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),

Texas Instruments, Inc.

is authorized to discharge from a facility located at

34 Forest Street
Attleboro, MA 02703

to the receiving waters named **Speedway Brook and an unnamed brook to Coopers Pond**, class B waters, 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 sixty (60) days after the date of 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 March 20, 2000.

This permit consists of 10 pages in Part I including effluent limitations, monitoring requirements and 25 pages in Part II, Standard Conditions.

Signed this 25th day of October, 2010

/S/SIGNATURE ON FILE

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

David Ferris, Director
Massachusetts Wastewater Management Program
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

PART I.A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge groundwater infiltration from outfall serial number **002A** to Speedway Brook. Such discharges shall be limited and monitored by the permittee as specified below and apply during **dry weather** conditions, defined as any time when there is no precipitation and that is at least 48 hours after a storm event that was greater than 0.1 inches in magnitude:

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS		MONITORING REQUIREMENTS	
PARAMETER	**AVERAGE MONTHLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE TYPE**[1]
Flow	Report GPD	Report GPD	1/Month	Estimate
pH Range [2]	6.5 – 8.3 standard units		1/Month	Grab
Cis-1,2-Dichloroethylene	Report ug/l	70 ug/l	1/Month	Grab
Trichloroethylene	Report ug/l	5 ug/l	1/Month	Grab
Vinyl Chloride	Report ug/l	Report ug/l	1/Month	Grab
Tetrachloroethene	Report ug/l	Report ug/l	1/Month	Grab
126 Priority Pollutants[3]	Report ug/l	Report ug/l	1/Year[3]	24-Hour Composite[4]

a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
b. The effluent pH shall be in the range of 6.5 to 8.3 standard units and not more than 0.5 units outside of the natural background range.
c. The discharge shall not cause objectionable discoloration of the receiving waters.
d. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.
e. The results of sampling for any parameter above its required frequency must also be reported.

Footnotes:

1. Sampling shall be conducted before mixing with any other stream at a location prior to discharge to Outfall 002A. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP. All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.

Part I.A.1 (continued)

2. Requirement for State Certification.

3. A priority pollutant scan shall be conducted during the last calendar quarter of the first year of this permit and the result of this scan shall be submitted with the January DMR. Sampling shall be conducted during dry weather conditions as defined on Page 2. This submittal shall include all test results. The permittee shall analyze for parameters 1M through 13M, and parameters 1V through 31V of the EPA's Form 2C application.

4. A 24-hour composite sample will consist of at least twenty four (24) grab samples taken during a consecutive 24 hour period.

Part I.A.2. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge treated groundwater that has been treated from outfall serial number **002B** to Speedway Brook. Such discharges shall be limited and monitored by the permittee as specified below and apply during **dry weather** conditions, defined as any time when there is no precipitation and that is at least 48 hours after a storm event that was greater than 0.1 inches in magnitude:

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS		MONITORING REQUIREMENTS	
PARAMETER	**AVERAGE MONTHLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE TYPE**[1]
Flow	250,000 GPD	Report GPD	1/Week	Estimate [2]
pH Range [3]	6.5 – 8.3 standard units		1/Week	Grab
Trichloroethylene	Report ug/l	5 ug/l	1/Month	Grab
Trans-1,2-dichloroethylene	Report ug/l	100 ug/l	1/Month	Grab
126 Priority Pollutants[4]	Report ug/l	Report ug/l	1/Year[4]	24-Hour Composite[5]

a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
b. The effluent pH shall be in the range of 6.5 to 8.3 standard units and not more than 0.5 units outside of the natural background range.
c . The discharge shall not cause objectionable discoloration of the receiving waters.
d. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.
e. The results of sampling for any parameter above its required frequency must also be reported.

Part I.A.2 (continued)

Footnotes:

1. Sampling shall be conducted before mixing with any other stream at a location prior to discharge to Outfall 002B. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP. All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.

2. For flow, report maximum and minimum daily rates and total flow for each operating date. Attach this data to each DMR form.

3. Requirement for State Certification.

4. See Footnote 3 of Part I.A.1.

5. A 24-hour composite sample will consist of at least twenty four (24) grab samples taken during a consecutive 24 hour period.

Part I.A.3. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge groundwater infiltration from outfall serial number **004** to an unnamed brook to Coopers Pond. Such discharges shall be limited and monitored by the permittee as specified below and apply during **dry weather** conditions, any time when there is no precipitation and that is at least 48 hours after a storm event that was greater than 0.1 inches in magnitude:

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS		MONITORING REQUIREMENTS	
PARAMETER	**AVERAGE MONTHLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE TYPE**[1]
Flow	Report GPD	Report GPD	1/Month	Estimate
pH Range[2]	6.5 – 8.3 standard units		1/Month	Grab
Cis-1,2-Dichloroethylene	Report ug/l	Report ug/l	1/Month	Grab
Trichloroethylene	Report ug/l	Report ug/l	1/Month	Grab
Tetrachloroethene	Report ug/l	Report ug/l	1/Quarter	Grab
Chloroform	Report ug/l	Report ug/l	1/Quarter	Grab
Vinyl Chloride	Report ug/l	Report ug/l	1/Quarter	Grab
126 Priority Pollutants[3]	Report ug/l	Report ug/l	1/Year[3]	24-Hour Composite[4]

a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
b. The discharge shall not cause objectionable discoloration of the receiving waters.
c. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.
d. The results of sampling for any parameter above its required frequency must also be reported.

Footnotes:

1. Sampling shall be conducted before mixing with any other stream at a location prior to discharge to Outfall 004. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP. All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.
2. Requirement for State Certification
3. See Footnote 3 of Part I.A.1.
4. A 24-hour composite sample will consist of at least twenty four (24) grab samples taken during a consecutive 24 hour period.

Part I.A.4. During the period beginning on the effective date and lasting through expiration, the permittee is require to monitor water discharged from outfall serial number **007,** an outlet of Coopers Pond, which discharges to a tributary to the Wading River. Such discharges shall be limited and monitored by the permittee as specified below and apply during **dry weather** conditions, any time when there is no precipitation and that is at least 48 hours after a storm event that was greater than 0.1 inches in magnitude:

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS		MONITORING REQUIREMENTS	
PARAMETER	**AVERAGE MONTHLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE TYPE**[1]
Flow	Report GPD	Report GPD	1/Quarter	Estimate
pH Range	Report standard units		1/Quarter	Grab
Aluminum, Total	Report ug/l	Report ug/l	1/Quarter	Grab
Copper, Total	Report ug/l	Report ug/l	1/Quarter	Grab
Lead, Total	Report ug/l	Report ug/l	1/Quarter	Grab
Nickel, Total	Report ug/l	Report ug/l	1/Quarter	Grab
Silver, Total	Report ug/l	Report ug/l	1/Quarter	Grab
Zinc, Total	Report ug/l	Report ug/l	1/Quarter	Grab

a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
b. The discharge shall not cause objectionable discoloration of the receiving waters.
c. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.
d. The results of sampling for any parameter above its required frequency must also be reported.

Footnotes:

1. Sampling shall be conducted before mixing with any other stream at the designated outlet of Coopers Pond. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP. All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.

Part I.A. (continued)

5. 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.

6. Numerical Effluent Limitations for Toxicants

   EPA or MassDEP may use the results of the chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to Section 304(a)(1) 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.

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 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 byproduct any toxic pollutant which was not reported in the permit application.

8. This permit may be modified, or revoked and reissued, on the basis of new information in accordance with 40 CFR §122.62.

B. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfalls listed in Parts I A.1 through I.A.4 of this permit. Discharges of wastewater from any other point sources are not authorized by this permit and shall be reported in accordance with Section D.1.e.(1) of the General Requirements (Part II) of this permit (Twenty-four hour reporting).

C. MONITORING AND REPORTING

1. **For a period of one year from the effective date of the permit**, the permittee may either submit monitoring data and other reports to EPA in hard copy form or report electronically using NetDMR, a web-based tool that allows permittees to electronically submit discharge monitoring reports (DMRs) and other required reports via a secure internet connection. **Beginning no later than one year after the effective date of the permit**, the permittee shall begin reporting using NetDMR, unless the facility is able to demonstrate a reasonable basis that precludes the use of NetDMR for submitting DMRs and reports. Specific requirements regarding submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

   a. Submittal of Reports Using NetDMR

      NetDMR is accessed from: http://www.epa.gov/netdmr. **Within one year of the effective date of this permit**, the permittee shall begin submitting DMRs and reports required under this permit electronically to EPA using NetDMR, unless the facility is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs and reports ("opt-out request").

