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"),

Tyco Electronics Integrated Cable Systems

is authorized to discharge from a facility located at

Tyco Electronics Integrated Cable Systems
100 Piscataqua Drive
Newington, NH 03801

to receiving water named

Piscataqua River

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

This permit shall become effective on the first day of the calendar month following 60 days after signature.

This permit and the authorization to discharge expire at midnight, five (5) years from the last day of the month preceding the effective date.

This permit supersedes the permit issued on July 14th, 2004.

This permit consists of 10 pages in Part I including effluent limitations, monitoring requirements, Attachment 1 – Marine Acute Toxicity Test Procedure and Protocol, and 25 pages in Part II, Standard Conditions.

Signed this 15th day of April, 2010

/S/ SIGNATURE ON FILE

_____

Stephen S. Perkins, Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

PART I

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 non-contact cooling water, contact cable cooling water, and cable test tank water from **Outfall 007** to the Piscataqua River. This discharge shall be limited and monitored by the permittee as reported below.

Effluent Characteristic	Discharge Limitations		Monitoring Requirements [1]	
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow (MGD)	0.06	0.16	Continuous	Recorder [2]
Temperature ºC(ºF)	Report	27ºC (80.6ºF)	1/Month	Grab
pH (SU) [3]	6.5 – 8.0		1/Month	Grab
Total Recoverable Copper (mg/L)	0.37	Report	2/Month	Composite [5]
Total Recoverable Zinc (mg/L)	8.6	Report	2/Month	Composite [5]
Contact Cooling Water Volume (MG) [4]	Report Total		Continuous	Estimate
Contact Cooling Water, Process Operating Days (days) [4]	Report Total		Continuous	Count
Cable Test Tank Drainage Volume (MG) [4]	Report Total		Continuous	Estimate
Cable Test Tank Drainage, Process Discharge Days (days) [4]	Report Total		Continuous	Count
Extrusion Lines in Operation (number) [4]	Report Total		Continuous	Count
Monthly Average Process Water Usage Flow Rate [4]	Report		1/Month	Calculate
Total Residual Chlorine (TRC) (mg/L)	Report	Report	1/Month	Grab

See pages 4-5 for explanation of footnotes.

Effluent Characteristic	Discharge Limitations		Monitoring Requirements [1]	
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Biochemical Oxygen Demand (BOD) (lbs/day)	---	4.8	2/Month	Composite [5]
Total Suspended Solids (TSS) (lbs/day)	---	3.5	2/Month	Composite [5]
Oil and Grease (O&G) (lbs/day)	---	5.3	2/Month	Grab
Whole Effluent Toxicity (WET) [6,7,8]				
Acute LC_{50} (%)	---	50	1st and 3rd year	Composite [5]
Hardness (mg/L)	---	Report	1st and 3rd year	Composite [5]
Total Residual Chlorine (mg/L)	---	Report	1st and 3rd year	Composite [5]
Alkalinity (mg/L)	---	Report	1st and 3rd year	Composite [5]
pH (SU)	---	Report	1st and 3rd year	Composite [5]
Specific Conductance (µmhos/cm)	---	Report	1st and 3rd year	Composite [5]
Total Solids (mg/L)	---	Report	1st and 3rd year	Composite [5]
Total Dissolved Solids (mg/L)	---	Report	1st and 3rd year	Composite [5]
Total Ammonia Nitrogen as N (mg/L)	---	Report	1st and 3rd year	Composite [5]
Total Organic Carbon (mg/L)	---	Report	1st and 3rd year	Composite [5]
Total Cadmium (mg/L)	---	Report	1st and 3rd year	Composite [5]
Total Chromium (mg/L)	---	Report	1st and 3rd year	Composite [5]
Total Lead (mg/L)	---	Report	1st and 3rd year	Composite [5]
Total Copper (mg/L)	---	Report	1st and 3rd year	Composite [5]
Total Zinc (mg/L)	---	Report	1st and 3rd year	Composite [5]
Total Nickel (mg/L)	---	Report	1st and 3rd year	Composite [5]
Total Aluminum (mg/L)	---	Report	1st and 3rd year	Composite [5]

See pages 4-5 for explanation of footnotes.

(Part I.A.1, Continued)
Footnotes:

1. The final effluent shall be sampled at the highline, at a point representative of all commingled discharges through Outfall 007.

2. The effluent flow shall be continuously measured and recorded using a flow meter and totalizer.

3. Required for State Certification, see Part I.D.1.a. Also see Part I.B.1, Special Conditions Section of this permit.

4. The permittee shall report the following production information on each monthly Discharge Monitoring Report (DMR):
   (a) Each month, estimate the total volume of contact cooling water discharged in millions of gallons, and the number of days the contact cooling water process operated (i.e., discharged).
   (b) Each month, estimate the total volume of cable test tank water discharged in millions of gallons, and the number of days that water is discharged from the cable test tank(s).
   (c) Each month, report the number of extrusion lines that operated including those that operated for only a portion of the month.
   (d) Each month, calculate the "monthly average process water usage flow rate" for the reporting month as the sum of: (1) the total volume of contact cooling water used that month divided by the number of days that month that the contact cooling water process operated (i.e., discharged), plus (2) the volume of cable test tank water discharged that month divided by the number of days that month that water is discharged from the cable test tank(s).

5. Composite samples shall be 24-hour composite samples taken over a 24-hour period consisting of a minimum of four grab samples collected at equal intervals of no less than sixty (60) minutes and combined proportionally to flow; or, a composite sample continuously collected over a full operating day proportionally to flow.

6. The permittee shall conduct acute whole effluent toxicity (WET) tests on effluent samples using two species, Mysid Shrimp (Mysidopsis bahia) and Inland Silverside (Menidia beryllina), following the protocol in **Attachment 1** (Marine Acute Toxicity Test Procedure and Protocol) to this permit. Toxicity test samples shall be collected twice during the effectiveness of this permit. The permittee shall perform the WET tests once during the first year of the permit and once during the third year of the permit, during the month of July. The test results shall be submitted by the last day of the month following the completion of the test (August 31st).

7. The LC_{50} is defined as the concentration of wastewater (effluent) causing mortality to 50 percent of the test organisms. The "50 %" limit is defined as a sample which is composed of 50 percent effluent, the remainder being dilution water. If unacceptable

results are found in a routine WET test, the permittee shall conduct an additional toxicity test on the species of concern. The additional test shall be conducted as soon as possible. The additional test will be used to determine if the results found in the routine test are verifiable.

8. For each WET test the permittee shall report on the appropriate DMR, the concentrations of the Hardness, Total Residual Chlorine, Alkalinity, pH, Specific Conductance, Total Solids, Total Dissolved Solids, Total Ammonia Nitrogen as N, Total Organic Carbon, Total Cadmium, Total Chromium, Total Lead, Total Copper, Total Zinc, Total Nickel, and Total Aluminum found in the 100 percent effluent sample. Metals shall be reported as total recoverable concentrations. The permittee should note that all chemical parameter results must still be reported in the appropriate toxicity report.

(Part I.A continued)

2. This permit may be modified, or alternatively, revoked and reissued to incorporate additional toxicity testing requirements, including new and/or additional chemical specific limits, if the results of the toxicity tests indicate that the discharge causes an exceedance of any State Water Quality Criterion. Results from these toxicity tests are considered "New Information" and the permit may be modified as provided in 40 Code of Federal Regulations (CFR) §122.62(a)(2).

3. The discharge shall not cause a violation of the water quality standards of the receiving water and shall not jeopardize any designated uses of that receiving water.

4. The discharge shall remain free from pollutants in concentrations or combinations that settle or float to form harmful deposits, float as foam, debris, scum or other visible pollutants. It shall remain free from pollutants which produce odor, color, taste, or turbidity in the receiving water which is not naturally occurring and would render it unsuitable for its designated uses.

5. The permittee shall submit the results to EPA of any additional testing done beyond that required herein, if it is conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR §122.41(l)(4)(ii).

6. The permittee shall comply with all existing federal and state laws and regulations that apply to the reuse or disposal of industrial residuals such as those found in the cable testing tanks. These include but are not necessarily limited to 40 CFR Part 257 and Env-Wq 800.

7. 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 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 µg/l);

        (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrite; five hundred micrograms per liter (500 µg/l) for 2,4-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 CFR §122.21(g)(7); or

        (4) Any other notification level established by the Director in accordance with 40 CFR §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 µg/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 CFR §122.21(g)(7).

(4) Any other notification level established by the Director in accordance with 40 CFR §122.44(f).

c. 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.

8. Toxics Control

a. The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.

b. Any toxic components of the effluent shall not result in any demonstrable harm to aquatic life or violate any State or Federal Water Quality Standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards.

c. EPA or the New Hampshire Department of Environmental Services -Water Division (NHDES-WD) may use the results of chemical analyses conducted pursuant to this permit, as well as National Water Quality Criteria developed pursuant to 304(a)(a) of the Clean Water Act (CWA), State Water Quality Criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including but not limited to those pollutants listed in Appendix D of 40 CFR Part 122.

B. SPECIAL CONDITIONS

1. pH Limit Adjustment

The permittee may submit a written request to EPA-NE requesting a change in the permitted pH limit range, not to be less restrictive than the 6.0-9.0 SU range found in the applicable National Effluent Limitation Guideline (Plastics Molding and Forming Point Source Category, Contact Cooling and Heating Water Subcategory, 40 CFR Part §463, Subpart A) for this facility. The permittee's written request must include the State's approval letter containing an

original signature (no copies). The State's letter shall state that the permittee has demonstrated to the State's satisfaction that the NH Standard for pH will be protected as long as discharges to the receiving water from a specific outfall are within a specific numeric pH range and the naturally occurring receiving water pH will not be significantly altered. The letter must specify for each outfall the associated numeric pH limit range. Until written notice is received by certified mail from EPA-NE indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the respective permit.

