxicity tests in accordance with the appropriate test protocols described below. The permittee must collect discharge samples and perform the toxicity tests that are required by Part I of the NPDES permit. Acute toxicity test data shall be reported as outlined in Section IX.

II. TEST FREQUENCY AND SAMPLING REQUIREMENTS

See Part I of the NPDES permit for sampling location, sample type, test frequency, test species, and test date(s) requirements. Chain of Custody information should be provided for each sample tested.

An acute toxicity test sampling event is defined as a single discharge (composite or grab) sample.

III. METHODS

Methods should follow those recommended by EPA in:

Peltier, W., and Weber, C.I., 1985. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Third Edition. Office of Research and Development, Cincinnati, OH. EPA/600/4-85/013.

Any exceptions are stated herein.

IV. SAMPLE COLLECTION

A discharge sample shall be collected. Aliquots shall be split from the sample, containerized and preserved (as per 40 CFR Part 136) for chemical and physical analyses required. The remaining sample shall be dechlorinated (if necessary) in the laboratory using sodium thiosulfate for subsequent toxicity testing. Grab samples must be used for pH, temperature, and total residual chlorine (as per 40 CFR Part 122.21).

The Methods for Aquatic Toxicity Identification Evaluations (Phase I) EPA/600/3-88/034, Section 8.7, provides detailed information regarding the use of sodium thiosulfate (i.e. dechlorination).

All samples held overnight shall be refrigerated at 4°C.

V. DILUTION WATER

Dilution water used for acute toxicity analysis shall be collected at a point upstream of the discharge free from toxicity or other sources of contamination. When using receiving water as the dilution water an additional control (0% effluent), made up from a standard dilution water of known quality, will also be run. ,

If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a hardness, pH, conductivity, alkalinity, and total suspended solids similar to that of the receiving water may be substituted **AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S)**. It may prove beneficial to the permittee to have the proposed dilution water source screened for suitability prior to toxicity testing. For further information see Section 6, page 22 of EPA/600/4-85/013.

VI. REGION I RECOMMENDED EFFLUENT TOXICITY TEST CONDITIONS FOR THE DAPHNIDS (Ceriodaphnia dubia and Daphnia pulex) 48 HOUR ACUTE TESTS¹

1. Test type	Static, non-renewal
2. Temperature (°C)	25 ± 1°C
3. Light quality	Ambient laboratory illumination
4. Photoperiod	16 hour light, 8 hour dark
5. Test chamber size	Minimum 30 ml
6. Test solution volume	Minimum 25 ml
7. Age of test organisms	1-24 hours (neonates)
8. No. daphnids per test chamber	5
9. No. of replicate test chambers 4 per treatment	
10. Total no. daphnids per test concentration	20
11. Feeding regime	None
12. Aeration	None
13. Dilution water ²	Receiving water, other surface water, moderately hard synthetic water (prepared using either Millipore Milli-Q ^R or equivalent deionized water and reagent grade chemicals) or deionized water combined with mineral water.
14. Dilution factor	0.5
15. Number of dilutions ³ dilution at the	5 plus a control. An additional permitted effluent concentration (% effluent) is required if it is not included in the dilution series.
16. Effect measured or appendages on gentle	Mortality - no movement of body prodding

- | | |
|---|---|
| 17. Test acceptability organisms in control | 90% or greater survival of test solution |
| 18. Sampling requirements be | For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must first be used within 48 hours of collection. |
| 19. Sample volume required | Minimum 2 liters |
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Footnotes:

1. Adapted from EPA/600/4-85/013.
2. Standard prepared dilution water must have hardness requirements to generally reflect the characteristics of the receiving water.
3. When receiving water is used for dilution an additional control made up of standard dilution water (0% effluent) is required.

VII. REGION I RECOMMENDED TEST CONDITIONS FOR THE FATHEAD MINNOW
(Pimephales promelas) 48 HOUR ACUTE TEST¹

- | | |
|---|--|
| 1. Test Type: | Static, non-renewal |
| 2. Temperature (°C): | 25 ± 1°C |
| 3. Light quality: | Ambient laboratory illumination |
| 4. Photoperiod: | 16 hr light, 8 hr dark |
| 5. Size of test vessels: | 250-1000 ml |
| 6. Volume of test solution: | Minimum 200ml/replicate |
| 7. Age of fish: | 1-14 days |
| 8. No. of fish per chamber: | 10 (not to exceed loading limits) |
| 9. No. of replicate test vessels per treatment: | 2 |
| 10. Total no. organisms per concentration: | 20 |
| 11. Feeding regime: | None |
| 12. Aeration: | None, unless DO concentration falls below 40% of saturation, at which time gentle single-bubble aeration should be started at a rate of less than 100 bubbles/min. (Routine DO check recommended.) |
| 13. Dilution Water: ² | Receiving water, other surface water, moderately hard synthetic water (prepared using either Millipore Milli-Q ^R or equivalent deionized and reagent grade chemicals) or deionized water combined with mineral water. |
| 14. Dilution factor: | 0.5 |

15. Number of dilutions:³ dilution at the 5 plus a control. An additional permitted effluent concentration (% effluent) is required if it is not included in the dilution series.
16. Effect measured: Mortality-no movement on gentle prodding
17. Test acceptability: 90% or greater survival of test organisms in control solution
18. Sampling requirements: For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must be first used within 48 hours of collection.
19. Sample volume required: Minimum 4 liters
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Footnotes:

1. Adapted from EPA/600/4-85/013.
2. Standard dilution water must have hardness requirements to generally reflect characteristics of the receiving water.
3. When receiving water is used for dilution, an additional control made up of standard dilution water (0% effluent) is required.

VIII. CHEMICAL ANALYSIS

The following chemical analyses shall be performed for each sampling event.