      DMRs shall be submitted electronically to EPA no later than the 15th day of the month following the completed reporting period. All reports required under the permit shall be submitted to EPA as an electronic attachment to the DMR. Once a

permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to EPA and will no longer be required to submit hard copies of DMRs to MassDEP. However, permittees shall continue to send hard copies of reports other than DMRs to MassDEP until further notice from MassDEP.

b. Submittal of NetDMR Opt-Out Requests

Opt-out requests must be submitted in writing to EPA for written approval at least sixty (60) days prior to the date a facility would be required under this permit to begin using NetDMR. This demonstration shall be valid for twelve (12) months from the date of EPA approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to EPA unless the permittee submits a renewed opt-out request and such request is approved by EPA. All opt-out requests should be sent to the following addresses:

Attn: NetDMR Coordinator
U.S. Environmental Protection Agency, Water Technical Unit
5 Post Office Square, Suite 100 (OES04-4)
Boston, MA 02109-3912

And

Massachusetts Department of Environmental Protection
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

c. Submittal of Reports in Hard Copy Form

Monitoring results shall be summarized for each calendar month and reported on separate hard copy Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period. All reports required under this permit shall be submitted as an attachment to the DMRs. Signed and dated originals of the DMRs, and all other reports or notifications required herein or in Part II shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (OES04-SMR)
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Duplicate signed copies of all reports or notifications required above shall be submitted to the State at the following addresses:

MassDEP – Southeast Region
Bureau of Waste Prevention (Industrial)
20 Riverside Drive
Lakeville, MA 02347

and

Massachusetts Department of Environmental Protection
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

Any verbal reports, if required in Parts I and/or II of this permit, shall be made to both EPA-New England and to MassDEP.

D. STATE PERMIT CONDITIONS

This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are (i) a federal National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency (EPA) pursuant to the Federal Clean Water Act, 33 U.S.C. §§1251 et seq.; and (ii) an identical state surface water discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53, and 314 C.M.R. 3.00. All of the requirements contained in this authorization, as well as the standard conditions contained in 314 CMR 3.19, are hereby incorporated by reference into this state surface water discharge permit.

This authorization also incorporates the state water quality certification issued by MassDEP under § 401(a) of the Federal Clean Water Act, 40 C.F.R. 124.53, M.G.L. c. 21, § 27 and 314 CMR 3.07. All of the requirements (if any) contained in MassDEP's water quality certification for the permit are hereby incorporated by reference into this state surface water discharge permit as special conditions pursuant to 314 CMR 3.11.

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.

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

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES PURSUANT TO THE CLEAN WATER ACT (CWA)

NPDES PERMIT NUMBER: MA0001791

PUBLIC NOTICE START AND END DATES:

NAME AND MAILING ADDRESS OF APPLICANT:

Texas Instruments, Inc.
P.O. Box 650311, MS 329
Dallas, Texas 75265

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Texas Instruments, Inc.
34 Forest Street
Attleboro, MA 02703

RECEIVING WATER(S):

Speedway Brook and Unnamed Brook to Coopers Pond
(USGS Hydrologic Code #01090004 – Narragansett Bay Watershed)

RECEIVING WATER CLASSIFICATION(S): Class B - Warm water fishery, both

SIC CODE: None

Table of Contents

I. Proposed Action, Type of Facility and Discharge Location

Texas Instruments, Incorporated (TI) was formerly located at this site in Attleboro, Massachusetts and manufactured a variety of electronic sensor and control devices used in many applications. Since the issuance of the last permit in 2000, the permittee has divested of all of its property and associated operations at this site. This property is now owned and operated by other entities, including Preferred Real Estate Investments (PREI) and Sensata Technologies. The permittee has only retained the responsibility of operating a groundwater extraction and treatment system at the site as well as monitoring two (2) locations for ground water infiltration, as authorized by its 2000 permit. These remaining three (3) discharges will be retained in the reissued permit and all other previously authorized discharges from the 2000 permit will be terminated.

The Facility's current permit expired on April 20, 2005. The permit has been administratively continued due to the permittee's submittal of a completed re-application. As a result, TI remains subject to its existing (2000) permit until EPA issues a new one.

See **Figure 1** for a map of the site location and **Figure 2** for a map showing the location of the outfalls which will be authorized by this draft permit.

II. Description of Treatment System and Discharges

Active Outfalls to be retained:

Outfall 002A

This outfall, designated as Outfall 002 in the 2000 permit, is comprised of untreated groundwater infiltration which is discharged to a storm drainage system before eventually being discharged to Speedway Brook. The pollutants present in this discharge reflect historical contamination at the site. The treated groundwater from the treatment system at Outfall 002B joins this outfall prior to discharge to Speedway Brook.

Outfall 002B

This outfall, designated as Outfall 002A in the 2000 permit, discharges treated water from a groundwater extraction system. This system was installed by TI to address the groundwater contamination on this portion of the site. This treatment system primarily employs air stripping to remove volatile organic compounds (VOCs). This discharge flow is directed to Outfall 002A prior to discharge to Speedway Brook.

Outfall 004

This outfall is comprised of untreated groundwater infiltration which discharges to an unnamed tributary to Coopers Pond and also reflects historical contamination at the site.

Outfall 007

This is the designation of a discharge "outlet" from Coopers Pond which discharges to a tributary to the Wading River. Due to the historical discharges of metal finishing wastewater to the tributary to Coopers Pond from Outfall 003, the 2000 permit required monthly monitoring for several metals and other parameters in order to assess the degree to which pollutants were being exported from Coopers Pond and making their way downstream to the Wading River and the Three Mile River. The results of this monitoring show the continued discharge of pollutants out of Coopers Pond, even though the facility is no longer discharging wastewater to Coopers Pond.

MassDEP's Southeast Regional Office has been in discussions with TI concerning contamination in Cooper's Pond since 2004 when MassDEP started an audit of the TI site (Release Tracking Number 4-00022). The Commonwealth's site cleanup program, the Massachusetts Contingency Plan (MCP), is primarily geared to contaminated soil and groundwater. Because contamination in Cooper's Pond is related to surface water and sediments, the MassDEP believes that the process to address this contamination in Cooper's Pond will be challenging. Cooper's Pond received a Release Tracking Number (RTN 4-21862) and Notice of Responsibility (to both TI and PREI) from the MassDEP this past April 2009.

Although TI no longer discharges to this tributary of Coopers Pond, the majority of this contamination is believed to have originated from TI's past operations at this site. Since the MassDEP has initiated discussions with TI regarding this contamination, EPA has determined that it should continue to characterize the water being discharged from Coopers Pond, to support the MassDEP's efforts.

Outfall to be discontinued:

Outfall 003

This outfall had previously discharged treated metal finishing wastewater to a tributary to Coopers Pond. The use of this outfall to discharge this process wastewater was discontinued in the year 2000 as this wastewater was diverted to the City of Attleboro's Publicly Owned Treatment Works (POTW). Therefore, all requirements associated with Outfall 003 have been removed from this draft permit.

III. <u>Receiving Water Description</u>

Under the state water use classification system, the Massachusetts Department of Environmental Protection (MassDEP) has designated Speedway Brook as a Class B water warm fishery. This waterbody joins the Ten Mile River downstream and eventually discharges to Narragensett Bay and is designated as Segment MA52-05. Class B waters are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated, they shall be suitable for a source of

public water supply following appropriate treatment. Class B waters shall be suitable for irrigation and other agricultural uses, and for compatible industrial cooling and process uses. The waters shall have consistently good aesthetic value.

Speedway Brook does not always meet the state water quality standards prescribed for Class B waters, and is included on MassDEP's 2008 303(d) list of impaired waters for metals, nutrients, siltation, organic enrichment/low dissolved oxygen, pathogens, and turbidity.

IV. Limitations and Conditions

The effluent limitations and all other requirements described in Part VI of this Fact Sheet may be found in the draft permit.

V. Permit Basis: Statutory and Regulatory Authority

General Requirements

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a National Pollutant Discharge Elimination System (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. This draft NPDES permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and any applicable State regulations. The regulations governing the EPA NPDES permit program are generally found at 40 CFR Parts 122, 124, 125, and 136.

When developing permit limits, EPA must consider the most recent technology-based treatment and water quality-based requirements. Subpart A of 40 CFR Part 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. EPA is required to consider technology and water quality-based requirements as well as all limitations and requirements in the existing permit when developing permit limits.