2. Best Management Practices (BMPs)

a. The effluent diffuser shall be maintained to ensure proper operation. Proper operation means that the plume shall have unobstructed flow. Maintenance may include dredging in the vicinity of the diffuser, clean out of solids in the diffuser header pipe, removal of debris and repair/replacement.

b. Any necessary maintenance dredging must be performed only during the marine construction season authorized by the New Hampshire Fish & Game Department and only after receiving all necessary permits from the NHDES Wetlands Bureau, U.S. Coast Guard, U.S. Army Corps of Engineers, etc.

c. To determine if maintenance will be required, the permittee shall have a licensed diver or licensed marine contractor inspect and videotape the operation of the diffuser. The inspections and videotaping shall be performed annually. EPA and the NHDES-WD shall be contacted at least seven (7) days prior to the dive inspection. After submitting one year of inspection and videotaping results, the permittee may submit a written request to EPA requesting a reduction in the frequency of required outfall inspections and videotaping, to no less than once every three years. The permittee is required to continue inspections and videotaping at the frequency specified in the permit until notice is received by certified mail from EPA that the outfall inspection and videotaping requirement has been changed.

d. Copies of reports summarizing the results of each diffuser inspection shall be submitted to EPA and NHDES-WD within 60 days of each inspection. Where it is determined that maintenance will be necessary, the permittee shall provide the proposed schedule for the maintenance.

C. MONITORING AND 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 effective date of the permit.

Signed and dated originals of these, and all other notifications and reports required herein, shall be submitted to EPA at the following address:

Environmental Protection Agency, Region 1
Water Technical Unit (OES04-SMR)
5 Post Office Square – Suite 100
Boston, Massachusetts 02109-3912

Duplicate signed copies of all DMRs and all other notifications and reports required herein shall be submitted to the State at:

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

Additionally, all reporting required in Part II, Standard Conditions, of this permit shall be made to both EPA and NHDES-WD.

D. STATE PERMIT CONDITIONS

1. The permittee shall comply with the following conditions which are included as State Certification requirements:

   a. The pH range of 6.5 – 8.0 SU must be achieved in the final effluent unless the permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring receiving water pH is not significantly altered by the permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits outside of the range of 6.0 to 9.0 SU found in the applicable National Effluent Limitation Guidelines for this facility (Plastics Molding and Forming Point Source Category, Contact Cooling and Heating Water Subcategory, 40 CFR §463, Subpart A).

2. The permittee shall not at any time, either alone or in conjunction with any person or persons, cause directly or indirectly the discharge of waste into the said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification or interfere with the uses assigned to said water by the New Hampshire Legislature (RSA 485-A:12).

3. This NPDES Discharge permit is issued by the EPA under Federal and State law. Upon final issuance by the EPA, the NHDES-WD may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

4. EPA shall have the right to enforce the terms and conditions of this permit pursuant to federal law. NHDES-WD shall have the right to enforce the permit pursuant to state law, if NHDES-WD adopts the 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 the permit as issued by the other Agency.

Response to Comments on Draft National Pollutant Discharge Elimination System (NPDES) Permit No. NH0001490 – Tyco Electronics Integrated Cable Systems – Newington, NH.

Introduction:
In accordance with the provisions of 40 C.F.R. §124.17, this document presents EPA's responses to comments received on the draft NPDES permit for Tyco Electronics Integrated Cable Systems (Tyco), Permit No. NH0001490. The responses to comments explain and support the EPA determinations that form the basis of the final permit. The Tyco draft permit public comment period began March 8, 2010 and ended April 6, 2010. Comments were received on the draft permit from Tyco.

The final permit is substantially identical to the draft permit that was available for public comment. Although EPA's knowledge of the facility has benefited from the comments and additional information submitted, the information and arguments presented did not raise any substantial new questions concerning the permit. EPA did, however, make certain clarifications in response to comments. These improvements and changes are detailed in this document and reflected in the final permit. A summary of the changes made in the final permit are listed below. The analyses underlying these changes are explained in the responses to individual comments that follow.

Changes in Final Permit:

1. Part I.B.2.c has been revised to state:

   To determine if maintenance will be required, the permittee shall have a licensed diver or licensed marine contractor inspect and videotape the operation of the diffuser. The inspections and videotaping shall be performed annually. EPA and the NHDES-WD shall be contacted at least seven (7) days prior to the dive inspection. After submitting one year of inspection and videotaping results, the permittee may submit a written request to EPA requesting a reduction in the frequency of required outfall inspections and videotaping, to no less than once every three years. The permittee is required to continue inspections and videotaping at the frequency specified in the permit until notice is received by certified mail from EPA that the outfall inspection and videotaping requirement has been changed.

SUMMARY OF COMMENTS:

COMMENT 1:
I am writing in response to Tyco Electronics-Integrated Cable Systems (TE-ICS) Draft Permit #NH0001490. TE-ICS is satisfied with all the Permit Conditions, Effluent Limitations and Monitoring Requirements except for one Special Condition. Section B.2.c. Best Management Practices requires: "To determine if maintenance will be required the permittee shall have a licensed diver or licensed marine contractor inspect and videotape the operation of the diffuser. The inspections and videotaping shall be performed annually. EPA and the NHDES-WD shall be contacted at least seven (7) days prior to the dive inspection."

TE-ICS 007 Outfall Pipe consist of a 4 inch PVC pipe that gravity feeds approximately 450 feet to the end of our pier on the Piscataqua River. The 4 inch pipe converts to HDPE [high density polyethylene] and submerges vertically into the river approximately 26 feet below mean sea level. I have enclosed a copy of the original Design Report and 007 Outfall Plan and Details. You will see on the plan that approximately 2 feet from the river bottom the 4 inch pipe has a tee connection in which the discharge direction is a cross-flow from the ambient river flow direction. The discharge is also angled at 30° upward from horizontal. This is just an open pipe without any form of membrane or duckbill diffuser which makes the chances for the pipe to get clogged less probable. The Design report dilution modeling also demonstrates the outfalls ability to achieve greater than 100-fold dilution.

Although TE-ICS does not disagree that our outfall pipe should be inspected for structural integrity, we feel that contracting a certified diver or marine contractor to videotape this outfalls pipe on an annual basis is unwarranted and not cost effective. The 007 outfall has been operational since 1998 and has not encountered any problems with discharge flow. We feel that inspecting and video taping the outfall diffuser during the third year of the permit period would be sufficient to ensure operation efficiency. We respectfully submit this proposal for your consideration prior to issuance of our final permit.

RESPONSE TO COMMENT 1:

Outfall 007 has been in operation since 1998 and since there is no record of previous inspections, EPA believes inspection and videotaping once during the first year of the permit is necessary. However, EPA has reviewed the Outfall 007 Plan and Details submitted by the permittee, and agrees that a reduction in inspection frequency may be appropriate, especially if the first inspection finds the outfall to be in acceptable condition. Therefore, a condition has been added to the permit to allow Tyco to request a reduction in outfall inspection frequency, to no less than once in every three years. The outfall inspection frequency of once every three years is consistent with the minimum requirement in recently issued NPDES permits in New Hampshire.

Therefore, Part I.B.2.c of the permit has been revised to state:

> To determine if maintenance will be required, the permittee shall have a licensed diver or licensed marine contractor inspect and videotape the operation of the diffuser. The inspections and videotaping shall be performed annually. EPA and the NHDES-WD shall be contacted at least seven (7) days prior to the dive inspection. After submitting one year of inspection and videotaping results, the permittee may submit a written request to EPA requesting a reduction in the frequency of required outfall inspections and videotaping, to no less than once every three years. The permittee is required to continue inspections and videotaping at the frequency specified in the permit until notice is received by certified mail from EPA that the outfall inspection and videotaping requirement has been changed.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

FACT SHEET

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

NPDES PERMIT NUMBER: **NH0001490**

NAME AND ADDRESS OF APPLICANT:

Tyco Electronics Integrated Cable Systems
P.O. Box 479
Portsmouth, NH 03802

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Tyco Electronics Integrated Cable Systems
100 Piscataqua Drive
Newington, NH 03801

RECEIVING WATER AND CLASSIFICATION: **Piscataqua River / Class B**

SIC CODES: 3357 (Drawing and Insulating of Nonferrous Wire) and 3669 (Communications Equipment)

TABLE OF CONTENTS

I. PROPOSED ACTION

The above named applicant has applied to the U.S. Environmental Protection Agency (EPA) for the re-issuance of a National Pollutant Discharge Elimination System (NPDES) permit to discharge process water into the designated receiving water. The existing (current) permit was issued to Tyco Integrated Cable Systems (Tyco) on July 14, 2004, and became effective on the date of signature. EPA received a permit renewal application from Tyco on January 20, 2009. Since the permit renewal application was deemed timely and complete by EPA, the permit has

been administratively continued. On February 12, 2010, the facility was renamed Tyco Electronics Integrated Cable Systems.

II. TYPE OF FACILITY

Tyco manufactures underwater fiber optic telecommunications systems, which generates non-contact cooling water, contact cable cooling water, and cable test tank water. The facility's stormwater discharges are permitted under Multi-Sector Stormwater General Permit NHR05A616. The location of the facility and the receiving water are shown in Attachment A. The SIC codes applicable to the site are 3357 – drawing and insulating of nonferrous wire, and 3669 – communications equipment.

III. SUMMARY OF MONITORING DATA

A quantitative description of the discharge in terms of significant effluent parameters based on the discharge monitoring reports (DMRs) submitted by Tyco during the time period of July 2004 through May 2009, is included in Attachment C.

IV. PERMIT BASIS AND EXPLANATION OF EFFLUENT LIMIT DERIVATIONS

The effluent limitations, monitoring requirements, and any implementation schedule, if required, may be found in Part 1 (Effluent Limitations and Monitoring Requirements) of the draft permit.

A. General Requirements

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a NPDES permit unless such a discharge is otherwise authorized by the CWA. The NPDES permit is the mechanism used to implement technology and water quality-based effluent limitations and other requirements including monitoring and reporting. The draft permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and applicable State regulations. During development, EPA considered the most recent technology-based treatment requirements, water quality-based requirements, and all limitations and requirements in the current/existing permit. The regulations governing the EPA NPDES permit program are generally found at 40 C.F.R. Parts 122, 124, 125, and 136. The general conditions of the draft permit are based on 40 C.F.R. §122.41 and consist primarily of management requirements common to all permits. The effluent monitoring requirements have been established to yield data representative of the discharge under authority of Section 308(a) of the CWA in accordance with 40 C.F.R. §122.41(j), §122.44(i), and §122.48.

1. Technology-Based Requirements

Subpart A of 40 C.F.R. §125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under Section 301(b) of the CWA, including the

application of EPA promulgated effluent limitations and case-by-case determinations of effluent limitations under Section 402(a)(1) of the CWA.

Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA (see 40 C.F.R. §125 Subpart A) to meet best practicable control technology currently available (BPT) for conventional pollutants and some metals, best conventional control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. In general, technology-based effluent guidelines for non-publicly owned treatment works (non-POTW) facilities must be complied with as expeditiously as practicable but in no case later than three years after the date such limitations are established and in no case later than March 31, 1989 [See 40 C.F.R. §125.3(a)(2)]. Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by a NPDES permit.

EPA has promulgated technology-based National Effluent Limitation Guidelines (ELGs) for Plastics Molding and Forming Point Source Category, Contact Cooling and Heating Water Subcategory (40 CFR §463, Subpart A). The effluent limitations specified in 40 CFR §463, Subpart A, are calculated based on the "average process water usage flow rate," defined in 40 CFR §463.11(a), as the volume of process water used per year by a process divided by the number of days per year the process operates.

40 CFR §463.11(a) specifies that the "average process water usage flow rate" for plants with more than one plastics molding and forming process that uses contact cooling and heating water is the sum of the average process water usage flow rates for the contact cooling and heating processes. Since the facility discharges contact cooling water and also periodically discharges water from two cable test tanks, the average process water usage flow rate for Outfall 007 is calculated as the sum of the contact cooling water and the cable test tank water average process water usage flow rates.

Specifically, the permittee must meet the ELGs calculated by multiplying the average process water usage flow rate for the contact cooling and heating water processes at a point source times the following pollutant concentrations:

Pollutant or Pollutant Property	Maximum for any 1 day (mg/L)
BOD_5	26
Oil and grease	29
TSS	19
pH	*

*within the range of 6.0 to 9.0 SU at all times.

2. Water Quality-Based Requirements

Water quality-based criteria are required in NPDES permits when EPA and the State determine that effluent limits more stringent than technology-based limits are necessary to maintain or achieve State or Federal Water Quality Standards (See Section 301(b) (1)(C) of the CWA). Water quality-based criteria consist of three parts: 1) beneficial designated uses for a water body or a segment of a water body; 2) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s) of the water body; and 3) anti-degradation requirements to ensure that once a use is attained it will not be degraded.

The New Hampshire Surface Water Quality Regulations, found in Chapter 1700 of the New Hampshire Code of Administrative Rules, includes the three water quality based elements discussed above. The State Surface Water Quality Regulations limit or prohibit discharges of pollutants to surface waters and thereby assure that the surface water quality standards of the receiving water are protected, maintained, and/or attained. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 C.F.R. §122.44(d). New Hampshire has classified the Piscataqua River as a Class B water body.

Additionally, the Piscataqua River is listed on the New Hampshire 303(d) list as impaired due to pathogens. Enterococcus concentrations violated the water quality standards for the primary contact recreation designated use in the Piscataqua River. The source of pathogens is mostly unknown; however, the following specific sources have been identified in specific assessment units: Wet weather discharges (Point Source and Combination of Stormwater, SSO or CSO) and sanitary sewer overflows (collection system failure). The discharge of process water from this facility is not expected to contribute to the pathogen loading of the river.

Available dilution in the Piscataqua River for the discharge from Outfall 007 is 100, based on dilution studies completed by the permittee in November 1997 and approved by NHDES-WD on January 9, 1998. This dilution factor is used for calculating the water quality-based criteria limits.

3. Anti-Backsliding

EPA's anti-backsliding provision as identified in Section 402(o) of the Clean Water Act and at 40 C.F.R. §122.44(l) prohibits the relaxation of permit limits, standards, and conditions unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued. Anti-backsliding provisions apply to effluent limits based on technology, water quality, BPJ and State Certification requirements. Relief from anti-backsliding provisions can only be granted under one of the defined exceptions [See 40 C.F.R. §122.44(l)(i)].

4. Anti-Degradation

The State of New Hampshire's Anti-Degradation Policy is found at Env-Wq 1708. All existing instream uses and the level of water quality necessary to protect the existing uses of the Piscataqua River shall be maintained and protected. Class B water bodies in the State of New Hampshire are considered as being acceptable for fishing, swimming, and other recreational purposes and, after adequate treatment, for use as water supplies.

B. Description of the Facility

Tyco manufactures underwater fiber optic telecommunications systems. The fiber optic cables consist of fibers enclosed in an extruded plastic ("loose") tube, then wrapped with steel wire and copper ("power conducting"), and coated in a final layer of plastic (extruded polyethylene, or "poly"). Depending on the desired end-use, some cables are wrapped in additional layers of steel ("armoring").

The facility discharges intermittently through one outfall, Outfall 007, to the Piscataqua River. The process water discharges through Outfall 007 consists of contact cooling water (0.07 MGD), non-contact cooling water (0.02 MGD), and cable test tank water (0.02 MGD). The facility's stormwater discharges are permitted under Multi-Sector Stormwater General Permit NHR05A616.

The process water throughout the facility collects in one of two tanks, the main tank or the test tank. The tanks pump to the highline where the two flows commingle, and a representative sample of the discharge through Outfall 007 is taken. The water flows from the highline, via gravity, to a deepwater single port diffuser (located approximately 26 feet below mean sea level) which discharges at a 90-degree angle to the water surface, below low tide.

The main tank collects discharges of contact cooling water from loose tube extruders, contact cooling water from polyethylene ("poly") extruders, non-contact cooling water from extruder heads, and trough water overflow. The main tank is a 15,200 gallon concrete pit, mostly below grade level, that is 9 feet deep x 12 feet wide x 20 feet long, and located in the armoring department. There are two submersible pumps in the pit, each capable of pumping approximately 60 gpm, or 90 gpm combined. The pumps are controlled by four float switches. The first and lowest float activates the system. The second activates the lead pump, the third activates the lag pump, and the fourth is the high level alarm, which is both visual and audible. The pit is equipped with an emergency overflow valve which is kept closed, except during emergency.

The test tank collects discharges from the pan building test tank overflow which comes in contact with insulated cable, maintenance drainage of the cable test tanks (in the pan building), and AC condensate. The pan building houses cable test tanks and is located on the eastern side of the facility. The test tank is 16 feet wide, 4 feet long, and 4 feet deep and holds approximately 2,750 gallons. There are two submersible pumps in the pit, each capable of pumping

approximately 80 gpm, or 120 gpm combined. There are three float switches, which control the pumps. The first activates the system, the second the lead pump, and the third the lag pump and alarm (both visual and audible).

Various activities throughout the facility generate contact and non-contact cooling water (approximately 7,000 GPD) that is discharged directly to the Newington POTW or re-circulated to a cooling tower and chiller with overflow to the POTW, therefore these discharges are not subject to this permit. These include power conducting lines (spring loaded dies, patch welders, cross welders, line welders), air conditioners, chillers, humidifiers, heat exchangers used to cool various types of manufacturing equipment, induction heaters, cable test tanks (tank building test tank overflow), cable storage tanks, lab equipment, and molding equipment (see Attachment D). Additionally, sanitary wastewater generated onsite (approximately 25,000 GPD) is discharged to the Newington POTW.

Four aboveground storage tanks (ASTs) are located onsite. A 20,000 gal. fuel oil tank and a 1,000 gal. diesel tank are both double walled tanks with interstitial leak detection monitoring. A 275 gal. kerosene tank and 15,000 gallon asphalt tank are both stored inside and are both surrounded by secondary containment.

C. Average Process Water Usage Flow Rate

The plastics used in the cable making process include polyethylene, Dupont Hytrel polyester elastomer (butylene/poly(alkylene ether) phthalate plus stabilizer) and Dupont Zytel nylon resin (polyhexaminethlene adipamide). The cooling water comes in contact only with the plastic, therefore the process is considered to be plastic molding and forming and the contact cooling water discharge is subject to the effluent limitation guidelines in 40 CFR §463, Subpart A. The effluent limitations specified in 40 CFR §463, Subpart A are calculated based on the "average process water usage flow rate," defined in 40 CFR §463.11(a), as reported by the applicant.

The current permit states that the facility discharges an average of 0.005 MGD of contact cooling water when operating at low production and an average of 0.020 MGD of contact cooling water when operating at full production. In addition to contact cooling water, the facility also periodically discharges an average of 0.02 MGD water from the cable test tank operation.

The current permit limits were based on these average flow rates and corresponding production levels, however, the calculation of the average process water usage flow rate and corresponding effluent limitation in the draft permit shall be based directly upon the guidance of the ELG. The ELGs applicable to the facility (40 CFR §463.11(a)) specify that the "average process water usage flow rate" for plants with more than one plastics molding and forming process that uses contact cooling and heating water is the sum of the average process water usage flow rates for the contact cooling and heating processes. Therefore, the average process water usage flow rate for Outfall 007 is calculated as the sum of the contact cooling water and the cable testing water average process water usage flow rates.

The "average process water usage flow rate," as defined in 40 CFR §463.11(a), is calculated by dividing the total volume of process water used per year (both contact cooling water and the cable test tank water) divided by the number of days per year each process operated. These average process usage flow rates are then summed for the most recent three years of data, as provided by the permittee (see Attachment E). The average of these average process water usage flow rates over the past three years (0.022 MGD) was used to calculate the effluent limitations in the draft permit.

NCCW does not contact any raw material, or intermediate or finished products, so it is not included in the process water flow rate used to calculate production-based effluent limitations. The previous fact sheet indicates an average NCCW discharge of 0.02 MGD when the facility is operating at full production. See Attachment D for a diagram of the flows contributing to the discharge through Outfall 007.

D. Discharge Location

Outfall 007 discharges to the Piscataqua River via a deepwater port. Refer to Attachment B for the location of the discharge.

E. Proposed Permit Effluent Limitations and Conditions

The effluent limitations and monitoring requirements may be found in Part I (Effluent Limitations and Monitoring Requirements) of the draft permit.

The current permit includes production-based maximum daily mass loading limits for BOD, TSS, and O&G based on two tiers of production. The draft permit does not base the limits on two levels of production, but instead bases the effluent limits for BOD, TSS, and O&G on the "average process water usage flow rate," in accordance with 40 CFR 463, Subpart A. Refer to Attachment E for the calculation of the average process water usage flow rate (0.022 MGD).