<u>Parameter</u>	<u>Effluent</u>	<u>Diluent</u>	<u>Minimum Detection Limit (mg/L)</u>
Hardness* ¹	X	X	0.5
Alkalinity	X	X	2.0
pH	X	X	---
Specific Conductance	X	X	---
Total Solids and Suspended Solids	X	X	---
Ammonia	X	X	0.1
Total Organic Carbon	X	X	0.5
Total Residual Chlorine (TRC)* ²	X	X	0.02
<u>Total Metals</u>			
Cd	X		0.005
Cr, Ni	X		0.05
Pb, Cu	X	X	0.005
Zn, Al	X	X	0.02
Mg, Ca	X	X	0.05

Superscripts:

*¹ Method 314A (hardness by calculation) from APHA (1985) Standard Methods for the Examination of Water and Wastewater, 16th Edition.

*² Total Residual Chlorine

Methods: either of the following methods the 16th edition of the APHA (1985) Standard Methods for the Examination of Water and Wastewater must be used for these analyses.

Method 408-C (Amperometric Titration Method)-the preferred method;
Method 408-D (Ferrous Titrimetric Method).

IX. TOXICITY TEST REPORT

The following must be reported:

- Description of sample collection procedures, site description;
- Names of individuals collecting and transporting samples, times and dates of sample collection and analysis; and
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests; light and temperature regime; other information on test conditions if different than procedures recommended.

(July 1, 1990)

Toxicity test data shall include the following:

- Survival for each concentration and replication at time 24, and 48 hours.
- LC50 and 95% confidence limits shall be calculated using one of the following methods in order of preference Probit, Trimmed Spearman Karber, Moving Average Angle, or the graphical method. All printouts (along with the name of the program, the date, and the author(s)) and graphical displays must be submitted. When data is analyzed by hand, worksheets should be submitted.

The Probit, Trimmed Spearman Karber, and Moving Average Angle methods of analyses can only be used when mortality of some of the test organisms are observed in at least two of the (% effluent) concentrations tested (i.e. partial mortality). If a test results in a 100% survival and 100% mortality in adjacent treatments ("all or nothing" effect), a LC50 may be estimated using the graphical method.

- All chemical/physical data generated (include detection limits).
- Raw data and bench sheets.
- Describe method of dechlorination where applicable.
- Any observations and test conditions which affected the outcome of testing.

X. REPORTING

Signed copies of the toxicity testing reports shall be submitted as required by of Part I of the NPDES permit.

Exhibit 6

State Permit No. 307
Federal Permit No. MA0004120

MODIFICATION OF
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

The Foxboro Company
38 Neponset Avenue
Foxboro, MA 02035

is authorized to discharge in accordance with effluent limitations, monitoring requirements and other conditions set in the previous permit, except as set forth herein and listed as follows:

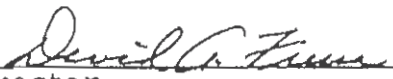
Replace page 2 of 7 with the attached page.

This modifies the permit issued on June 20, 1984.


This permit modification shall become effective 30 days from date of signature.

This permit modification and the authorization to discharge shall expire at midnight, June 20, 1989.

Signed this 16th day of November, 1987



Director
Water Management Division
Environmental Protection Agency
Region I
Boston, MA



Director, Division of Water
Pollution Control
Department of Environmental
Quality Engineering
Commonwealth of Massachusetts
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date and lasting through July 1, 1988 the permittee is authorized to discharge from outfall serial number 001a, treated process wastewater.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements Measurement Frequency	Sample Type
	Avg. Monthly	Max. Daily		
Flow, MGD	0.185	0.382	Continuous	Total Daily
TSS	20 mg/l	30 mg/l	2/Month	Composite
Oil and Grease	-	15 mg/l	2/Month	Grab
Cadmium (Total)	0.26 mg/l	0.69 mg/l	2/Month	Composite
Chromium (Total)	1.5 mg/l	2.77 mg/l	2/Month	Composite
Chromium, hexavalent	0.1 mg/l	0.25 mg/l	2/Month	Grab
Copper (Total)	1.5 mg/l	3.0 mg/l	2/Month	Composite
Cyanide (Total)	0.25 mg/l	0.65 mg/l	2/Month	Grab
Cyanide, amenable	0.1 mg/l	0.2 mg/l	2/Month	Grab
Nickel (Total)	1.8 mg/l	3.6 mg/l	2/Month	Composite
Aluminum (Total)	1.5 mg/l	2.0 mg/l	2/Month	Composite
* Total Toxic Organics	-	2.13 mg/l	1/Quarter	Grab
** Phosphorus	2.0 mg/l	-	2/Month	Composite

* See page 4 of 7 for Total Toxic Organics definition and monitoring requirements.

** The permittee shall continue to use diligent efforts to reduce the level of phosphorus in their discharge as much as practical.

The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units and shall be monitored continuously, report daily range.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: the discharge of the wastewater treatment plant, prior to mixing with the noncontact cooling water.

NOTE: The limits established above are based on water quality considerations and the fact that the discharge, as limited above, is only permitted until July 1, 1988. More stringent limits will be imposed by EPA to protect water quality standards if the discharge continues beyond July 1, 1988.

Exhibit 7

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

The Foxboro Company
(Neponset Plant)

is authorized to discharge from the facility located at

38 Neponset Avenue
Foxboro, MA

to receiving waters named

Neponset Reservoir

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on the date of signature.

This permit and the authorization to discharge expire at midnight, five years from the date of issuance.

This permit supersedes the permit issued on October 23, 1980.

This permit consists of 7 pages in Part I including effluent limitations, monitoring requirements, etc., and 19 pages in Part II including General Conditions and Definitions.

Signed this 20th day of June 1984



Edward R. McSweeney
Director
Water Management Division
Environmental Protection Agency
Region I
Boston, MA



Thomas C. Mc Mahon
Director, Division of Water
Pollution Control
Department of Environmental
Quality Engineering
Commonwealth of Massachusetts
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date and lasting through the expiration date the permittee is authorized to discharge from outfall serial number 001a, treated process wastewater.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Avy. Monthly	Max. Daily	Measurement Frequency	Sample Type
Flow, MGD	0.185	0.382	Continuous	Total Daily Composite
TSS	20 mg/l	30 mg/l	2/Month	Grab
Oil and Grease		15 mg/l	2/Month	Composite
Cadmium (Total)	0.26 mg/l	0.69 mg/l	2/Month	Composite
Chromium (Total)	1.5 mg/l	2.77 mg/l	2/Month	Composite
Chromium, hexavalent	0.1 mg/l	0.25 mg/l	2/Month	Grab
Copper (Total)	1.5 mg/l	3.0 mg/l	2/Month	Composite
Cyanide (Total)	0.25 mg/l	0.65 mg/l	2/Month	Grab
Cyanide, amenable	0.1 mg/l	0.2 mg/l	2/Month	Grab
Nickel (Total)	1.8 mg/l	3.6 mg/l	2/Month	Composite
Aluminum (Total)	1.5 mg/l	2.0 mg/l	2/Month	Composite
* Total Toxic Organics		2.13 mg/l	1/Quarter	Grab
** Phosphorus			2/Month	Composite

* See page 4 of 7 for Total Toxic Organics definition and monitoring requirements.