Technology-Based Requirements

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 CFR §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. Although TI was previously subject to effluent limitation

guidelines (ELGs) for metal finishing wastewater, these discharges ceased in 2000 and none of the discharges authorized by this permit are subject to any ELGs.

In general, the statutory deadline for non-POTW, technology-based effluent limitations 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 CFR §125.3(a)(2)). Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA can not be authorized by a NPDES permit.

In the absence of published technology-based effluent guidelines, the permit writer is authorized under Section 402(a)(1)(B) of the CWA to establish effluent limitations on a case-by-case basis using best professional judgment (BPJ). EPA considered technology based guidelines for groundwater treatment systems in setting VOC limits for Outfall 002B.

The effluent monitoring requirements have been established to yield data representative of the discharges under the authority of Section 308(a) of the CWA, according to regulations set forth at 40 CFR § 122.41(j), 122.44(i) and 122.48. The monitoring program in the permit specifies routine sampling and analysis which will provide continuous information on the reliability and effectiveness of the installed pollution abatement equipment. The approved analytical procedures are to be found in 40 CFR 136 unless other procedures are explicitly required in the permit.

Water Quality-Based Requirements

Water quality-based limitations 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 (WQS). See Section 301(b)(1)(C) of the CWA.

Receiving water requirements are established according to numerical and narrative standards adopted under state law for each water quality classification. When using chemical-specific numeric criteria to develop permit limits, both the acute and chronic aquatic-life criteria, expressed in terms of maximum allowable in-stream pollutant concentration, are used. Acute aquatic-life criteria are considered applicable to daily time periods (maximum daily limit) and chronic aquatic-life criteria are considered applicable to monthly time periods (average monthly limit). Chemical-specific limits are allowed under 40 CFR § 122.44(d)(1) and are implemented under 40 CFR § 122.45(d).

A facility's design flow is used when deriving constituent limits for daily and monthly time periods as well as weekly periods where appropriate. Also, the dilution provided by the receiving water is factored into this process where appropriate. Narrative criteria from the state's water quality standards are often used to limit toxicity in discharges where (a) a specific pollutant can be identified as causing or contributing to the toxicity but the state has no numeric standard; or (b) toxicity cannot be traced to a specific pollutant.

EPA regulations require NPDES permits to contain effluent limits more stringent than technology-based limits where more stringent limits are necessary to maintain or achieve state or federal WQS. The permit must address any pollutant or pollutant parameter (conventional, non-conventional, toxic and whole effluent toxicity) that is or may be discharged at a level that causes or has "reasonable potential" to cause or contribute to an excursion above any water quality criterion. See 40 CFR Section 122.44(d)(1). An excursion occurs if the projected or actual in-stream concentration exceeds the applicable criterion. In determining reasonable potential, EPA considers (a) existing controls on point and non-point sources of pollution; (b) pollutant concentration and variability in the effluent and receiving water as determined from the permit application, monthly Discharge Monitoring Reports (DMRs), and State and Federal Water Quality Reports; (c) sensitivity of the species to toxicity testing; (d) known water quality impacts of processes on wastewater; and, where appropriate, (e) dilution of the effluent in the receiving water.

WQS consist of three parts: (a) beneficial designated uses for a water body or a segment of a water body; (b) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s); and (c) antidegradation requirements to ensure that once a use is attained it will not be degraded. The Massachusetts Surface Water Quality Standards (MA SWQS), found at 314 CMR 4.00, include these elements. The state will limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the receiving waters are protected and maintained or attained. These standards also include requirements for the regulation and control of toxic constituents and require that EPA criteria, established pursuant to Section 304(a) of the CWA, shall be used unless a site-specific criterion is established. The conditions of the permit reflect the goal of the CWA and EPA to achieve and then to maintain WQS.

Antibacksliding

A permit may not be renewed, reissued or modified with less stringent limitations or conditions than those contained in the previous permit unless in compliance with the anti-backsliding requirements of the CWA [see Sections 402(o) and 303(d)(4) of the CWA and 40 CFR §122.44(l)(1 and 2)]. EPA's antibacksliding provisions prohibit the relaxation of permit limits, standards, and conditions except under certain circumstances. Effluent limits based on BPJ, water quality, and state certification requirements must also meet the antibacksliding provisions found at Section 402(o) and 303(d)(4) of the CWA.

The limits and monitoring requirements in the 2000 permit for Outfall 003 have been eliminated since all previous wastewater discharges attributable to this outfall have been discontinued. Therefore, EPA determined that the "material and substantial alterations language" at 40 CFR 122.44(l)(2)(i)(A) applies and this change is allowed.

For Outfall 007, EPA has eliminated the monitoring requirements for total suspended solids (TSS), temperature, cadmium, phosphorus, and ammonia nitrogen based on monitoring information collected under the 2000 permit. The elimination of these

monitoring requirements is not subject to EPA's antibacksliding provisions. The discharges of TSS were low enough to not represent a potential to violate WQS and the temperature monitoring is no longer appropriate since the permittee does not discharge any heated effluent to Coopers Pond. Monitoring for cadmium, phosphorus and ammonia nitrogen have mostly resulted in non-detectable or low levels. In addition, monitoring for the parameter methyl tert-butyl ether (MtBE) for Outfalls 002A and 004 and chloroform for Outfall 002A have been eliminated due to monitoring data which shows that they are rarely, if ever detected.

Antidegradation

Federal regulations found at 40 CFR Section 131.12 require states to develop and adopt a statewide antidegradation policy which maintains and protects existing instream water uses and the level of water quality necessary to protect the existing uses, and maintains the quality of waters which exceed levels necessary to support propagation of fish, shellfish, and wildlife and to support recreation in and on the water. The Massachusetts Antidegradation Regulations are found at Title 314 CMR 4.04. There are no new or increased discharges being proposed with this permit reissuance. Therefore, EPA does not believe that the MassDEP is required to conduct an antidegradation review regarding this permit issuance.

State Certification

Under Section 401 of the CWA, EPA is required to obtain certification from the state in which the discharge is located that all water quality standards or other applicable requirements of state law, in accordance with Section 301(b)(1)(C) of the CWA, are satisfied. EPA permits are to include any conditions required in the state's certification as being necessary to ensure compliance with state water quality standards or other applicable requirements of state law. See CWA Section 401(a) and 40 CFR §124.53(e). Regulations governing state certification are set out at 40 CFR §124.53 and §124.55. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR §122.44(d).

VI. Explanation of Permit's Effluent Limitations

Attachment A shows the discharge monitoring report (DMR) data for Outfalls 002A, 002B and 004 for the reporting period of March 2007 to April 2009. This data was taken into consideration when determining whether the existing permit limits need to be maintained, reduced, or eliminated. In the following discussion, this period is referred to as the "monitoring period".

Outfall 002B (Formerly Outfall 002A)

Volatile Organic Compounds (VOCs)

This outfall is comprised of treated groundwater from historical contamination on the site. Although the fact sheet accompanying the 2000 permit did not explain the basis of the limits established for this outfall, it is likely that a previous permit determined these limits were achievable with the treatment technology employed, which is an air stripper. The 2000 permit limited tricholorethylene (TCE), chloroform and trans-1,2-dichloroethylene (DCE) to 100 ug/l each as a daily maximum.

In 2005, EPA Region 1 issued a Remediation General Permit (RGP) which authorized discharges from remediation of contaminated groundwater as well as from other activities. In determining appropriate effluent limits for chlorinated VOCs, EPA reviewed technology based and water quality based information that was available. Technology based information was obtained from existing discharge data from contaminated sites that employed typical technologies of air stripping and/or activated carbon to remove VOCs. For water quality based information, EPA reviewed the human health criteria that had been published for these VOCs. In the RGP, EPA established limits for 14 of the most commonly found VOCs contaminating groundwater, basing some on technology (treatability) and others on water quality (human health criteria). EPA determined that setting limits on these commonly found VOCs for groundwater treatment systems would also ensure the removal of other compounds with similar characteristics, including other VOCs. The RGP limit for TCE was set at 5 ug/l and was technology based. There were no specific limits established for DCE or chloroform in the RGP. Treatment with air stripping under this permit has resulted in mostly non-detectable readings for these two parameters.