1. Outfall 007

a. Flow

The current permit requires an average monthly flow limitation of 0.06 MGD and a maximum daily limit of 0.16 MGD. Review of DMR data shows that these limits have not been exceeded on any occasion. The maximum daily flow has ranged from 0 – 0.11 MGD, and the average monthly flow has ranged from 0 – 0.04 MGD. The flow limits shall be retained in the draft permit, in accordance with anti-backsliding requirements found in 40 CFR §122.44(l).

b. pH

The New Hampshire Water Quality Standards require effluent pH limits of 6.5 to 8.0 standard units (SU). *See* N.H. Rev. Stat. Ann. 485-A:8,II. Consequently, the draft permit retains the pH limits in the current permit of 6.5 to 8.0 SU, in accordance with State Water Quality Standards. Review of DMR data shows that the discharge has not exceeded this pH limitation range on any occasion. The monitoring frequency has been reduced from 2/month to 1/month.

c. Oil and Grease

The current permit requires Oil and Grease limitations based on the ELGs (40 CFR §463) and two production levels.

No numerical water quality standards exist in New Hampshire's Water Quality Regulations, however, Section Env-Wq 1703.03(c)(1)(b) of the NH Standards' General Water Quality Criteria, which applies to all surface waters in New Hampshire, states, "All waters shall be free from substances in kind or quantity which: Float as foam, debris, scum, or other visible substances." In addition, Section Env-Wq 1703.09(b) states, "Class B waters shall contain no oil and grease in such concentrations that would impair any existing or designated use." Given the language in both these narrative standards, EPA-New England interprets these provisions, in particular the "free from floating visible substances" to mean "free from an oil sheen", and to prohibit, in the context of discharges into Class B waters, any discharge that would cause an oil sheen.

Review of DMR data reveals that the current permit maximum daily limit of 6.0 lbs/day for production level 1 has been exceeded on one occasion. This single exceedence was caused by discharge from test tanks located inside the tank building, which has since been re-directed to discharge directly to the POTW. The current permit maximum daily limit of 9.7 lbs/day for production level 2 has not been exceeded on any occasion.

Therefore, the draft permit shall require a maximum daily permit limit for Oil and Grease of 5.3 lbs/day, based on the average process water usage flow rate of 0.022 MGD, as discussed above, and the applicable ELG of 29 mg/L. EPA believes this effluent limitation, monitored at a frequency of 2/month, will also ensure consistency with the narrative water quality standard for O&G.

d. TSS

The current permit requires TSS limitations for two production levels. Production Level 1 (0.025 MGD) requires a TSS limit of 4.0 lbs/day and Production Level 2 (0.040 MGD) requires a TSS limit of 6.3 lbs/day, both based on an ELG limit of 19 mg/L. Review of DMR data reveals that the TSS limit for Production Level 1 was exceeded on one occasion and the TSS limit for Production Level 2 was not exceeded on any occasion.

The draft permit shall require a maximum daily permit limit for TSS of 3.5 lbs/day, based on the average process water usage flow rate of 0.022 MGD, as discussed above, and the applicable ELG of 19 mg/L. The permittee shall continue to sample at a frequency of 2/month.

e. BOD

The current permit requires BOD limitations for two production levels. Production Level 1 (0.025 MGD) requires a BOD limit of 5.4 lbs/day and Production Level 2 (0.040 MGD) requires a BOD limit of 8.7 lbs/day, both based on an ELG limit of 26 mg/L. Review of DMR data reveals that the BOD limit for Production Level 1 was exceeded on three occasions and the TSS limit for Production Level 2 was not exceeded on any occasion.

The draft permit shall require a maximum daily permit limit for BOD of 4.8 lbs/day, based on the average process water usage flow rate of 0.022 MGD, as discussed above, and the applicable ELG of 26 mg/L. The permittee shall continue to sample at a frequency of 2/month.

f. Temperature

The current permit requires a maximum daily temperature limit of 27ºC (80.6ºF), monitored 2/month. The narrative temperature criterion in the NH Standards, Section Env-Wq 1703.13(b), provides that temperature in Class B waters shall be in accordance with the state statutes RSA 485-A:8,II and VIII. The first statute indicates any stream temperature increase associated with the discharge of treated sewage, waste or cooling water, water diversions, or releases shall not appreciable interfere with the designated uses for Class B waters. The second statute indicates the minimum treatment requirements for thermal wastes discharged to interstate waters are to follow the water quality requirements and recommendations of the NHFGD, New England Interstate Water Pollution Control Commission, or the EPA, whichever provide the most effective level of control.

Review of DMR data reveals that the maximum daily discharge temperature has ranged from 11ºC – 27ºC, and therefore has not exceeded the limit. The maximum daily temperature limit of 27ºC shall be retained in the draft permit in accordance with anti-backsliding requirements found in 40 CFR §122.44(l). The monitoring frequency has been reduced from 2/month to 1/month.

g. Total Recoverable Metals – Copper and Zinc

Current NH Standards for metals are expressed in terms of dissolved metal; however, EPA is required by 40 CFR Section 122.45(c) to regulate the total recoverable form of the metal in NPDES permits. That limit is set such that the total recoverable metal concentration in the effluent (the combined effect of both dissolved and particulate fractions) will not cause an exceedence of a particular dissolved metal's acute and/or chronic aquatic-life criterion in the NH Standards after mixing with the receiving water. Therefore, to convert the dissolved acute and chronic aquatic-life criteria for metals found in NH Standards Env-Wq 1703.21(b), Table 1703.1

to their recoverable form, the appropriate marine conversion factor from Table 1703.2 was used. For copper and zinc, the conversion factors are 0.83 and 0.946, respectively. This approach is consistent with the recommendations contained in Section 1.5 of the Metals Translator Guidance cited at the end of this paragraph.

For ease of presentation, the dissolved metal criteria in the NH Standards and the resultant total recoverable metal criteria are shown in Table 1. The maximum daily and average monthly effluent concentrations that are protective of the instream aquatic-life criteria are calculated by multiplying the total recoverable metals criteria by the facility's dilution factor of 100. Based on the available dilution, effluent concentrations that exceed these maximum daily and average monthly effluent concentrations would cause "instream exceedences" of the total recoverable metals aquatic-life criteria.

Table 1. NH Water Quality Based Limits for Copper and Zinc

Parameter	NH Aquatic-Life Criteria (Dissolved Metal)		NH Aquatic-Life Criteria (Converted to Total Recoverable Metal)		Instream Exceedence Concentration (Total Recoverable Metal)	
	Marine Acute Criteria	Marine Chronic Criteria	Marine Acute Criteria	Marine Chronic Criteria	Maximum Daily Limit	Average Monthly Limit
Copper (mg/L)	0.0048	0.0031	0.0058	0.0037	0.58	0.37
Zinc (mg/L)	0.090	0.081	0.095	0.086	9.5	8.6

The current permit requires a total recoverable copper limit of 0.37 mg/L and a total recoverable zinc limit of 8.6 mg/L, both monthly averages. These limits were included in the current permit based on previous monitoring data that indicated the facility has reasonable potential to cause or contribute to violations of the chronic water quality criteria in the Piscataqua River.

Review of DMR data reveals that the copper average monthly limit has been exceeded on two occasions, with concentrations of 0.45 mg/L and 0.58 mg/L. Review of DMR data reveals that the zinc average monthly limit has not been exceeded on any occasion, with a maximum recorded zinc concentration of 4.20 mg/L. The draft permit shall retain the total recoverable copper and zinc monthly average limits from the current permit, sampled at a frequency of 2/month.

Maximum daily limits for copper and zinc were not included in the current permit because the available monitoring data indicated that the facility did not have reasonable potential to cause or contribute to violations of the acute water quality criteria. Review of metal concentrations sampled in Whole Effluent Toxicity (WET) tests reveals that the "instream exceedence" maximum daily concentrations listed in Table 1, above, have not been exceeded. Therefore, the

draft permit shall not include a maximum daily limit; however, the draft permit shall require reporting of the maximum daily (total recoverable) copper and zinc concentrations, at a frequency of 2/month.

h. Contact Cooling Water and Cable Test Tank Drainage Volumes, Process Operating/Discharge Days, Number of Extrusion Lines in Operation, and Monthly Average Process Water Usage Flow Rate.

The current permit requires the facility to report the volume of contact cooling water used each month, the volume of cable test tank water used each month, and the number of days that the contact cooling and cable test tanks processes operate each month. This information is used to calculate the "monthly process water discharge rate," which is used to determine which of the alternate permit limits (Production Level 1 or Production Level 2) apply to the facility's process water discharge. The current permit also requires the permittee to report, each month, the number of extrusion lines that operated including those that operated for only a portion of the month. The draft permit shall not include effluent limitations based on production levels.

However, the draft permit shall continue to require the facility to report the volume of contact cooling water used each month (in million gallons), the volume of cable test tank water used each month (in million gallons), and the number of days that the contact cooling and cable test tanks processes operate each month. This information shall be used during permit reissuance to calculate the "average process water flow rate" for the contact cooling water and the cable test tank water, which is used to determine the permit limits for BOD, TSS and O&G. In accordance with 40 CFR 463.11(a), the average process water flow rate is calculated as the volume of process water used *per year* divided by the number of days *per year* each process operates.

Review of DMR data shows that the facility has been reporting the flow rates of the contact cooling water and cable test tank water each month, not the volumes. The permittee has provided, per EPA's request, the total monthly volumes for the past three years (2007-2009). This data has been used to calculate the average process water use flow rate, which has been used to calculate the effluent limitations for BOD, TSS and O&G, in accordance with 40 CFR 463, Subpart A.

The draft permit shall also require calculation and reporting the number of extrusion lines that operated each month, including those that operated only a portion of the month, as well as calculation of the monthly average process water usage flow rate. Review of DMR data shows that the number of extrusion lines in operation has ranged from 1 – 3 extrusion lines. The monthly average process water usage flow rate shall be calculated for the reporting month as specified in Part I.A.1 of the permit.

i. Total Residual Chlorine (TRC)

The current permit does not require sampling for TRC; however, the facility uses potable water as source water throughout the facility. Based on the potential for elevated chlorine levels in potable water, the draft permit shall require monitoring of TRC at a frequency of 2/month. The permittee shall report both the maximum daily and the average monthly concentrations. Review of TRC sampled in Whole Effluent Toxicity (WET) tests reveals a maximum TRC concentration of 0.15 mg/L.

j. Whole Effluent Toxicity (WET) Testing

New Hampshire's State law N.H. RSA 485-A:8, VI and the N.H. Code of Administrative Rules, Part Env-Wq 1703.21(a)(1) states that, "all classes of waters shall be free from toxic pollutants or chemical constituents in concentrations or combination that injure or are inimical to plants, animals, humans, or aquatic life." Whole effluent toxicity (WET) testing is conducted to assess whether or not certain discharges produce a toxic effect in the receiving water. If there is evidence that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative criterion within an applicable State water quality standard, then the permit must contain effluent limits for whole effluent toxicity [See 40 C.F.R. §122.44(d)(1)(v)]. WET testing can be performed on invertebrate and/or vertebrate species and the results are typically used in conjunction with pollutant specific controls to limit the discharge of toxic pollutants.