** The permittee shall monitor for this parameter for one year after permit issuance. Depending on the monitoring data, either the permit will be modified to include a specific limit for this parameter or the monitoring requirement will be deleted.

The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units and shall be monitored continuously, report daily range.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: the discharge of the wastewater treatment plant, prior to mixing with the noncontact cooling water.

The permittee shall not augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with the above limitations.

PART I

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date and lasting through the expiration date the permittee is authorized to discharge from outfall serial number 001b, non-contact cooling water.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Avg. Monthly	Max. Daily	Measurement Frequency	Sample Type
Flow, gallons/day	-	320,000	Estimate	Daily Total
Temperature	-	83°F	2/Quarter	Grab
Oil & Grease	-	15 mg/l	2/Quarter	Grab

The noncontact cooling water shall not be used to dilute the process wastewater

The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units and shall be monitored by a grab sample, once a quarter.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at the outfall.

The discharge shall be sampled once a quarter during rainfall and once a quarter during dry conditions. One grab sample is required. The sample during rainfall shall be taken within thirty (30) minutes of the beginning of the rainfall.

Total Toxic Organics

The term "Total Toxic Organics" (TTO) is the summation of all quantifiable values greater than 0.01 milligrams per liter (mg/l) for the following toxic organics:

Acenaphthene	Acenaphthylene	Naphthalene
Acrolein	Anthracene	Nitrobenzene
Acrylonitrile	1,12-benzoperylene	2-nitrophenol
Benzene	(benzo(ghi)perylene)	4-nitrophenol
Benzidine	Fluorene	2,4-dinitrophenol
Carbon tetrachloride	Phenanthrene	4,6-dinitro-o-cresol
(tetrachloromethane)	1,2,5,8-dibenzanthracene	N-nitrosodimethylamine
Chlorobenzene	(dibenzo(a,h)anthracene)	N-nitrosodiphenylamine
1,2,4-trichlorobenzene	Indeno(1,2,3-cd)pyrene	Trichloroethylene
Hexachlorobenzene	(2,3-o-phenylene pyrene)	Vinyl chloride (chloroethylene)
1,2-dichloroethane	Pyrene	Aldrin
1,1,1-trichloroethane	Tetrachloroethylene	Dieldrin
Hexachloroethane	Toluene	Chlordane (technical mixture and metabolites)
1,1-dichloroethane	1,3-dichlorobenzene	4,4-DDT
1,1,2-trichloroethane	1,4-dichlorobenzene	4,4-DDE (p,p-DDX)
1,1,2,2-tetrachloroethane	3,3-dichlorobenzidine	4,4-DDD (p,p-TDE)
Chloroethane	1,1-dichloroethylene	Alpha-endosulfan
Bis (2-chloroethyl) ether	1,2-trans-dichloroethylene	Beta-endosulfan
2-chloroethyl vinyl ether	2,4-dichlorophenol	Endosulfan sulfate
(mixed)	1,2-dichloropropane	Endrin
2-chloronaphthalene	(1,3-dichloropropane)	Endrin aldehyde
2,4,6-trichlorophenol	2,4-dimethylphenol	Heptachlor
Parachlorometa cresol	2,4-dinitrotoluene	Heptachlor epoxide
Chloroform (trichloromethane)	2,6-dinitrotoluene	(BHC-hexachlorocyclohexane)
2-chlorophenol	1,2-diphenylhydrazine	Alpha-BHC
1,2-dichlorobenzene	Ethylbenzene	Beta-BHC
N-nitrosodi-n-propylamine	Fluoranthene	Gamma-BHC
Pentachlorophenol	4-chlorophenyl phenyl ether	Delta-BHC
Phenol	4-bromophenyl phenyl ether	(PCB-polychlorinated biphenyls)
Bis (2-ethylhexyl) phthalate	Bis (2-chloroisopropyl) ether	PCB-1242 (Arochlor 1242)
Butyl benzyl phthalate	Bis (2-chloroethoxy) methane	PCB-1254 (Arochlor 1254)
Di-n-butyl phthalate	Methylene chloride	PCB-1221 (Arochlor 1221)
Di-n-octyl phthalate	(dichloromethane)	PCB-1232 (Arochlor 1232)
Diethyl phthalate	Methyl chloride	PCB-1248 (Arochlor 1248)
Dimethyl phthalate	(chloromethane)	PCB-1260 (Arochlor 1260)
1,2-benzanthracene	Methyl bromide (bromomethane)	PCB-1016 (Arochlor 1016)
(benzo(a)anthracene)	Bromoform (tribromomethane)	Toxaphene
Benzo(a)pyrene (3,4-benzopyrene)	Dichlorobromomethane	2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)
3,4-Benzofluoranthene	Chlorodibromomethane	
(benzo(b)fluoranthene)	Hexachlorobutadiene	
1,1,2-benzofluoranthene	Hexachlorocyclopentadiene	
(benzo(k)fluoranthene)	Isophorone	
Chrysene		

In monitoring for Total Toxic Organics, the permittee need analyze for only those pollutants which would reasonably be expected to be present. The permittee may make the following certification on its monitoring reports in lieu of conducting an analysis: "Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitations for total toxic organics (TTO). I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the permitting authority.

In requesting the certification alternative the permittee shall submit a solvent management plan that specifies, to the satisfaction of the permitting authority, the toxic organic compounds used; the method of disposal used instead of dumping, such as reclamation, contract hauling, or incineration; and procedures for ensuring that toxic organics do not routinely spill or leak into the wastewater. This plan shall become a part of and an enforceable provision of this permit.

2. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 ug/l);
 - (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application or
 - (4) Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f).
- b. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

C. MONITORING AND REPORTING

1. Reporting

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report Form(s) postmarked no later than the 15th day of the month following the completed reporting period. The first report is due on the 15th day of the month following the effective date of the permit.

Signed copies of these, and all other reports required herein, shall be submitted to the Director at the following address:

Permit Compliance Section
Compliance Branch
Water Management Division
Environmental Protection Agency
JFK Federal Building
Boston, MA 02203

Duplicate signed copies of all monitoring reports shall be submitted to the State at:

Massachusetts Department of Environmental Quality Engineering
Massachusetts Division of Water Pollution Control
Southeastern Regional Office
Lakeville Hospital
Lakeville, Massachusetts 02346

Signed copies of all other notifications and reports required by this permit shall be submitted to the State at:

Massachusetts Department of Environmental Quality Engineering
Massachusetts Division of Water Pollution Control
Regulatory Branch
1 Winter Street
Boston, Massachusetts 02108

D. STATE PERMIT CONDITIONS

This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency and the Division of Water Pollution Control under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Director of the Massachusetts Division of Water Pollution Control pursuant to M.G.L. Chap. 21, §43.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this Permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES Permit issued by the U. S. Environmental Protection Agency. In the event this Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this Permit shall remain in full force and effect under State law as a Permit issued by the Commonwealth of Massachusetts.

Exhibit 8

Federal Permit No. MA0004120
State Permit No. 307
State Application No. 517

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

OCT 14 1974

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"), and the Massachusetts Clean Waters Act, as amended, (M.G.L., C.21, §§26-53),

Foxboro Company (Neponset Plant)

is authorized to discharge from a facility located at

38 Neponset Avenue
Foxboro, Massachusetts 02035

to receiving waters named

Neponset Reservoir

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, and III hereof.

This permit shall become effective 30 days after the date of signing.

This permit and the authorization to discharge shall expire at midnight, 5 years from signing date.

Signed this 8th day of October, 1974



Jeffrey G. Miller
Jeffrey G. Miller, Director
Enforcement Division
Environmental Protection Agency



Thomas C. McMahon
Thomas C. McMahon, Director
Division of Water Pollution Control
Commonwealth of Massachusetts

Exhibit 9

Memo to the file from Hilary Snook (6/1/15): Robinson Brook

On April 29, Hilary Snook from USEPA's Ecology Monitoring Team made a site visit to Robinson Brook, located in Foxboro Massachusetts to ascertain the connectivity and ecological and hydrologic function of the brook to downstream waterbodies, wetlands, and riparian areas. Visual observations were made from the Mechanic Street road crossing downstream to the Cocasset Street road crossing, and then from the Route 140 road crossings and from the outlet of Hersey Pond at Walnut Street. A summary of this visit is stated below:

Robinson Brook is a headwater stream that performs many functions for overall hydrology, water quality, and ecological health. Based on visual observations and review of United States Geologic Survey topographic maps for the area, it is one of many headwater streams within the Three Mile River watershed that connects and conveys overland surface flows and groundwater to numerous wetlands and riparian areas, flowing into the Rumford River which joins the Three Mile River, and ultimately flows into the Taunton River and out to the Atlantic Ocean. Within any given watershed, these first and second order stream systems make up the dominant number of stream miles and their connected hydrologic flows provide critical functions throughout the watershed and river basin.

Robinson Brook's hydrologic connectivity ensures perennial inflows to the larger stream systems, maintaining baseflows during antecedent weather conditions, and mitigating downstream flood impacts during excessive runoff or precipitation events. Groundwater inflows during low flow periods maintain stream temperature regimes critical for survival and reproduction of instream and riparian biota. They play a critical role in the recharge of groundwater aquifers, and inflows to connected wetlands and riparian floodplains that attenuate nutrient loads and provide the storage of flood waters to be released during periods of reduced downstream flows, thus reducing or eliminating flood surges to downstream waters. Flow regime changes assist in the transport of sediment loads, woody debris and detritus further downstream to be utilized as food sources and refugia/substrate for aquatic organisms and plants, and in the shaping of stream and river channel morphology. Robinson Brook revealed a reasonable amount of woody debris, inhabited by various macroinvertebrates, and stream substrates that were harboring larval aquatic life and amphibian egg masses (Figure 1).

Organisms observed in Robinson Brook during this site visit, although extremely sparse, included damselfly larvae, midge/bloodworms, pouch snails, and water striders. Caddisfly larvae was found at the mouth of an incoming tributary stream approximately $\frac{1}{4}$ mile downstream from the Mechanic St. road crossing and Robinson Brook. It should be noted that with the possible exception of the caddisfly larvae, these organisms are all considered to be tolerant species and biological indicators of poor water quality conditions.

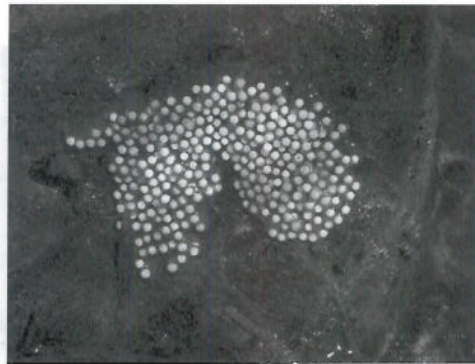


Figure 1- Egg mass on underside of rock from Robertson Brook

Robinson Brook's connectivity to downstream waters, wetlands, and riparian habitats plays a vital role in downstream water quality. Riparian and in stream aquatic plants show evidence of nutrient uptake from surrounding anthropogenic sources, alleviating excessive nutrient loadings and pollutants to downstream sources and providing natural sinks for the attenuation of nitrogen, phosphorus, and other nutrients. This attenuation of excessive nutrient loads assists in mitigating eutrophication and potential hypoxia issues that threaten aquatic life further downstream. The brook plays a key role in the initial decomposition of allochthonous materials, breaking down coarse woody debris and leaf litter by bacteria and invertebrates, to be consumed by other organisms as it makes its way downstream. Evidence of this process was found throughout the stream system. This process promotes the natural spiraling of nutrients through the watershed via physical and chemical decomposition, making them readily available for uptake by aquatic plants and organisms. In the absence of a connected system, these processes are short circuited and directly attribute to the loss of ecological integrity, biological integrity, and water quality.