The DMR data from the monitoring period has shown TCE to be in the range of non-detect to 99 ug/l, with the exception of one reading of 4500 ug/l, or 4.5 mg/l. During this same period, trans-1,2-DCE was detected in only one sample, at 13 ug/l. Chloroform was not detected at any time during this period or in prior monitoring. Therefore, the monitoring for chloroform has been eliminated since it was not detected in the effluent for this 2 year period. The current treatment system works effectively to meet the current permit limits, but may need to be upgraded to meet the technology based standards reflective of current groundwater remediation systems which typically employ several treatment steps to reduce the levels of VOCs, metals and other parameters.

Therefore, consistent with the rationale used in the fact sheet for the RGP, EPA has established a limit of 5 ug/l for TCE in this draft permit. The limit for trans-1,2-DCE has been maintained at 100 ug/l as in the 2000 permit. Although there are only 2 remaining VOCs to be monitored for this outfall, EPA believes that the

lower limit for TCE will effectively reduce the levels of any other VOCs that are present in the groundwater.

Since it has been many years since a full characterization of this outfall has been conducted, this permit requires a one time priority pollutant scan, which will determine whether there are other pollutants that need to be monitored or limited in this permit. This scan shall be conducted on the influent water to the groundwater treatment system before any treatment is conducted and during dry weather. If this scan shows that any other pollutants are present which have the potential to violate water quality standards, this permit may be modified to establish appropriate limits and/or monitoring requirements.

Flow

The 2000 permit limited flow to 0.25 MGD, or 250,000 gallons per day (GPD). DMR data for the period of March of 2007 to April 2009 showed a range of flows between 21,000 and 104,000 GPD. Therefore, it appears that the existing flow limit is appropriate for the amount of water that is extracted from this treatment system and has been retained in the draft permit.

pH

The pH range is limited to the Class B range of 6.5 to 8.3 standard units (su) which is the range required by the MA SWQS and which can be found at 314 CMR 4.05. During the monitoring period, the permittee has been in compliance with this permitted range, with values ranging from 6.5 to 7.9 s.u. The permitted range of 6.5 – 8.3 s.u. will remain in the permit. The 2000 permit required pH sampling twice per month with each sampling event comprised of 4 grab samples. Since the pH is not expected to vary widely, the draft permit has retained the twice per month pH monitoring requirement with the permittee required to report the monthly range in each monthly DMR.

Outfall 002A (Formerly Outfall 002)

VOCs

This outfall is comprised of untreated groundwater infiltration that discharges to a storm drainage system and then to Speedway Brook. The past 3 years of monitoring data show detectable and often high levels of cis-1,2-dichloroethylene and trichloroethylene. For the parameters tetrachloroethene and vinyl chloride, these were detected on a regular basis but at low concentrations. The results for chloroform and methyl tertiaty butyl ether (MtBE) show mostly non-detect values or very low detectable amounts.

Since there are several VOCs being discharged continually from this outfall without treatment, EPA believes that there is a reasonable potential for this

discharge to violate water quality standards. In this draft permit, EPA has established limits for cis-1,2-dichloroethylene and trichloroethylene, since the levels detected are often above the technology based limits that were established in the RGP discussed above. Therefore, consistent with the rationale used in the fact sheet for the RGP, EPA has established a limit of 5 ug/l for TCE and of 70 ug/l cis-1,2-dichloroethylene for this draft permit. Monthly monitoring will be continued for the parameters dichloroethylene and vinyl chloride. Monitoring will be eliminated for chloroform and methyl tertiary butyl ether (MtBE) based on the past three years of monitoring data.

In this draft permit, EPA has established a priority pollutant scan requirement for Outfall 002A. This scan shall be conducted on the discharge during dry weather. If this scan shows that any other pollutants are present which have the potential to violate water quality standards, this permit may be modified to establish appropriate limits and/or monitoring requirements.

Flow

The 2003 permit had a monitor only requirement for flow and flows ranged between 40,000 and 126,000 gallons per day (GPD) during the monitoring period. The estimation of flow to this outfall will continue to be reported on a monthly basis.

pH

The pH range is limited to the Class B range of 6.5 to 8.3 standard units (su) which is the range required by the MA SWQS and which can be found at 314 CMR 4.05. During the monitoring period, the permittee has been in compliance with this permitted range, with values ranging from 6.7 to 7.6 s.u. The permitted range of 6.5 – 8.3 s.u. will remain in the permit with a monthly monitoring frequency.

Outfall 004

This outfall is comprised of untreated groundwater infiltration to an unnamed brook to Coopers Pond. The same six (6) VOCs that have been monitored at Outfall 002A have been monitored at Outfall 004. During the monitoring period, cis-1,2-dichloroethylene and trichloroethylene have been consistently detected at low levels and the other parameters have been mostly not detected or detected at below 10 ug/l, with the exception of MtBE which was not detected during this period. At this time, due to the low levels of VOCs in this outfall, EPA has not determined that this discharge represents a reasonable potential to violate water quality standards and no effluent limits have been established. However, monthly monitoring has been retained for the parameters cis-1,2-dichloroethylene and trichloroethylene. Monitoring for the parameters vinyl chloride, tetrachloroethylene, and chloroform has been retained, but the monitoring frequency for these has been changed from monthly to quarterly since they are not often detected and

when they are, it is typically at very low concentrations. Monitoring for MtBE has been eliminated because it was consistently not detected during the monitoring period.

Similar to the requirement for Outfalls 002A and 002B described above, there has also been a priority pollutant scan requirement established for Outfall 004. If other pollutants are present which, in combination with the known VOCs, may pose a reasonable potential to violate water quality standards, this permit may be modified to establish specific permit limits or monitoring requirements.

Outfall 007

As mentioned earlier, EPA has determined that continuing to monitor the outlet of Coopers Pond is appropriate in light of the MassDEP's efforts to address the contamination in the area. Levels of several metals at this location indicate the potential for downstream water quality violations. See Attachment B for a summary of monitoring data since 2007. This outfall continues to discharge low to moderate levels of nickel, copper, zinc, lead, aluminum, and silver. In many cases, these levels are above water quality criteria for these metals. Monitoring for these metals, as well as for pH and flow will be retained in the next permit. The monitoring frequency for this outlet has been changed from monthly to quarterly based on the monitoring results collected under the existing permit.

The monitoring requirements for temperature, total suspended solids (TSS), cadmium, phosphorus, and ammonia nitrogen have been eliminated from this location based on past monitoring results. The TSS levels are typically low, in the range of 5 - 20 mg/l and do not indicate any potential for violating water quality standards. Temperature monitoring has been eliminated since there is no source of heated water discharged to Coopers Pond by the permittee and since past monitoring shows ambient temperature levels. The levels of cadmium, phosphorus and ammonia nitrogen since 2007 have been at very low levels or not detected.

Storm Water

As mentioned earlier, TI has sold off all of its interests at this site and only retains the responsibility for the treatment system discharging to Outfall 002B and for monitoring the two untreated groundwater infiltration discharges at Outfalls 002A and 004. One of the current tenants on the site (Sensata Technologies) filed for a "no exposure" certification and is not subject to the requirements of the multi-sector (industrial) storm water permit.

VII. Essential Fish Habitat Determination (EFH)

"Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq. (1998)), EPA is required to consult with the National Marine Fisheries Service (NMFS) if EPA's actions or proposed actions that it funds, permits, or undertakes, may adversely impact any essential fish

habitat, such as: waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity (16 U.S.C. § 1802(10)). "Adversely impact" 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.

Essential fish habitat is only designated for species for which federal fisheries management plans exist (16 U.S.C. §1855(b)(1)(A)). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999. Speedway Brook and Coopers Pond in the vicinity of these discharges are not covered by the EFH designation for riverine systems. Therefore, EPA has determined that EFH species are not affected by these discharges.

VIII. Endangered Species Act (ESA)

Section 7(a) of the Endangered Species Act (ESA) of 1973, as amended 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 administers Section 7 consultations for bird, terrestrial, and freshwater aquatic species. NMFS typically administers Section 7 consultations for marine species and anadromous fish.

EPA has reviewed the listing of federal endangered or threatened species of fish, wildlife, and plants to see if any such listed species might potentially be impacted by the reissuance of this NPDES permit and has not found any such listed species. Therefore, EPA is not formally consulting with NMFS or USFWS in regard to the provisions of the ESA. During the public comment period, EPA has provided a copy of the Draft Permit and Fact Sheet to both NMFS and USFWS.

Other Conditions

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

IX. 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 WQS. The staff of MassDEP 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 pursuant to 40 CFR 124.53 and expects that the draft permit will be certified.