When EPA believes that toxicity testing and limits are appropriate and necessary as described in the previous paragraph, EPA can specify the appropriate testing conditions (e.g., acute and/or chronic WET testing) and effluent limitations (e.g., LC_{50} and/or C-NOEC). Acute toxicity results are typically reported in terms of the LC_{50}. The LC_{50} is defined as the concentration of toxicant, or in the case of this permit, the percentage of effluent that is lethal to 50 percent of the test organisms during a specific time period. The current permit requires an LC50 limit of 50% effluent, which means that at least 50 percent of test organisms survive when exposed to a sample comprised of 50% effluent over a time period of typically forty-eight hours.

The testing is to be performed using the species Mysid Shrimp (Mysidopsis bahia) and Inland Silverside (Menidia berylliana) in accordance with the test procedure and protocol (Marine Acute Toxicity Test Procedure and Protocol) which is provided as Attachment 1 to the draft permit. EPA has required acute, rather than chronic (and modified acute), WET testing for the Outfall
007 effluent since it is an intermittent discharge, rather than a continuous discharge.

Review of DMR data and toxicity tests shows that the annual WET tests have consistently met the permit limit (i.e., $LC_{50} \geq 50\%$), therefore the draft permit WET testing frequency has been reduced to twice during the term of the permit. The permittee shall perform the WET tests once during the first year of the permit and once during the third year of the permit, during the month of July. The test results shall be submitted by the last day of the month following the completion of the test (August 31st).

2. Special Conditions

a. pH limit adjustment

The permittee may submit a written request to EPA-NE requesting a change in the permitted pH limit range, not to be less restrictive than the 6.0-9.0 SU range found in the applicable National Effluent Limitation Guideline (Plastics Molding and Forming Point Source Category, Contact Cooling and Heating Water Subcategory in 40 CFR Part 463, Subpart A) for this facility. The permittee's written request must include the State's approval letter containing an original signature. Until written notice is received by certified mail from EPA-NE indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the respective permit.

b. Best Management Practices (BMPs)

The effluent diffuser at Outfall 007 shall be maintained to ensure proper operation. Therefore, the draft permit requires annual inspection and videotaping of the discharge from the diffuser and submittal of reports summarizing the results to EPA and NHDES WD within 60 days of each inspection.

V. ENDANGERED SPECIES ACT (ESA)

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA) grants authority to and imposes requirements upon Federal agencies regarding endangered or threatened species of fish, wildlife, or plants ("listed species") and habitat of such species that has been designated as critical (a "critical habitat"). The ESA requires every Federal agency, in consultation with and with the assistance of the Secretary of Interior, to insure that any action it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) typically administer Section 7 consultations for bird, terrestrial, and freshwater aquatic species.

EPA has reviewed the federal endangered or threatened species of fish and wildlife to see if any such listed species might potentially be impacted by the re-issuance of this NPDES permit. The review focused primarily on marine aquatic species, since discharge is into the Piscataqua River. Based on the normal distribution of listed marine species, it is highly unlikely that any species of concern would be present in the vicinity of the facility. Furthermore, the effluent limitations and other permit conditions which are in place in this draft permit should preclude any adverse effects should there be any incidental contact with listed species. During the public comment period, EPA has provided a copy of the draft permit and fact sheet to NMFS and USFWS.

VI. ESSENTIAL FISH HABITAT (EFH)

Under the 1996 Amendments (PL 104-297) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq. (1998)), EPA is required to consult with National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) if EPA's actions, or proposed actions that EPA funds, permits, or undertakes, "may adversely impact any essential fish habitat." 16 U.S.C. §1855(b). The Amendments broadly define essential fish habitat as, "... those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." 16 U.S.C. §1802(10). Adverse effect means any impact which reduces the quality and/or quantity of EFH. 50 C.F.R. §600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

EFH is only designated for species for which Federal Fisheries Management Plans exist (16 U.S.C. § 1855(b)(1)(A)). EFH designations were approved for New England by the U.S. Department of Commerce on March 3, 1999.

The Piscataqua River is designated EFH for several species (see Attachment F). EPA believes the draft permit adequately protects Piscataqua River EFH, and therefore additional mitigation is not warranted. A formal EFH consultation with NMFS is not required. If adverse effects to EFH do occur as a result of this permitting action, or if new information becomes available that changes the basis for this determination, then NMFS will be notified and a consultation will be promptly initiated. EPA will provide this fact sheet and the draft permit to the NMFS habitat division.

VII. STATE CERTIFICATION REQUIREMENTS

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving water(s) either certifies that the effluent limitations and/or conditions contained in the permit are stringent enough to assure, among other things, that the discharge will not cause the receiving water to violate State Water Quality Standards or the Agency waives its right to certify as set forth in 40 C.F.R. § 124.53. The NHDES is the certifying authority within the State of New Hampshire. EPA has discussed this draft permit with staff at the NHDES and anticipates that the draft permit will be certified by the State.

Upon public noticing of this draft permit, EPA is formally requesting that the NHDES make a written determination concerning certification. The State will be deemed to have waived its right to certify unless certification is received within 60 days of receipt of this request.

VIII. GENERAL CONDITIONS AND DEFINITIONS

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

IX. COMMENT PERIOD, HEARING REQUESTS, AND PROCEDURES FOR FINAL DECISIONS

All persons, including applicants, who believe any condition of this 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 **Nicole Kowalski, EPA New England - Region I, 5 Post Office Square - Suite 100 (OEP06-4), Boston, Massachusetts 02109-3912.** 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 if the criteria stated in 40 C.F.R. §124.12 are satisfied. In reaching a final decision on the draft permit, the EPA 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 any public hearings, if such hearings are held, the EPA 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 petition for review of the permit to EPA's Environmental Appeals Board consistent with 40 C.F.R. §124.19.

X. EPA CONTACT

Documents used in the preparation of this draft permit and fact sheet will be included in an administrative record available for review at EPA's office during the public comment period. Arrangements for review of the administrative record may be made, and 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, by contacting:

Nicole Kowalski
EPA New England - Region I
5 Post Office Square Suite 100 (OEP06-4)
Boston, Massachusetts 02109-3912
Telephone: (617) 918-1746
Fax: (617) 918-0746
E-mail: kowalski.nicole@epa.gov

12/11/2009
Date

Stephen S Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

XI. ATTACHMENTS

A. Site Locus Plan

B. Outfall Location Plan

C. Summary of DMR Data

D. Outfall 007 Flows

E. Average Process Water Usage Flow Rates

F. EFH Designation

Attachment A

PREPARED FROM: USGS PORTSMOUTH, NEW HAMPSHIRE QUADRANGLE. 1986

2,000 1,000 0 2,000 4,000

Feet

NOTES: Aries developed the Locus Map from the New Hampshire Geographically Referenced Analysis and Information Transfer System (NH GRANIT) maintained by University of New Hampshire and the NH Office of State Planning.