Despite the role that Robinson Brook plays as a first order stream system, it should be noted that it struggles to return to a somewhat "natural" state and much of its natural functions as stated in the previous paragraph have been significantly degraded. This waterbody can be considered a heavily impacted urban stream system. The upper headwater area flows underneath extensively paved parking areas, the brook has been historically channelized (Figure 2), it is subject to higher high flows and lower low flows due to urbanization and stormwater infrastructure, and there are significant nutrient inputs from roadways and manicured lawns/fields in the watershed. The stream displays these impacts by generating heavy growths of filamentous algae (Figure 3), large sediment loads atypical under most natural conditions in the region, and a limited abundance of aquatic life, the majority of which are considered pollutant tolerant organisms.



Figure 2-Channelized structure of Robinson Brook



Figure 3-Heavy macrophyte growth from upstream nutrient sources

Robinson Brook and other headwater aquatic systems provide seasonal habitat for many key organism life stages. Migrations up into headwater streams during seasonal spawning and mating periods ensures propagation of the species and a hospitable rearing ground for many juveniles and larval life forms. Terrestrial organisms also depend on these systems as part of their integrated food web, capitalizing on organisms living within the riparian and in stream habitats, often timed with the onset of specific amphibious and invertebrate life stages.

Robinson Brook contains macro-invertebrate and amphibian populations.

Robinson Brook, through its connectivity, is a key component to the function, water quality, and overall health of its downstream constituents. Singularly, Robinson Brook plays a small but vital role in mitigating transport of pollutants further downstream, by the attenuation of nutrients, the muting of hydrologic fluctuations, and providing the habitat and ecological niches critical to maintaining biological integrity in the watershed. Cumulatively, these headwaters streams are the dominating influence in a given watershed on the condition of waters farther downstream. Their integrity and hydrologic connectivity is imperative in order to sustain the quality and ecological integrity of our regions waters.

Exhibit 10

Pincumbe, David

From: Jane Sears Pierce [jpierce@town.foxborough.ma.us]
Sent: Wednesday, December 18, 2013 11:01 AM
To: Pincumbe, David
Cc: Judi Johnson; Bob Boette; Sheila Warner
Subject: Robinson Brook, Foxborough
Attachments: Robinson Brook at YMCA.pdf

David~

I've been thinking about your questions regarding the upper reaches of Robinson Brook and it occurred to me that every time I've visited the YMCA on Mechanic Street (for various filings), the brook has always had water in it. I've never seen it dry and have visited the site numerous times over the past four years that I've been working in Foxborough.

A MassGIS (Oliver) aerial photo of the YMCA site and Robinson Brook is attached FYI.

If you have any questions, please give me a call.

I hope this is helpful.

~Jane

Jane Sears Pierce
Conservation Manager
Town of Foxborough
40 South Street, Foxborough, MA 02035
508-543-1251
www.foxboroughma.gov/conservation

Please be advised that the Massachusetts Secretary of State considers e-mail to be a public record, and therefore subject to the Massachusetts Public Records Law, M.G.L. c. 66 §10.

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Emails +
Correspondence

Exhibit 11

MEMORANDUM



To: File

From: Lisa McIntosh and Duff Collins

Date: August 17, 2015

RE: EPA Memorandum on Robinson Brook

As requested by Invensys (Schneider Electric), Woodard & Curran reviewed a memorandum prepared by Hilary Snook of EPA's Ecology Monitoring Team, dated June 1, 2015 (Snook Memo), regarding the hydrological connectivity and ecological function of Robinson Brook to downstream waterbodies. The observations relayed in this memorandum were later used by EPA in their rationale to identify Robinson Brook as a Waters of the United States.

The EPA memorandum discusses observations made by Mr. Snook during a site visit on April 29, 2015. The Snook Memo notes that "visual observations were made from the Mechanic Street road crossing and downstream to the Cocasset Street road crossing, and then from the Route 140 road crossings and from the outlet of Hersey Pond at Walnut Street." The EPA¹ used information presented in the Snook Memo to state that "Robinson Brook specifically performs many of the important functions of headwater streams" ... "and its importance to the integrity of downstream navigable waters is clear."

However, the Invensys Outfall 002 discharge point is located approximately 450 yards (1350 feet) from the Mechanic Street origin of Robinson Brook (indicated on the USGS topographic map), where Snook started EPA's evaluation. Therefore, the EPA's observations and conclusions regarding Robinson Brook's connectivity and ecological import to downstream waters do not confirm the nexus of the facility's Outfall 002 discharge point and Robinson Brook.

In actuality, the reach of the brook at the effluent discharge point is very often is dry, typically filling directly after storm events or with a seasonally high water table. The stream in this reach appears as a narrow man-made ditch, as evidenced by its steep channel banks and linearity, proximal to the edge of a facility parking lot. During a recent site visit (August 5, 2015), the stream contained considerable wetland vegetation, suggesting a low-flow environment. Approximately one to three inches of water was observed in the vicinity of the outfall area, with very little to no surface water flow within the brook. It was noted that a large rainstorm had occurred in the area on the previous evening, and it appeared that the standing water was most likely related to storm flow. A site visit on July 22 indicated no standing or flowing water in this reach of the brook.

LM/DC

¹ EPA Response to Comments on Draft National Pollutant Discharge Elimination System (NPDES) Permit No. MA0004120, undated.

Exhibit 12

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

NPDES PERMIT NO.: MA0004120

STATE PERMIT NO.: 307

NAME AND ADDRESS OF APPLICANT: Richard Mannion
The Foxboro Company
38 Neponset Avenue
Foxboro, MA 02035

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

The Foxboro Company
38 Neponset Avenue
Foxboro, MA 02035

RECEIVING WATER: Neponset Reservoir

CLASSIFICATION: B

I. Proposed Action, Type of Facility, and Discharge Location.

The above named applicant has applied to the U.S. Environmental Protection Agency for a modification to their existing NPDES permit to discharge into the designated receiving water. The facility is engaged in metal finishing. The discharge is from treated process wastewater and noncontact cooling water.