X. Public Comment Period, Public Hearing, and Procedures for Final Decision

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 George Papadopoulos, U.S. EPA, Office of Ecosystem Protection**,** Industrial Permits Branch, Mailcode OEP 06-1, 5 Post Office Square, Suite 100, 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 meeting 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.

XI. EPA and MassDEP Contacts

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 the EPA and MassDEP contacts below:

George Papadopoulos, Industrial Permits Branch
5 Post Office Square - Suite 100 - Mailcode OEP 06-1
Boston, MA 02109-3912
Telephone: (617) 918-1579 FAX: (617) 918-1505

Kathleen Keohane, Massachusetts Department of Environmental Protection
Division of Watershed Management, Surface Water Discharge Permit Program
627 Main Street, 2nd Floor, Worcester, Massachusetts 01608
Telephone: (508) 767-2856 FAX: (508) 791-4131

March 25, 2010
Date

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

ATTACHMENT A
Texas Instruments, Inc. (MA0001791)
Outfall 002A- DMR Data Summary (FORMERLY 002)
March 2007 – April 2009

MONITORING PERIOD END DATE	Flow (Mgal/d)		pH (s.u.)		Methyl tert-butyl ether (ug/L)		Chloroform (ug/L)	
	Daily Maximum	Monthly Average	Minimum	Maximum	Daily Maximum	Monthly Average Minimum	Daily Maximum	Monthly Average Minimum
3/31/2007	0.09	0.09	6.9	6.9	< 25	< 25	< 25	< 25
4/30/2007	0.105	0.105	7.08	7.08	4	4	< 2.5	< 2.5
5/31/2007	0.099	0.099	6.78	6.78	< 5	< 5	< 5	< 5
6/30/2007	0.091	0.091	6.99	6.99	2	2	< 0.5	< 0.5
7/31/2007	0.085	0.085	6.95	6.95	< 5	< 5	< 5	< 5
8/31/2007	0.095	0.095	7.01	7.01	< 5	< 5	< 5	< 5
9/30/2007	0.056	0.056	6.92	6.92	< 0.0005	< 0.005	< 0.0005	< 0.005
10/31/2007	0.099	0.099	7.02	7.02	< 0.0005	< 0.0005	< 0.0005	< 0.0005
11/30/2007	0.123	0.123	7.08	7.08	< 1	< 1	< 1	< 1
12/31/2007	0.109	0.109	7.27	7.27	< 1	< 1	< 1	< 1
1/31/2008	0.116	0.116	7.08	7.08	< 5	< 5	< 1	< 1
2/29/2008	0.126	0.126	7.32	7.32	< 5	< 5	< 1	< 1
3/31/2008	0.089	0.089	7.3	7.3	1.8	1.8	< 1	< 1
4/30/2008	0.119	0.119	7.52	7.52	< 5	< 5	< 1	< 1
5/31/2008	0.109	0.109	7.23	7.23	< 1	< 1	< 1	< 1
6/30/2008	0.094	0.094	7.5	7.5	< 5	< 5	< 1	< 1
7/31/2008	0.109	0.109	7.36	7.36	< 5	< 5	7.9	7.9
8/31/2008	0.119	0.119	7.2	7.2	< 5	< 5	< 1	< 1
9/30/2008	0.109	0.109	6.7	6.7	< 1	< 1	< 1	< 1
10/31/2008	0.099	0.099	7.6	7.6	< 1	< 1	< 1	< 1
11/30/2008	0.049	0.049	7.1	7.1	1.6	1.6	< 1	< 1
12/31/2008	0.04	0.04	7.28	7.28	1.4	1.4	< 1	< 1
1/31/2009	0.109	0.109	6.9	6.9	< 1	< 1	< 1	< 1
2/28/2009	0.119	0.119	7.3	7.3	< 1	< 1	< 1	< 1
3/31/2009	0.099	0.099	7.25	7.25	< 1	< 1	< 1	< 1
4/30/2009	0.089	0.089	7.1	7.1	< 1	< 1	< 1	< 1

2003 Permit Limits	Flow (gal/d)		pH (s.u.)		Methyl tert-butyl ether (ug/L)		Chloroform (ug/L)	
	Daily Maximum	Monthly Average	Mininum	Maximum	Daily Maximum	Monthly Average Minimum	Daily Maximum	Monthly Average Minimum
	Report	**Report**	**6.5**	**8**	**Report**	**Report**	**Report**	**Report**
Minimum	0.04	0.04	6.7	6.7	ND	ND	ND	ND
Maximum	0.126	0.126	7.6	7.6	4	4	7.9	7.9
Average	0.098	0.098	7	7	1	1	1	1
Standard Deviation	0	0	0	0	N/A	N/A	N/A	N/A
# Measurements	26	26	26	26	26	26	26	26
# Exceeds Limits	N/A	N/A	0	0	N/A	N/A	N/A	N/A

Texas Instruments, Inc. (MA0001791)
Outfall 002A- DMR Data Summary (FORMERLY 002)
March 2007 – April 2009

MONITORING PERIOD END DATE	Vinyl Chloride (ug/L)		cis-1,2-Dichloroethylene (ug/L)		Tetrachloroethene (ug/L)		Trichloroethene (ug/L)	
	Daily Maximum	Monthly Average Minimum	Daily Maximum	Monthly Average Minimum	Daily Maximum	Monthly Average Minimum	Daily Maximum	Monthly Average Minimum
3/31/2007	< 25	< 25	170	170	210	210	< 25	< 25
4/30/2007	5	5	120	120	4	4	170	170
5/31/2007	6	6	170	170	< 5	< 5	270	270
6/30/2007	17	17	340	340	15	15	420	420
7/31/2007	7	7	140	140	< 5	< 5	120	120
8/31/2007	< 5	< 5	48	48	< 5	< 5	42	42
9/30/2007	8	8	110	110	< 0.0005	< 0.0005	98	98
10/31/2007	< 0.0005	< 0.0005	31	31	< 0.0005	< 0.0005	26	26
11/30/2007	< 1	< 1	15	15	< 1	< 1	16	16
12/31/2007	1	1	29	29	1.1	1.1	27	27
1/31/2008	2.9	2.9	53	53	2.6	2.6	80	80
2/29/2008	3.9	3.9	100	100	2.5	2.5	140	140
3/31/2008	5.1	5.1	130	130	3.6	3.6	175	175
4/30/2008	< 1	< 1	63	63	1.6	1.6	101	101
5/31/2008	< 1	< 1	45	45	< 1	< 1	59	59
6/30/2008	< 1	< 1	35	35	2.1	2.1	40	40
7/31/2008	1.7	1.7	30	30	< 1	< 1	8.5	8.5
8/31/2008	< 1	< 1	23	23	< 1	< 1	23	23
9/30/2008	< 1	< 1	13	13	< 1	< 1	13	13
10/31/2008	2.2	2.2	54	54	< 1	< 1	40	40
11/30/2008	15.8	15.8	200	200	2.4	2.4	123.5	123.5
12/31/2008	10	10	190	190	5.5	5.5	200	200
1/31/2009	< 1	< 1	90.8	90.8	3	3	144	144
2/28/2009	3.3	3.3	81.8	81.8	2.7	2.7	170	170
3/31/2009	< 1	< 1	98.6	98.6	3.2	3.2	180	180
4/30/2009	< 1	< 1	86	86	3.8	3.8	170	170

2003 Permit Limits	Vinyl Chloride (ug/L)		cis-1,2-Dichloroethylene (ug/L)		Tetrachloroethene (ug/L)		Trichloroethene (ug/L)	
	Daily Maximum	Monthly Average Minimum	Daily Maximum	Monthly Average Minimum	Daily Maximum	Monthly Average Minimum	Daily Maximum	Monthly Average Minimum
	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	ND	ND	13	13	ND	ND	ND	ND
Maximum	17	17	340	340	210	210	420	420
Average	6.4	6.4	94.9	94.9	17.5	17.5	114.2	114.2
Standard Deviation	4.9	4.9	74.7	74.7	53.3	53.3	95.7	95.7
# Measurements	26	26	26	26	26	26	26	26
# Exceeds Limits	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Texas Instruments, Inc. (MA0001791)
Outfall 002B- DMR Data Summary (FORMERLY 002A)
March 2007 – April 2009