Aries Project # 99061J
File # 99061J(13.07.mxd

ARIES ENGINEERING, INC.
environmental engineers and hydrogeologists

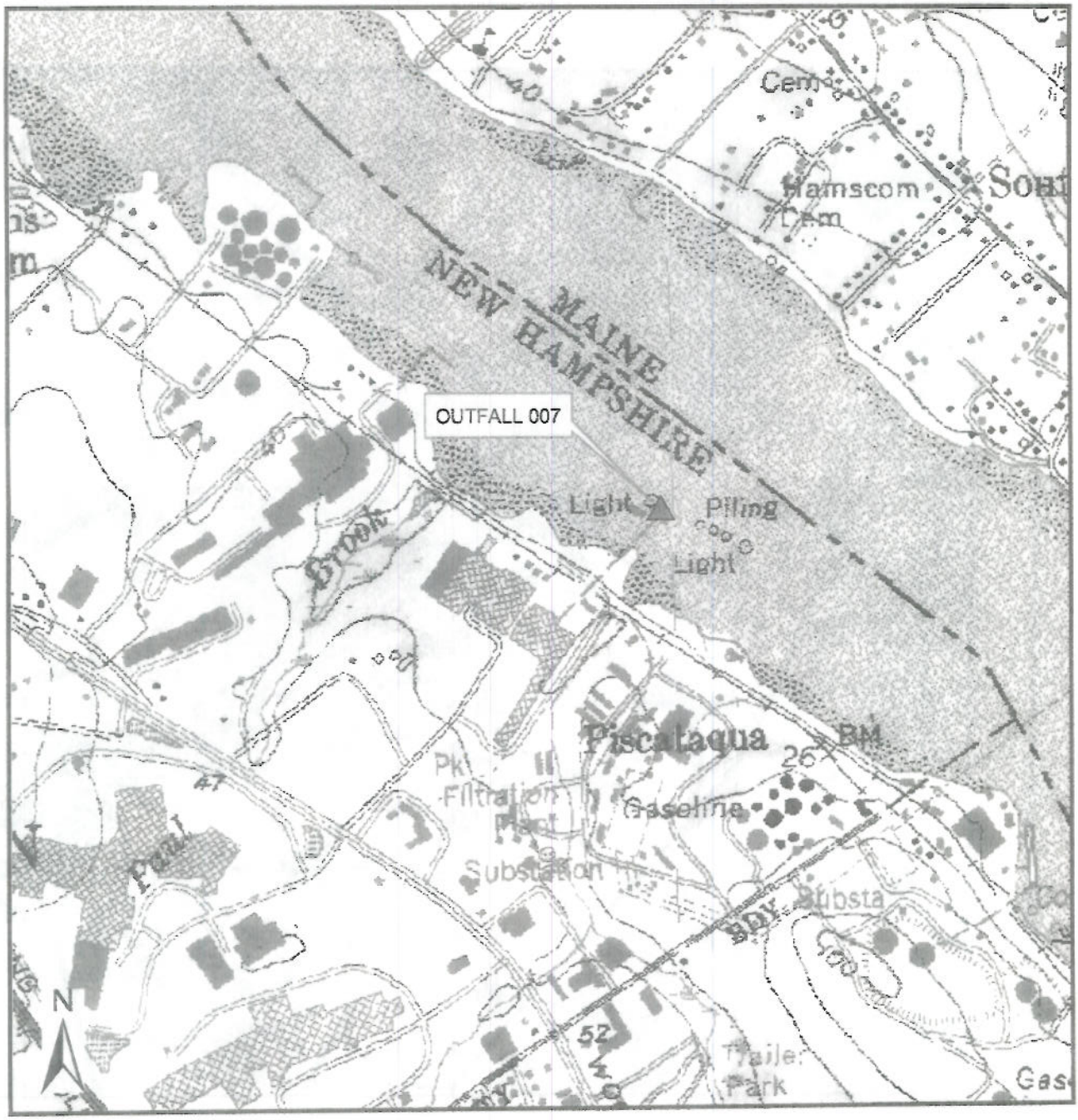
TYCO INTEGRATED CABLE SYSTEMS, INC
NEWINGTON, NEW HAMPSHIRE

LOCUS PLAN

MARCH 2007

FIGURE 1

Attachment B



PREPARED FROM: USGS PORTSMOUTH, NEW HAMPSHIRE QUADRANGLE, 1986

1,000 500 0 1,000 2,000 Feet

NOTES: Aries developed the Locus Map from the New Hampshire Geographically Referenced Analysis and Information Transfer System (NH GRANIT) maintained by University of New Hampshire and the NH Office of State Planning.

Aries Project # 99061A
File # 99061A(1)1.10.mxd

ARIES ENGINEERING, INC.
environmental engineers and hydrogeologists

NPDES PERMIT RENEWAL
TYCO INTEGRATED CABLE SYSTEMS, INC
NEWINGTON, NEW HAMPSHIRE

OUTFALL LOCATION PLAN

JANUARY 2010

FIGURE 1

Attachment C - Summary of DMR Data

Tyco Integrated Cable (NH0001490) - Outfall 007

MP Date	Cable Test Tank Drainage, Operating Days Req. Mon.	Cable test tank Drainage, Volume (actually flow rate) Req. Mon. Mgal/d	CCW Process, Operating Days Req. Mon.	CCW Volume (actually flow rate) Req. Mon. Mgal/d	Extrusion lines in operation, number Req. Mon. Mgal/d
	MO AVG	MO AVG	MO AVG	MO AVG	MO AVG
7/31/2004			30.	.006	
8/31/2004			30.	.006	
9/30/2004			30.	.005	
10/31/2004			30.	.006	
11/30/2004			30.	.01	
12/31/2004	9.	.004	30.	.009	
1/31/2005			30.	.007	1.
2/28/2005			30.	.008	1.
3/31/2005			30.	.009	1.
4/30/2005			30.	.01	1.
5/31/2005		.002	30.	.01	1.
6/30/2005			30.	.01	1.
7/31/2005			30.	.01	1.
8/31/2005	11.	.01	30.	.01	1.
9/30/2005	28.	.008	30.	.017	2.
10/31/2005	31.	.002	31.	.009	2.
11/30/2005	30.	.001	30.	.01	2.
12/31/2005	31.	.003	31.	.009	2.
1/31/2006	23.	.001	31.	.01	2.
2/28/2006	4.	.	28.	.009	2.
3/31/2006	28.	.001	31.	.009	2.
4/30/2006	30.	.004	30.	.009	2.
5/31/2006	30.	.003	30.	.009	2.
6/30/2006	30.	.001	30.	.011	2.
7/31/2006	7.	.001	30.	.013	2.
8/31/2006	31.	.004	31.	.014	2.
9/30/2006	30.	.002	30.	.013	2.
10/31/2006	30.	.002	30.	.012	2.
11/30/2006	30.	.001	30.	.02	2.
12/31/2006	30.	.006	30.	.03	2.
1/31/2007	30.	.002	30.	.03	2.
2/28/2007	30.	.006	30.	.03	2.
3/31/2007	30.	.004	30.	.03	2.
4/30/2007	30.	.008	30.	.02	2.
5/31/2007	30.	.005	30.	.01	2
6/30/2007	30.	.003	30.	.01	2.
7/31/2007	30.	.003	30.	.01	2.
8/31/2007	30.	.008	30.	.02	2.
9/30/2007	18.	.003	30.	.03	2.
10/31/2007	30.	.005	30.	.02	2.
11/30/2007	30.	.008	30.	.02	2.
12/31/2007	30.	.001	30.	.01	2.
1/31/2008	30.	.01	30.	.01	2.
2/29/2008	30.	.007	30.	.01	2.
3/31/2008	30.	.01	30.	.01	2.
4/30/2008	30.	.004	30.	.02	2.
5/31/2008	30.	.001	30.	.02	2.
6/30/2008	30.	.003	30.	.02	2.
7/31/2008	30.	.014	30.	.016	3.
8/31/2008	30.	.014	30.	.025	3.
9/30/2008	30.	.005	30.	.022	3.
10/31/2008	30.	.008	30.	.019	3.
11/30/2008	30.	.007	30.	.02	3.
12/31/2008	30.	.008	30.	.02	3.
1/31/2009	30.	.007	30.	.017	3.
2/28/2009	30.	.007	30.	.01	3.
3/31/2009	30.	.003	30.	.007	3.
4/30/2009	30.	.003	30.	.006	3.
5/31/2009	30.	.007	30.	.007	3.
6/30/2009	30.	.001	30.	.01	3.
7/31/2009	30.	.007	30.	.01	3.
8/31/2009	30.	.001	30.	.01	3.
9/30/2009	14.	.003	30.	.01	2.
10/31/2009	30.	.003	30.	.01	2.
11/30/2009				.01	
	Cable Test Tank Drainage, Operating Days Req. Mon.	Cable test tank Drainage, Volume Req. Mon. Mgal/d	CCW Process, Operating Days Req. Mon.	CCW Volume Req. Mon. Mgal/d	Extrusion lines in operation, number Req. Mon. Mgal/d
	MO AVG	MO AVG	MO AVG	MO AVG	MO AVG
average	28	0.005	30	0.014	2.1
minimum	4	0.000	28	0.005	1
maximum	31	0.014	31	0.030	3.0
exceedences	NA	NA	NA	NA	NA

Attachment C - Summary of DMR Data

Tyco Integrated Cable (NH0001490) - Outfall 007

MP Date	Flow		pH		Water temperature degrees C		Water temperature degrees F		Copper, Total Recoverable	Zinc, Total Recoverable
	.06 Mgal/d	.16 Mgal/d	6.5 SU	8 SU	Req. Mon. deg C	27 deg C	Req. Mon. deg F	80.6 deg F	.37 mg/L	8.6 mg/L
	MO AVG	DAILY MX	MINIMUM	MAXIMUM	MO AVG	DAILY MX	MO AVG	DAILY MX	MO AVG	MO AVG
7/31/2004	.006	.009	6.8	7.1	25.9	26.2	78.6	79.1	.05	.2
8/31/2004	.006	.01	7.2	7.4	11.	11.2	51.8	52.1	.06	0.52
9/30/2004	.005	.008	6.7	7.2	24.6	27.	76.2	80.6	.05	0.22
10/31/2004	.006	.01	7.3	7.7	18.9	20.	66.	68.0	.05	1.00
11/30/2004	.01	.01	7.2	7.9	18.6	19.4	65.4	66.9	.05	0.68
12/31/2004	.01	.04	7.7	7.9	17.7	18.1	63.8	64.5	.09	0.84
1/31/2005	.007	.01	7.6	7.8	20.5	21.	68.9	70.0	.15	1.00
2/28/2005	.008	.009	7.3	7.5	13.8	13.9	56.8	57.0	<0.05	0.44
3/31/2005	.009	.01	7.4	7.6	16.3	19.	61.3	66.2	.05	0.28
4/30/2005	.01	.011	7.3	7.4	18.9	19.2	66.	66.0	.03	0.60
5/31/2005	.01	.05	6.6	7.4	13.4	18.7	56.1	65.6	.	0.15
6/30/2005	.01	.01	6.9	7.	21.8	21.9	71.2	71.4	.58	4.20
7/31/2005	.017	.024	7.	7.5	22.4	23.8	72.3	74.8	.05	0.69
8/31/2005	.02	.08	7.5	7.8	25.5	26.1	77.	78.0	.	0.36
9/30/2005	.026	.076	7.2	7.6	24.5	25.6	76.	78.0	.06	0.48
10/31/2005	.012	.029	7.3	7.7	22.1	22.8	71.7	73.0	.07	0.88
11/30/2005	.011	.017	6.8	7.	21.1	21.5	69.	70.7	.21	0.72
12/31/2005	.013	.057	7.1	7.2	15.8	15.9	60.5	60.6	.	0.75
1/31/2006	.01	.024	7.18	7.78	21.05	22.3	69.89	72.14	.	0.34
2/28/2006	.01	.013	7.1	7.2	19.6	20.	67.32	68.0	.	0.32
3/31/2006	.01	.015	7.1	7.3	21.25	21.8	70.2	71.2	.05	0.14
4/30/2006	.013	.05	7.2	7.4	22.02	22.52	71.63	72.5	.	0.34
5/31/2006	.013	.05	7.6	7.6	19.5	20.	67.	68.0	.	0.52
6/30/2006	.012	.019	7.4	7.7	19.8	20.	67.7	68.0	.	0.79
7/31/2006	.015	.03	7.7	7.76	205.	21.	68.9	69.8	.	0.37
8/31/2006	.019	.05	7.6	7.6	24.8	25.	76.6	77.0	.	0.69
9/30/2006	.016	.033	7.4	7.8	24.	24.9	75.2	76.8	.	0.27
10/31/2006	.014	.039	7.3	7.6	20.	21.3	68.	70.3	.	0.40
11/30/2006	.03	.04	7.6	8.	20.6	21.1	69.	69.0	.	0.23
12/31/2006	.04	.08	6.8	7.3	20.	21.3	68.	70.3	.	0.33
1/31/2007	.03	.04	7.7	7.7	19.8	19.8	67.6	67.6	.	0.17
2/28/2007	.04	.11	7.7	7.7	17.7	17.8	63.9	64.0	.	0.16
3/31/2007	.04	.09	7.6	8.	18.8	22.8	65.8	73.0	.	0.38
4/30/2007	.03	.11	7.7	7.7	17.6	18.1	63.6	64.5	.	0.20
5/31/2007	.01	.05	7.5	7.7	21.1	22.	69.9	71.6	.03	0.36
6/30/2007	.02	.03	7.5	8.	21.	22.	71.	71.0	.	0.54
7/31/2007	.02	.03	7.9	8.	22.	23.	71.	73.0	.	0.24
8/31/2007	.03	.05	7.5	7.7	22.	26.	72.	79.0	.	0.28
9/30/2007	.03	.04	7.2	7.5	22.	25.	72.	77.0	.	0.72
10/31/2007	.025	.042	7.1	7.2	20.2	20.9	68.3	69.6	.05	1.40
11/30/2007	.03	.07	7.6	7.93	22.7	23.1	72.8	73.5	.05	0.92
12/31/2007	.01	.02	7.3	7.6	16.6	17.	61.8	62.6	.05	0.63
1/31/2008	.028	.07	6.9	7.2	13.9	14.7	57.02	58.0	.	0.47
2/29/2008	.02	.05	7.2	7.4	18.4	20.	65.	68.0	.	0.65
3/31/2008	.02	.09	7.6	8.	15.	18.	59.	64.0	.	0.24
4/30/2008	.02	.04	7.	7.2	19.8	20.	67.6	68.0	.04	1.20
5/31/2008	.02	.04	6.5	7.5	19.9	20.	67.8	68.0	.09	3.60
6/30/2008	.02	.07	7.2	7.7	24.	24.	75.	75.0	.07	0.57
7/31/2008	.03	.08	6.9	7.2	24.15	24.4	75.4	75.9	.	0.55
8/31/2008	.03	.11	6.8	7.4	25.05	25.5	77.	77.9	.45	1.30
9/30/2008	.02	.04	6.5	7.2	20.9	21.7	69.7	71.0	.	0.18
10/31/2008	.02	.069	7.	7.2	20.9	21.5	69.	70.0	.	0.19
11/30/2008	.03	.06	6.8	7.2	19.2	19.8	66.5	67.0	.	0.27
12/31/2008	.03	.06	7.2	7.4	17.8	18.4	64.	65.0	.	0.34
1/31/2009	.02	.05	6.8	7.	18.35	18.8	65.3	65.8	.11	0.93
2/28/2009	.02	.05	6.9	7.2	17.12	18.	62.8	64.4	.06	3.40
3/31/2009	.01	.02	6.8	7.	19.2	19.9	66.5	67.8	.	0.62
4/30/2009	.01	.02		7.3	19.7	22.	67.5	71.6	.11	0.37
5/31/2009	.01	.04	6.8	7.	21.	23.	69.	73.0	.06	0.47
6/30/2009	.01	.02	6.8	7.3	21.	22.	69.	71.	.	.47
7/31/2009	.01	.02	7.	7.4	24.	26.	75.	78.	.02	.27
8/31/2009	.02	.03	7.	7.4	23.7	24.4	74.6	75.9	.	.18
9/30/2009	.02	.04	7.	7.	22.	23.	71.	73.	.	.2
10/31/2009	.01	.02	6.6	6.9	17.	17.	62.	62.	.	.3
11/30/2009	.01	.03	6.6	7.7	19.	20.	66.	68.	.	.16