II. Description of Discharge.

A quantitative description of the discharge in terms of significant effluent parameters based on data submitted on discharge monitoring reports from November of 1986 through April 1987 is shown on Attachment A.

III. Limitations and Conditions.

The effluent limitations of the draft permit, the monitoring requirements, and any implementation schedule (if required) may be found on the following attachments: Attachment B.

IV. Permit Basis and Explanation of Effluent Limitation Derivation.

The Foxboro Company, located in Foxboro, MA, manufactures process control instrumentation. The manufacturing process consists of metal finishing and plating of parts for assembly into control instrumentation. The operation includes cadmium, chromium and cyanide plating, painting and solvent decreasing and machine shop operations. The Foxboro Company is classified as a metal finishing point source category.

The Clean Water Act establishes the national objective "to restore and maintain the chemical and biological integrity of the Nation's waters." The Act requires the Administrator of the EPA to establish effluent limitations which set forth the degree of reduction attainable through the application of best practicable control technology currently available (BPT), best conventional pollutant control technology (BCT), and best available technology economically achievable (BAT) (Section 301 and 304) for those industries for which national effluent guidelines have been promulgated. In addition, the effluent limitations must insure compliance with water quality standards as established by state law or regulation.

On June 20, 1984, the EPA issued an NPDES permit to the Foxboro Company to discharge treated process wastewater and noncontact cooling water into the Neponset Reservoir. The permit required the facility to meet effluent limitations achievable through the application of the best available technology (BAT) as outlined in the national guidelines for metal finishers. For some pollutants, the facility was required to meet effluent limitations more stringent than those required by the national guidelines. Foxboro's effluent, typical of all metal finishing wastewater, contains a variety of metals, total suspended solids (TSS), organics, cyanide and oil & grease. The permit limited several of these pollutants. Based on the water quality data available for the Reservoir, the limits on these pollutants also satisfied the water quality requirements of the CWA.

The facility also discharges phosphorus. The national guidelines do not establish numerical limits on phosphorus for discharges from metal finishers. In cases such as this, a limit must be established using best professional judgment (BPJ). To obtain more data to establish such a limit, the permit issued in 1984 required the Foxboro Company to monitor the concentration of phosphorus in their effluent for one year. Depending on the monitoring data, the permit would be modified to include a limit for this parameter or delete the monitoring requirement if a limit was not necessary.

In February of 1986, EPA began to review the data submitted by the Foxboro Company on phosphorus. In June of 1986, the Massachusetts DEQE performed a water quality survey to assess the quality of the Neponset Reservoir and its assimilative capacity for the discharge from the Foxboro Company. The water quality survey included taking samples of the surface water at seven locations and the sediments at three locations. Water column samples were analyzed for chemicals, nutrients, bacteria, algal and metals

concentrations. Water column samples at three locations were also analyzed for volatile organic compounds. The sediment samples were analyzed for nutrient and metal concentrations.

A fish survey was also conducted to assess the numbers and quality of the fish in the reservoir. As part of this survey, tissue samples from the fish in the reservoir were analyzed for metals and organic pollutants to determine if bioaccumulation was a concern.

As a result of concerns from the local citizens on the quality of the public and private water supply wells located adjacent to the reservoir, the DEQE with the aid of the EPA sampled one of the public and two of the private wells. Because of their proximity to the reservoir, these wells have the potential of being recharged by the water in the reservoir. These samples were analyzed for metals and organic compounds.

The data from the water quality survey indicates that the overall water quality in the reservoir is poor. The reservoir is highly eutrophic. Violations of the water quality standard for bacteria were observed. Elevated metals concentrations in both the water column and the sediments were seen near the discharge and at some in-lake stations. Organic compounds were also detected in the water column near the discharge and at one in-lake station.

The data from the fish survey indicates that the reservoir contains a healthy population of fish. None of the fish captured appeared to be stressed by conditions in the reservoir. Analysis of the fish tissue indicated levels which are safe and common for fish from this type of environment.

Finally, the data from the well water analyses indicated that the wells had not been contaminated by the water in the reservoir or by Foxboro Company's discharge. One sample from a private well contained trace levels of benzene and toluene which is expected to be from cross contamination when the sample was taken. All samples presently meet drinking water standards. However, it is important to note that although the wells have not shown any contamination as of yet, there is no assurance that contamination will not occur in the future.

As a result of this new information on the existing quality of the reservoir, EPA decided to modify the permit to include tighter limits which are needed to meet the water quality requirements of the CWA. The Foxboro Company, in turn, has decided to eliminate their process water discharge by "tie-in" to the Mansfield municipal wastewater treatment plant. After consideration of the time needed to obtain the permits necessary for tie-in and to complete the construction of the project, EPA is requiring the Foxboro Company to eliminate their process wastewater discharge by July 1, 1988. The permit has been modified to enforce this decision by only authorizing the process wastewater discharge until July 1, 1988. The facility is allowed to discharge with the same limits as their existing permit until this date.

In addition to restricting the duration of the process wastewater discharge, the modification also includes a numerical limit on phosphorus. Due to the quality of the reservoir and in particular the eutrophication problem, a phosphorus limit has been established to ensure that best management practices are used in handling and disposing of this compound. The concentration of phosphorus is limited to 1.65 mg/l for the monthly average. This value is the average of the monthly average concentrations reported on the facilities Discharge Monitoring Reports (DMR) for the last six months. Phosphorus is found in the compounds used for cleaning. This limit should be achievable by implementing conservative application and avoiding large batch discharges.

Due to the duration of the discharge, the limits in the current permit are restrictive enough to meet the water quality standards of the CWA. The facility is also under an administrative order from the EPA which requires them to submit interim reports on the progress of the tie-in.

* { The modification allows for the discharge of noncontact cooling water into the reservoir for the duration of the existing permit. The Foxboro Company has plans to eventually eliminate this discharge by installing a cooling water recycling system. This project will be addressed either by another modification to their existing permit or at the time of permit expiration.