MONITORING PERIOD END DATE	Flow (Mgal/d)	pH (s.u.)		trans-1,2-Dichloroethylene (mg/L)	Chloroform (mg/L)	Trichloroethylene (mg/L)
	Monthly Average	Minimum	Maximum	Daily Maximum	Daily Maximum	Daily Maximum
3/31/2007	0.07	6.5	6.9	< 0.0005	< 0.0005	< 0.0005
4/30/2007	0.062	6.85	7.1	< 0.0005	< 0.0005	0.001
5/31/2007	0.036	6.51	6.59	< 0.0005	< 0.0005	< 0.0005
6/30/2007	0.08	6.8	7.1	< 0.0005	< 0.0005	0.002
7/31/2007	0.048	6.9	7.1	-	-	-
8/31/2007	0.086	6.95	7.1	< 0.0005	< 0.0005	0.0005
9/30/2007	0.039	6.8	7.1	< 0.0005	< 0.0005	< 0.0005
10/31/2007	0.09	6.9	7.2	< 0.0005	< 0.0005	< 0.0005
11/30/2007	0.104	6.9	7.1	< 0.0001	< 0.0001	0.01
12/31/2007	0.085	6.9	7.1	< 0.001	< 0.001	4.5
1/31/2008	0.087	6.9	7.1	< 0.0001	< 0.0001	0.0016
2/29/2008	0.094	7.1	7.3	< 0.001	< 0.001	0.099
3/31/2008	0.063	7	7.5	< 0.0001	< 0.0001	0.055
4/30/2008	0.096	6.9	7.3	< 0.001	< 0.001	0.045
5/31/2008	0.098	6.9	7.2	0.0013	< 0.0001	0.0025
6/30/2008	0.083	7.5	7.8	< 0.001	< 0.001	0.025
7/31/2008	0.089	7.2	7.3	< 0.001	< 0.001	0.016
8/31/2008	0.103	6.6	6.8	< 0.001	< 0.001	0.014
9/30/2008	0.096	6.8	7.3	< 0.001	< 0.001	0.012
10/31/2008	0.077	7.6	7.9	< 0.001	< 0.001	0.018
11/30/2008	0.021	7	7.4	< 0.001	< 0.001	0.0019
12/31/2008	0.027	7.3	7.4	< 0.001	< 0.001	< 0.001
1/31/2009	0.102	6.9	7.2	< 0.0001	< 0.0001	0.016
2/28/2009	0.094	6.9	7.1	< 0.001	< 0.001	0.006
3/31/2009	0.073	7.1	7.4	< 0.001	< 0.001	0.007
4/30/2009	0.062	6.9	7.2	< 0.001	< 0.001	0.003

2003 Permit Limits	Flow (Mgal/d)	pH (s.u.)		trans-1,2-Dichloroethylene (mg/L)	Chloroform (mg/L)	Trichloroethylene (mg/L)
	Monthly Average	Mininum	Maximum	Daily Maximum	Daily Maximum	Daily Maximum
	Report	**6.5**	**8.0**	**0.1**	**0.1**	**0.1**
Minimum	0.021	6.5	6.6	ND	ND	ND
Maximum	0.104	7.6	7.9	0.0013	ND	4.5
Average	0.08	6.9	7.2	0.0001	ND	0.24
Standard Deviation	0.02	0.3	0.3	0.0001	N/A	1.00
# Measurements	26	26	26	25	25	25
# Exceeds Limits	N/A	0	0	0	0	1

Texas Instruments, Inc. (MA0001791)
Outfall 004 – DMR Data Summary
March 2007 – April 2009

MONITORING PERIOD END DATE	Flow (Mgal/d)		Methyl tert-butyl ether (ug/L)		Chloroform (ug/L)		Vinyl Chloride (ug/L)	
	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average
3/31/2007	0.081	0.081	< 5	< 5	< 5	< 5	< 5	< 5
4/30/2007	0.085	0.085	< 0.0005	< 0.0005	1	1	1	1
5/31/2007	0.072	0.072	< 0.5	< 0.5	2	2	1	1
6/30/2007	0.08	0.08	< 0.5	< 0.5	4	4	1	1
7/31/2007	0.061	0.061	< 5	< 5	6	6	< 5	< 5
8/31/2007	0.06	0.06	< 5	< 5	11	11	< 5	< 5
9/30/2007	0.052	0.052	< 0.0005	< 0.0005	9	9	< 0.0005	< 0.0005
10/31/2007	0.058	0.058	< 0.0005	< 0.0005	8	8	< 0.0005	< 0.0005
11/30/2007	0.071	0.071	< 1	< 1	1.1	1.1	< 1	< 1
12/31/2007	0.079	0.079	< 1	< 1	1.1	1.1	< 1	< 1
1/31/2008	0.071	0.071	< 5	< 5	< 1	< 1	2	2
2/29/2008	0.098	0.098	< 5	< 5	< 1	< 1	< 1	< 1
3/31/2008	0.083	0.083	< 5	< 5	< 1	< 1	< 1	< 1
4/30/2008	0.1	0.1	< 5	< 5	< 1	< 1	< 1	< 1
5/31/2008	0.095	0.095	< 1	< 1	< 1	< 1	< 1	< 1
6/30/2008	0.067	0.067	< 5	< 5	2	2	< 1	< 1
7/31/2008	0.079	0.079	< 5	< 5	5	5	< 1	< 1
8/31/2008	0.071	0.071	< 1	< 1	3.7	3.7	< 1	< 1
9/30/2008	0.067	0.067	< 1	< 1	2.4	2.4	1.5	1.5
10/31/2008	0.064	0.064	< 1	< 1	3	3	< 1	< 1
11/30/2008	0.071	0.071	< 1	< 1	< 1	< 1	1.2	1.2
12/31/2008	0.093	0.093	< 1	< 1	< 1	< 1	< 1	< 1
1/31/2009	0.059	0.059	< 1	< 1	< 1	< 1	1.6	1.6
2/28/2009	0.074	0.074	< 1	< 1	< 1	< 1	2.8	2.8
3/31/2009	0.098	0.098	< 1	< 1	< 1	< 1	< 1	< 1
4/30/2009	0.086	0.086	< 1	< 1	< 1	< 1	1.2	1.2

2003 Permit Limits	Flow (gal/d)		Methyl tert-butyl ether (ug/L)		Chloroform (ug/L)		Vinyl Chloride (ug/L)	
	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average
	Report	**Report**	**Report**	**Report**	**Report**	**Report**	**Report**	**Report**
Minimum	0.052	0.052	ND	ND	ND	ND	ND	ND
Maximum	0.1	0.1	ND	ND	11	11	2.8	2.8
Average	0.076	0.076	N/A	N/A	3	3	1.0	1.0
Standard Deviation	0	0	N/A	N/A	3	3	0.6	0.6
# Measurements	26	26	26	26	26	26	26	26
# Exceeds Limits	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Texas Instruments, Inc. (MA0001791)
Outfall 004 – DMR Data Summary
March 2007 – April 2009

MONITORING PERIOD END DATE	cis-1,2-Dichloroethylene (ug/L)		Tetrachloroethene (ug/L)		Trichloroethene (ug/L)	
	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average
3/31/2007	150	150	< 5	< 5	< 5	< 5
4/30/2007	30	30	1	1	7	7
5/31/2007	25	25	< 0.5	< 0.5	4	4
6/30/2007	26	26	0.9	0.9	5	5
7/31/2007	15	15	< 5	< 5	< 5	< 5
8/31/2007	9	9	< 5	< 5	< 5	< 5
9/30/2007	7	7	< 0.0005	< 0.0005	< 0.0005	< 0.0005
10/31/2007	15	15	< 0.0005	< 0.0005	< 0.0005	< 0.0005
11/30/2007	< 1	< 1	< 1	< 1	1.6	1.6
12/31/2007	< 1	< 1	< 1	< 1	2.8	2.8
1/31/2008	33	33	1.9	1.9	5	5
2/29/2008	20	20	< 1	< 1	3.8	3.8
3/31/2008	20	20	< 1	< 1	4.5	4.5
4/30/2008	16	16	< 1	< 1	3.4	3.4
5/31/2008	15	15	< 1	< 1	2.2	2.2
6/30/2008	15	15	< 1	< 1	1.5	1.5
7/31/2008	7.2	7.2	< 1	< 1	1.1	1.1
8/31/2008	10	10	< 1	< 1	1.2	1.2
9/30/2008	24	24	< 1	< 1	2.2	2.2
10/31/2008	6.5	6.5	< 1	< 1	1.5	1.5
11/30/2008	29.7	29.7	< 1	< 1	2.9	2.9
12/31/2008	25.8	25.8	2.6	2.6	6.3	6.3
1/31/2009	37.7	37.7	< 1	< 1	4.7	4.7
2/28/2009	40.3	40.3	2.8	2.8	4.8	4.8
3/31/2009	19.9	19.9	< 1	< 1	3.9	3.9
4/30/2009	21	21	< 1	< 1	4.2	4.2