	Flow		pH		Water temperature degrees C		Water temperature degrees F		Copper, Total Recoverable	Zinc, Total Recoverable
	.06 Mgal/d	.16 Mgal/d	6.5 SU	8 SU	Req. Mon. deg C	27 deg C	Req. Mon. deg F	80.6 deg F	.37 mg/L	8.6 mg/L
	MO AVG	DAILY MX	MINIMUM	MAXIMUM	MO AVG	DAILY MX	MO AVG	DAILY MX	MO AVG	MO AVG
average	0.02	0.04	7.18	7.49	22.92	21.03	67.98	69.7	0.04	0.65
minimum	0	0	7	7	11	11	52	52.1	0	0
maximum	0.04	0.11	7.90	8.00	205.00	27.00	77.00	80.6	0.58	4.20
exceedences	0	0	0	0	NA	0	NA	0.0	2	0

Attachment C - Summary of DMR Data

Tyco Integrated Cable (NH0001490) - Outfall 007
From WET tests:

MP Date	Aluminum, Total Recoverable Req. Mon. mg/L	Cadmium, Total Recoverable Req. Mon. mg/L	TRC Req. Mon. mg/L	Chromium Total Recoverable Req. Mon. mg/L	Copper Total Recoverable Req. Mon. mg/L	LC50 Ceriodaphnia 50 %	LC50 menidia 50 %	Lead Total Recoverable Req. Mon. mg/L	Nickel Total Recoverable Req. Mon. mg/L	Ammonia Nitrogen (as N) Req. Mon. mg/L	Salinity Req. Mon. ppt	Zinc Total Recoverable Req. Mon. mg/L
	DAILY MX	DAILY MX	DAILY MX	DAILY MX	DAILY MX	DAILY MN	DAILY MN	DAILY MX	DAILY MX	DAILY MX	DAILY MX	DAILY MX
9/30/2004	.025	<0.001	<0.05	<0.001	.037	>100	>100	<0.003	.003	<0.1	<1	.22
9/30/2005	.07	.005	<0.05	.002	.033	>100	>100	.038	.014	<0.1	<1	.31
9/30/2006	.014	<0.001	<0.05	<0.002	.022	>100	>100	.008	<0.003	<0.1	<1	.56
9/30/2007	.02	.001	.15	.002	.041	100.	100.	.005	.003	.1	1.	.22
9/30/2008	.05	<0.0005	<0.02	<0.001	.026	50.	50.	.006	.023	.78	<1	.83
9/30/2009	.025	.	.	.003	.01	100.	100.	.001	.003	.	.	.18
average	0.034	0.002	0.075	0.002	0.028	83.333	83.333	0.012	0.009	0.293	0.500	0.387
minimum	0.014	0.000	0.000	0.002	0.010	50.000	50.000	0.001	0.003	0.000	0.000	0.180
maximum	0.070	0.005	0.150	0.003	0.041	100.000	100.000	0.038	0.023	0.780	1.000	0.830

Attachment C - Summary of DMR Data

Tyco Integrated Cable (NH0001490) - Outfall 007

Production Level 1

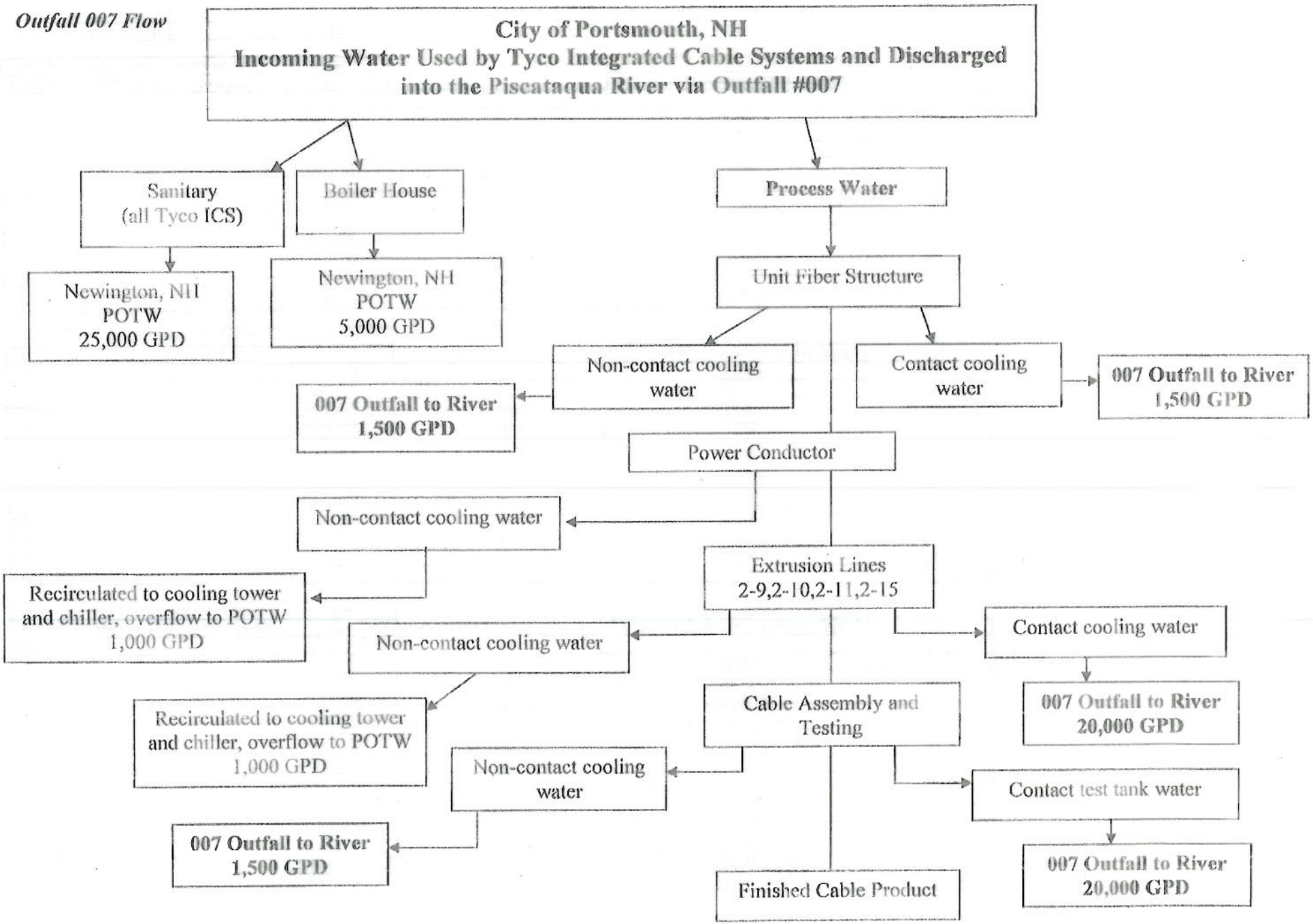
MP Date	BOD5 (20C) 5.4 lb/d DAILY MX	O&G 6 lb/d DAILY MX	TSS 4 lb/d DAILY MX
7/31/2004	0.37	0.37	1.50
8/31/2004	0.37	0.4	1.5
9/30/2004	0.33	0.33	1.3
10/31/2004	0.43	0.37	1.43
11/30/2004	0.40	0.4	1.6
12/31/2004	0.82	4.4	1.83
1/31/2005	0.33	0.33	1.33
2/28/2005	<0.37	<0.45	<1.51
3/31/2005	0.53	2.51	1.79
4/30/2005	0.91	4.0	2.0
5/31/2005	0.00	0.0	0.0
6/30/2005	10.83	6.0	0.0
7/31/2005	0.65	0.0	0.0
8/31/2005	3.70	0.0	0.0
9/30/2005			
10/31/2005	1.00	0.0	0.0
11/30/2005	0.63	0.0	0.0
12/31/2005	0.00	0.0	0.0
1/31/2006	1.80	0.0	0.0
2/28/2006	0.00	0.0	0.0
3/31/2006	0.00	0.0	0.0
4/30/2006	0.00	1.82	0.0
5/31/2006	0.00	0.0	0.0
6/30/2006	0.00	0.0	0.0
7/31/2006	0.00	0.0	0.0
8/31/2006	0.00	0.0	0.0
9/30/2006	0.00	0.0	0.0
10/31/2006	0.00	0.0	0.0
11/30/2006	1.8	0.0	0.0
12/31/2006			
1/31/2007			
2/28/2007	0	0	0
3/31/2007	0	0	0
4/30/2007	0	0	0
5/31/2007	0	0	1.0
6/30/2007	0	0	0
7/31/2007	0	0	0
8/31/2007	0	0	0
9/30/2007	0	0	0
10/31/2007	3.0	0	1.0
11/30/2007	1.29	0	0
12/31/2007	0	0	0.65
1/31/2008			
2/29/2008	0	0	0
3/31/2008			
4/30/2008			
5/31/2008	7.7	0	2.2
6/30/2008	0	0	0
7/31/2008			
8/31/2008			
9/30/2008			
10/31/2008			
11/30/2008			
12/31/2008			
1/31/2009			
2/28/2009	26.8	44.1	17.2
3/31/2009	.45	0	0
4/30/2009			
5/31/2009			
6/30/2009	0	1.2	0
7/31/2009			
8/31/2009	0	0	0
9/30/2009			
10/31/2009	0	0	0
	BOD5 (20C) 5.4 lb/d DAILY MX	O&G 6 lb/d DAILY MX	TSS 4 lb/d DAILY MX
average	1.46	1.50	0.83
minimum	0.00	0.00	0.00
maximum	26.80	44.10	17.20
exceedences	3	1	1