The monitoring program in the permit specifies routine sampling and analysis which will provide continuous general information on the reliability and effectiveness of the installed pollution abatement equipment. The effluent monitoring requirements have been established to reflect state certification requirements under Section 401(a)(1) of the CWA and to yield data representative of the discharge under the authority of section 308(a) of the CWA as required by 40 CFR 122.41(j), 122.44 and 122.48.

The remaining general and special conditions of the permit are based on the NPDES regulations, 40 CFR Parts 122 through 125, and consist primarily of management requirements common to all permits.

V. State Certification Requirements.

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving waters certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards. The staff of the Massachusetts Department of Environmental Quality Engineering has reviewed the draft permit and advised EPA that the limitations are adequate to protect water quality. EPA has requested permit certification by the State and expects that the draft permit will be certified.

VI. Comment Period, Hearing Requests, and Procedures for Final Decisions.

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the U.S. EPA, Compliance Branch, JFK Federal Building, Boston, Massachusetts 02203. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the final permit decision any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of 40 C.F.R. §124.74, 48 Fed. Reg. 14279-14280 (April 1, 1983).

VII. EPA Contact.

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

Lynne Fratus, WCI-2103
Compliance Branch
John F. Kennedy Federal Building
Boston, Massachusetts 02203
Telephone: (617)565-3507

June 30, 1987
Date

David A. Fierra, Director
Water Management Division
Environmental Protection Agency

ATTACHMENT A

DESCRIPTION OF DISCHARGE: Outfall 001a - treated process water

EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE

Parameter	1986		1987				
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
Flow-mgd	AV.	0.058	0.056	0.056	0.056	0.074	0.085
	MAX.	0.104	0.101	0.124	0.124	0.116	0.103
TSS-mg/l	AV.	10.8	5.0	8.5	12.5	7.0	18.2
	MAX.	18.0	9.0	16.0	16.0	10.0	24.0
Oil & Grease-mg/l	AV.	-	-	-	-	-	-
	MAX.	6.0	0.2	0.2	0.2	0.5	0.2
Cadmium-mg/l (total)	AV.	0.44	0.26	0.22	0.18	0.30	0.44
	MAX.	0.88	0.38	0.34	0.21	0.98	0.56
Chromium-mg/l (total)	AV.	0.22	0.28	0.12	0.19	0.42	0.30
	MAX.	0.37	0.48	0.15	0.25	0.68	0.52
Chromium-mg/l (hexavalent)	AV.	0.01	0.01	<0.01	0.06	<0.1	0.06
	MAX.	0.01	0.01	<0.01	0.1	<0.01	0.05
Copper-mg/l (total)	AV.	0.19	0.207	0.13	0.15	0.29	0.27
	MAX.	0.28	0.26	0.15	0.21	0.55	0.85
Cyanide-mg/l (total)	AV.	0.015	0.045	<0.01	0.01	<0.01	0.01
	MAX.	0.02	0.06	<0.01	0.02	<0.01	0.05
Cyanide-mg/l (amendable)	AV.	0.006	<0.01	<0.01	<0.01	<0.01	<0.01
	MAX.	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel-mg/l (total)	AV.	0.16	<0.15	<0.15	<0.15	<0.15	<0.15
	MAX.	0.20	<0.15	<0.15	<0.15	<0.15	<0.15
Aluminum-mg/l (total)	AV.	1.04	1.0	0.60	1.48	1.35	1.21
	MAX.	1.2	1.2	1.0	2.2	2.2	2.0
Total Toxic Organics-mg/l	AV.	-	-	-	-	-	-
	MAX.	-	-	-	-	-	-
Phosphorus-mg/l	AV.	1.0	1.0	1.0	2.05	3.5	1.4
	MAX.	1.0	1.0	1.0	4.0	7.6	1.54

AV. - indicates monthly average

M. - indicates daily maximum

* - The average of the monthly averages is 1.65 mg/l.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date and lasting through July 1, 1988 the permittee is authorized to discharge from outfall serial number 001a, treated process wastewater.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Avg. Monthly	Max. Daily	Measurement Frequency	Sample Type
Flow, MGD	0.185	0.382	Continuous	Total Daily Composite
TSS	20 mg/l	30 mg/l	2/Month	Grab
Oil and Grease	-	15 mg/l	2/Month	Composite
Cadmium (Total)	0.26 mg/l	0.69 mg/l	2/Month	Composite
Chromium (Total)	1.5 mg/l	2.77 mg/l	2/Month	Grab
Chromium, hexavalent	0.1 mg/l	0.25 mg/l	2/Month	Composite
Copper (Total)	1.5 mg/l	3.0 mg/l	2/Month	Grab
Cyanide (Total)	0.25 mg/l	0.65 mg/l	2/Month	Composite
Cyanide, amenable	0.1 mg/l	0.2 mg/l	2/Month	Grab
Nickel (Total)	1.8 mg/l	3.6 mg/l	2/Month	Composite
Aluminum (Total)	1.5 mg/l	2.0 mg/l	2/Month	Composite
* Total Toxic Organics	-	2.13 mg/l	1/Quarter	Grab
Phosphorus	1.65 mg/l	-	2/Month	Composite

* See page 4 of 7 for Total Toxic Organics definition and monitoring requirements.

The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units and shall be monitored continuously, report daily range.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: the discharge of the wastewater treatment plant, prior to mixing with the noncontact cooling water.

The permittee shall not augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with the above limitations.

Exhibit 13

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

NPDES PERMIT NO.: MA0004120

STATE PERMIT NO.: M-307

NAME AND ADDRESS OF APPLICANT:

The Foxboro Company
38 Neponset Avenue
Foxboro, MA 02035

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

The Foxboro Company
38 Neponset Avenue
Foxboro, MA 02035

RECEIVING WATER: Neponset Reservoir

CLASSIFICATION: B

I. Proposed Action, Type of Facility, and Discharge Location.

The above named applicant has applied to the U.S. Environmental Protection Agency for reissuance of an NPDES permit to discharge into the designated receiving water. The facility is engaged in metal finishing operations. The discharge is from non contact cooling water and stormwater. The process wastewater from this facility is directed to the Town of Mansfield municipal sewer system and the treated sanitary waste is covered under a separate permit (MA0004111)

II. Description of Discharge.

A quantitative description of the discharge in terms of significant effluent parameters based on previous Discharge Monitoring Reports and on the permit application are shown on Attachments A and B.