2003 Permit Limits	cis-1,2-Dichloroethylene (ug/L)		Tetrachloroethene (ug/L)		Trichloroethene (ug/L)	
	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average
	Report	**Report**	**Report**	**Report**	**Report**	**Report**
Minimum	ND	ND	ND	ND	ND	ND
Maximum	150	150	2.8	2.8	7	7
Average	25.8	25.8	1.0	1.0	3.5	3.5
Standard Deviation	28.1	28.1	1.0	1.0	1.7	1.7
# Measurements	26	26	26	26	26	26
# Exceeds Limits	N/A	N/A	N/A	N/A	N/A	N/A

ATTACHMENT B

1ST. HALF 2007 SEMI ANNUAL COOPERS POND MONITORING REPORT
OUTFALL 007

PARAMETERS	MONTHS IN THE 1ST. HALF OF THE YEAR					
	January	February	March	April	May	June
FLOW (MGD)	3.19	3.11	2.37	2.86	1.64	1.550
TEMP. (DEG. C)	8.3	3.2	6.0	12.0	24.8	21.00
TSS (MG/L)	<4.0	<10.0	<10.0	17.000	14.000	<10.0
P TOTAL (MG/L)	<.50	<.50	<.50	<.50	<.50	<.50
P DISS. (MG/L)	<.50	<.50	<.50	<.50	<.50	<.50
NH3 (MG/L)	<.20	<.20	<.20	<0.2	<.20	<.20
NICKEL (MG/L)	<0.040	0.050	<0.040	<0.04	<0.04	<0.04
COPPER (MG/L)	<0.025	0.038	0.034	0.029	0.026	0.041
ZINC (MG/L)	<0.20	<0.20	<0.20	<0.20	<.20	<.20
CADMIUM (MG/L)	<0.004	0.005	<0.004	<0.004	<0.004	<0.004
LEAD (MG/L)	<0.005	0.006	<0.005	<0.005	<0.005	<.005
SILVER (MG/L)	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
ALUMINUM (MG/L)	<0.200	<0.200	<0.200	0.200	<0.200	0.200
Ph (Su)	6.8	7.2	7.1	7.3	6.0	7.3

2ND. HALF 2007 SEMI ANNUAL COOPERS POND MONITORING REPORT

OUTFALL 007

PARAMETERS	MONTHS IN THE 2ND. HALF OF THE YEAR					
	July	August	September	October	November	December
FLOW (MGD)	0.65	0.62	0.61	0.22	1.45	1.550
TEMP. (DEG. C)	25.6	22.4	8.2	13.7	4.0	3.80
TSS (MG/L)	14.0	<10.0	290	<10.00	4.0	4.0
P TOTAL (MG/L)	<.50	<.50	<.50	<.50	0.050	0.14
P DISS. (MG/L)	<.50	<.50	<.50	<.50	<0.05	0.12
NH3 (MG/L)	<.20	<.20	<.20	0.20	<.10	0.40
NICKEL (MG/L)	0.040	0.050	0.070	0.060	0.072	0.063
COPPER (MG/L)	0.027	<0.025	0.042	<0.025	0.020	<0.020
ZINC (MG/L)	<0.20	<0.20	<0.20	<0.20	0.060	0.070
CADMIUM (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.005	<.005
LEAD (MG/L)	0.015	0.005	<0.005	<0.005	<0.005	<0.010
SILVER (MG/L)	<0.007	<0.007	<0.007	<0.007	<0.005	<0.005
ALUMINUM (MG/L)	0.200	1.300	<0.200	0.200	0.110	0.110
Ph (Su)	7.8	7.0	8.2	8.3	8.4	8.1

1ST. HALF 2008 SEMI ANNUAL COOPERS POND MONITORING REPORT

OUTFALL 007

PARAMETERS	MONTHS IN THE 1ST. HALF OF THE YEAR					
	January	February	March	April	May	June
FLOW (MGD)	3.40	7.70	5.29	3.24	2.36	2.070
TEMP. (DEG. C)	4.8	5.0	8.3	12.5	17.9	26.20
TSS (MG/L)	<2.0	<2.0	<2.0	16.0	18.0	7.0
P TOTAL (MG/L)	0.020	<0.02	<0.02	0.080	0.100	0.160
P DISS. (MG/L)	<0.02	<0.02	<0.02	0.030	0.050	0.050
NH3 (MG/L)	<.10	0.300	1.000	<0.1	<.10	0.500
NICKEL (MG/L)	0.051	0.020	0.020	0.028	0.028	0.043
COPPER (MG/L)	0.030	<0.02	0.020	0.030	0.020	0.030
ZINC (MG/L)	0.090	0.040	0.030	0.040	<.020	0.060
CADMIUM (MG/L)	<0.005	0.005	<0.005	<0.005	<0.005	<0.005
LEAD (MG/L)	<0.005	<.040	<.040	<0.005	<0.005	<0.005
SILVER (MG/L)	<0.005	<0.02	<0.02	0.013	<0.005	0.010
ALUMINUM (MG/L)	0.016	0.200	0.130	0.160	<0.020	0.120
Ph (Su)	7.5	7.6	7.0	7.3	7.3	7.4

2ND. HALF 2008 SEMI ANNUAL COOPERS POND MONITORING REPORT
OUTFALL 007

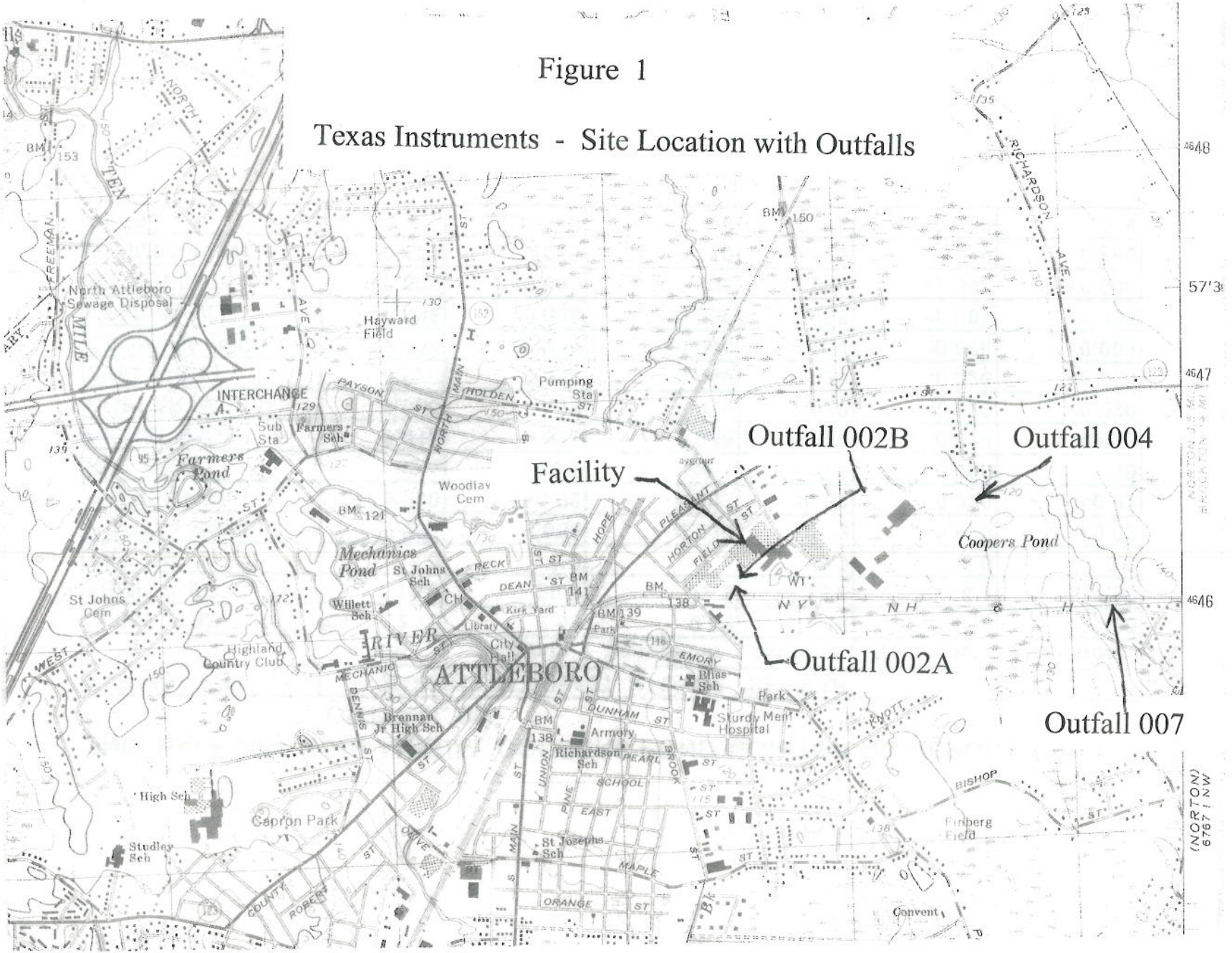
PARAMETERS	MONTHS IN THE 2ND. HALF OF THE YEAR					
	July	August	September	October	November	December
FLOW (MGD)	2.45	1.32	1.10	1.01	2.60	4.490
TEMP. (DEG. C)	27.1	18.7	17.4	10.2	11.0	7.20
TSS (MG/L)	6.0	14.0	2.0	6.0	<2.0	<2.0
P TOTAL (MG/L)	0.210	0.300	0.120	0.090	0.080	<0.20
P DISS. (MG/L)	0.170	0.030	0.050	0.030	0.040	<0.02
NH3 (MG/L)	<.10	<.10	0.200	<0.1	<.10	0.100
NICKEL (MG/L)	0.032	0.035	0.028	0.035	0.019	0.017
COPPER (MG/L)	0.020	0.020	0.030	0.040	0.030	<0.02
ZINC (MG/L)	<0.02	<0.02	0.020	0.030	0.040	0.040
CADMIUM (MG/L)	<0.005	0.005	<0.005	<0.005	<0.005	<0.005
LEAD (MG/L)	<0.005	0.035	<0.005	0.005	<0.005	<0.005
SILVER (MG/L)	<0.005	0.006	0.006	0.009	<0.005	<0.005
ALUMINUM (MG/L)	0.180	<0.005	0.050	0.180	0.190	0.170
Ph (Su)	7.4	7.1	7.4	7.1	7.7	7.8