Production Level 2

MP Date	BOD5 (20C) 8.7 lb/d DAILY MX	O&G 9.7 lb/d DAILY MX	TSS 6.3 lb/d DAILY MX
7/31/2004			
8/31/2004			
9/30/2004			
10/31/2004			
11/30/2004			
12/31/2004			
1/31/2005			
2/28/2005			
3/31/2005			
4/30/2005			
5/31/2005			
6/30/2005			
7/31/2005			
8/31/2005			
9/30/2005	0.00	0.0	0.0
10/31/2005			
11/30/2005			
12/31/2005			
1/31/2006			
2/28/2006			
3/31/2006			
4/30/2006			
5/31/2006			
6/30/2006			
7/31/2006			
8/31/2006			
9/30/2006			
10/31/2006			
11/30/2006			
12/31/2006	0	0	
1/31/2007	0	0	0
2/28/2007			
3/31/2007			
4/30/2007			
5/31/2007			
6/30/2007			
7/31/2007			
8/31/2007			
9/30/2007			
10/31/2007			
11/30/2007			
12/31/2007			
1/31/2008	0	3.7	0
2/29/2008			
3/31/2008	0	0	0
4/30/2008	1.6	0	0
5/31/2008			
6/30/2008			
7/31/2008	0	0	0
8/31/2008	0	2.5	0
9/30/2008	0	0	0
10/31/2008	0	1.6	0
11/30/2008	0	0	0
12/31/2008	0	0	0
1/31/2009	7.1	0	0
2/28/2009			
3/31/2009			
4/30/2009			
5/31/2009			
6/30/2009			
7/31/2009			
8/31/2009			
9/30/2009	0	0	0
10/31/2009			
	BOD5 (20C) 8.7 lb/d DAILY MX	O&G 9.7 lb/d DAILY MX	TSS 6.3 lb/d DAILY MX
average	0.67	0.60	0.00
minimum	0.00	0.00	0.00
maximum	7.10	3.70	0.00
exceedences	0	0	0

Attachment D

Outfall 007 Flow



Attachment E

Average Process Water Usage Flow Rates (MGD)
Tyco Integrated Cable Systems (NH0001490)

	Contact Cooling Volume (gallons)	Contact Cooling Operating Days	Cable Test Tanks Volume (gallons)	Cable Test Tanks Operating Days
Jan 2007	546,952	30	226,416	30
Feb	518,238	28	212,007	28
Mar	231,848	30	101,553	30
Apr	198,000	30	114,135	30
May	224,283	30	222,092	30
Jun	357,630	30	52,063	30
Jul	323,496	30	218,791	30
Aug	594,165	30	52,939	30
Sep	588,443	30	94,957	18
Oct	380,358	30	119,558	30
Nov	454,251	30	63,842	30
Dec	616,150	30	65,473	30
sum	5,033,814	358	1,543,826	346
CCW average process flow rate (MGD)	**0.014**		**CTT average process flow rate (MGD)**	**0.004**
2007 average process flow rate (MGD)	**0.019**			

Jan 2008	580,521	30	310,169	30
Feb	444,694	28	216,291	28
Mar	586,171	30	316,855	30
Apr	678,001	30	121,750	30
May	683,964	30	59,931	30
Jun	635,020	30	95,752	30
Jul	499,904	30	436,250	30
Aug	789,973	30	438,183	30
Sep	662,225	30	155,357	30
Oct	605,402	30	260,831	30
Nov	686,377	30	225,360	30
Dec	755,274	30	256,935	30
sum	7,607,526	358	2,893,664	358
CCW average process flow rate (MGD)	**0.021**		**CTT average process flow rate (MGD)**	**0.008**
2008 average process flow rate (MGD)	**0.029**			

Jan 2009	546,952	30	226,416	30
Feb	518,238	28	212,007	28
Mar	231,848	30	101,553	30
Apr	198,000	30	114,135	30
May	224,283	30	222,092	30
Jun	357,630	30	52,063	30
Jul	323,496	30	218,791	30
Aug	594,165	30	52,939	30
Sep	588,443	30	94,957	14
Oct	380,358	30	119,558	30
Nov	454,251	30	63,842	30
Dec	616,150	30	65,473	30
sum	5,033,814	358	1,543,826	342
CCW average process flow rate (MGD)	**0.014**		**CTT average process flow rate (MGD)**	**0.005**
2009 average process flow rate (MGD)	**0.019**			

2007-2009 AVERAGE (MGD)	**0.022**

Attachment F

Summary of Essential Fish Habitat (EFH) Designation

10□ x 10□ Square Coordinates:

Boundary	North	East	South	West
Coordinate	43° 10.0□ N	70° 40.0□ W	43° 00.0□ N	70° 50.0□ W

Square Description (i.e. habitat, landmarks, coastline markers) Gulf of Maine waters within the square within the Atlantic Ocean and within Great Bay affecting the following: from Rye Harbor to Gerrish Island, ME., including waters affecting Portsmouth, NH., and Kittery, ME., along with New Castle Island, NH., and Seavey, ME. Affected features inlcude: Ragged Neck Pt., Foss Ledges, Concord Pt., Seal Rocks, Fairhill Manor, Odiones Point, Frost Pt., Little Harbor, Sagamore Creek, New Castle I., Jaffrey Pt., Seavey I., Portsmouth Harbor, Kittery Depot, Admiralty Village, ME., Spruce Creek, Kittery Pt., western Cutts I., Wood I., White I., Phillips Rock, West Sister, Kits Rock, and Gunboat Shoal.

Species	Eggs	Larvae	Juveniles	Adults
Atlantic salmon *(Salmo salar)*			X	X
Atlantic cod *(Gadus morhua)*	X	X	X	X
haddock *(Melanogrammus aeglefinus)*	X	X		
pollock *(Pollachius virens)*	X	X	X	X
whiting *(Merluccius bilinearis)*			X	X
offshore hake *(Merluccius albidus)*				
red hake *(Urophycis chuss)*	X	X	X	X
white hake *(Urophycis tenuis)*	X	X	X	X
redfish *(Sebastes fasciatus)*	n/a			
witch flounder *(Glyptocephalus cynoglossus)*				
winter flounder *(Pleuronectes americanus)*	X	X	X	X
yellowtail flounder *(Pleuronectes ferruginea)*		X		X
windowpane flounder *(Scopthalmus aquosus)*	X	X	X	X
American plaice *(Hippoglossoides platessoides)*				X
ocean pout *(Macrozoarces americanus)*				
Atlantic halibut *(Hippoglossus hippoglossus)*	X	X	X	X
Atlantic sea scallop *(Placopecten magellanicus)*	X	X	X	X
Atlantic sea herring *(Clupea harengus)*		X	X	X

monkfish *(Lophius americanus)*				
bluefish *(Pomatomus saltatrix)*			X	X
long finned squid *(Loligo pealei)*	n/a	n/a		
short finned squid *(Illex illecebrosus)*	n/a	n/a		
Atlantic butterfish *(Peprilus triacanthus)*				
Atlantic mackerel *(Scomber scombrus)*	X	X	X	
summer flounder *(Paralicthys dentatus)*				
scup *(Stenotomus chrysops)*	n/a	n/a		
black sea bass *(Centropristus striata)*	n/a			
surf clam *(Spisula solidissima)*	n/a	n/a		
ocean quahog *(Artica islandica)*	n/a	n/a		
spiny dogfish *(Squalus acanthias)*	n/a	n/a		
tilefish *(Lopholatilus chamaeleonticeps)*				
bluefin tuna *(Thunnus thynnus)*				X