III. Limitations and Conditions.

The effluent limitations of the draft permit and the monitoring requirements may be found on pages 2 and 3 of the draft permit (Attachment C).

IV. Permit Basis and Explanation of Effluent Limitation Derivation.

The Foxboro Company, located in Foxboro MA, manufactures process control instrumentation. The manufacturing process consists of metal finishing and plating of parts for assembly into control instrumentation. The process also includes painting and solvent degreasing, and machine shop operations. The Foxboro Company is classified as a Metal Finisher.

The Clean Water Act establishes the national objective "to restore and maintain the chemical and biological integrity of the Nation's waters." The Act requires the Administrator of the EPA to establish effluent limitations which set forth the degree of reduction attainable through the application of best practicable control technology currently available (BPT), and best conventional pollutant control technology (BCT), and best available technology economically achievable (BAT) (Section 301 and 304) for those industries for which national effluent guidelines have been promulgated. In addition, the effluent limitations must insure compliance with water quality standards as established by state law or regulation.

This facility was previously permitted to discharge treated process wastewater and non contact cooling water. The company has tied-in the process wastewater discharge to the Town of Mansfield municipal sewer system, and therefore the process wastewater discharged is no longer permitted. The company has considered converting to a cooling water recycling system which would eliminate the need for a continuous cooling water discharge permit. This permit is necessary until the company completes this project. Upon completion of the project, the company may request a modification to indicate intermittent or "emergency" discharges.

This is a new draft permit. A previous draft of this permit has was Public Noticed from 9 November 1990 to 6 January 1991. The draft permit was withdrawn to allow the permittee to analyze the wastestream for pollutants which appeared in the permit application, but which would normally not be present in cooling water. Also, the permittee had expected the discharge to be only for emergency or intermittent discharge of cooling water from a recycling system as previously mentioned.

We consider it is appropriate to limit the stormwater discharge based on section 402(p)(2)(A) of the CWA, given that the discharge of process waste and cooling water was previously permitted for discharge from this outfall. Also, we feel section

402(p)(2)(E) applies in that this discharge is a significant contributor of pollutants to the Reservoir based on application and subsequent monitoring data.

Limitations presented in the draft permit for oil and grease, temperature, Total Suspended Solids, and pH are based on state water quality standards for class B waters. The reservoir is used for primary and secondary recreation, as well as a warm water fishery, and is in close proximity to public and private drinking water supply wells. The Neponset Reservoir provides little to no dilution for the purpose of calculating numeric water quality criteria to provide maximum protection of the water quality, since the Reservoir has been designated for protection in accordance with Massachusetts Surface Water Quality Standards 314 CMR 4.04(2). Whole effluent toxicity testing is required as a means of determining the toxicity of the discharge and thereby protecting the water quality of the reservoir.

The requirement for a stormwater study has been omitted. The Company must comply with the requirements of 40 CFR 122.26 as originally published on 16 November 1990 and amended.

We consider it appropriate to issue the permit to the Foxboro Company exclusively and not include the Town of Foxboro as a co-permittee unless the Company provides data which accounts for the flow and pollutants which the Town contributes to the discharge.

The reopener clause allows for the modification or revocation and reissuance of the permit based on new information that may be received concerning this discharge, in accordance with 40 CFR 122.62. This information may include, but is not limited to data obtained from the monitoring requirements of the permit.

V. State Certification Requirements.

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving waters certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards. The staff of the Massachusetts Division of Water Pollution Control has reviewed the draft permit and advised EPA that the limitations are adequate to protect water quality. EPA has requested permit certification by the State and expects that the draft permit will be certified.

VI. Comment Period, Hearing Requests, and Procedures for Final Decisions.

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the U.S. EPA, Compliance Branch, JFK Federal Building, Boston, Massachusetts 02203. Any person, prior to such date, may

submit a request in writing for a public hearing to consider the draft permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston office.

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VIII. EPA Contact.

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

Jay Brolin
John F. Kennedy Federal Building
WMM-2113
Boston, Massachusetts 02203
Telephone: (617)565-3590

Date

David A. Fierra, Director
Water Management Division
Environmental Protection Agency

ATTACHMENT B
APPLICATION/SUBSEQUENT MONITORING DATA

<u>PARAMETER</u>	<u>OUTFALL</u>	<u>001</u>	<u>PROPOSED LIMITS</u>		
	<u>001</u>	<u>W/STORM</u>	<u>AVG</u>	<u>MAX</u>	<u>WD</u>
Ammonia, mg/l	1.3	1.0	2.1	23	L
Phosphorus, mg/l	0.27	0.25	-	0.5	Q
Nitrogen, mg/l	-	0.26	-	0.5	Q
TSS, mg/l	12	34	20	30	Q
Oil and Grease, mg/l	5	7	-	15	Q
Fecal Coliform, #/100 ml	3900*	50**	-	-	20
Aluminum, ug/l	200	200	87	750	L
Mercury, ug/l	-	0.3	-	0.144	
Copper, ug/l	60	60	6.5	9.2	L
Silver, ug/l	-	0.3	0.12	1.2	L
Zinc, ug/l	240	80	47	180	L
Iron, mg/l	0.19	0.68	-	0.3	
Manganese, ug/l	30	50	-	50	
Methylene chloride, ug/l	7.8	-	-	5	
Trichloroethylene, ug/l	11	-	-	5	
Tetrachloroethylene, ug/l	-	9.6	-	5	

SWC = State Water Quality PAL = Protection of Fresh Water Aquatic Life
 HH = Human Health, Fish and Water Ingestion DW = Drinking Water MCL

* Application data dated 2/89 ** Application data dated 11/89

ATTACHMENT A
DISCHARGE MONITORING REPORTS AVERAGES

<u>Parameter</u>	<u>Average Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
Temperature, °F	57		61.75
Flow, MGD	-	-	0.277
pH, SU	6.325		6.925
Oil and Grease, mg/l	-	-	< 5