2ND. HALF 2009 SEMI ANNUAL COOPERS POND MONITORING REPORT
OUTFALL 007

PARAMETERS	MONTHS IN THE 1ST. HALF OF THE YEAR					
	July	August	September	October	November	December
FLOW (MGD)	2.73	2.56	0.52	2.18	4.19	2.450
TEMP. (DEG. C)	19.8	20.8	19.9	13.8	8.1	7.90
TSS (MG/L)	3.0	9.0	5.0	5.0	6.0	5.0
P TOTAL (MG/L)	0.280	0.050	0.030	<0.02	0.090	<0.02
P DISS. (MG/L)	0.200	<0.02	<0.02	<0.02	0.020	<0.02
NH3 (MG/L)	<0.1	<0.1	<0.1	<0.1	0.100	<.10
NICKEL (MG/L)	0.015	0.023	0.035	0.020	0.014	0.013
COPPER (MG/L)	0.050	<0.02	0.020	0.030	<0.020	<0.020
ZINC (MG/L)	0.020	0.030	0.040	0.030	<0.020	<0.020
CADMIUM (MG/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
LEAD (MG/L)	0.006	<0.005	<0.005	<0.005	<0.005	<0.005
SILVER (MG/L)	<0.005	<0.005	0.005	<0.005	<0.005	<0.005
ALUMINUM (MG/L)	0.170	0.080	0.110	0.120	0.050	0.140
Ph (Su)	8.0	8.6	8.8	7.5	7.9	7.4

Figure 1

Texas Instruments - Site Location with Outfalls



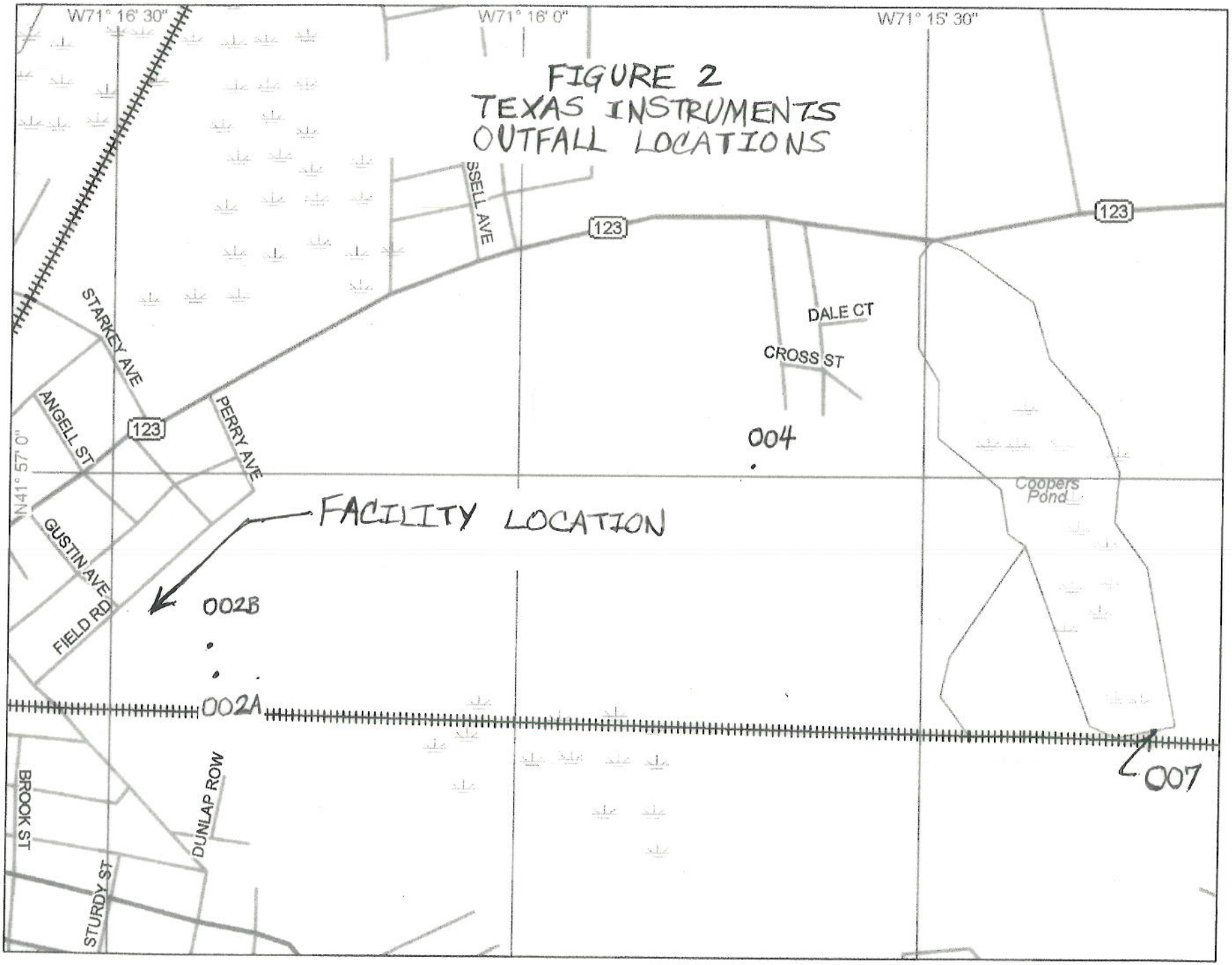


FIGURE 2
TEXAS INSTRUMENTS
OUTFALL LOCATIONS
W71° 16' 30"
W71° 16' 0"
W71° 15' 30"
N41° 57' 0"
SSELL AVE
123
STARKEY AVE
ANGELL ST
PERRY AVE
DALE CT
CROSS ST
004
FACILITY LOCATION
GUSTIN AVE
FIELD RD
002B
002A
007
Coopers Pond
BROOK ST
DUNLAP ROW
STURDY ST
© 2001 DeLorme. Topo USA® 3.0
Scale: 1 : 8,800 Zoom Level: 13-6 Datum: WGS84 Map Rotation: 0° Magnetic Declination: 15.5°W
700 ft

Response to Public Comments

From April 2, 2010 to May 1, 2010, the United States Environmental Protection Agency ("EPA") and the Massachusetts Department of Environmental Protection ("MassDEP") (together, the "Agencies") solicited public comments on a draft NPDES permit developed pursuant to a permit renewal application from Texas Instruments, Incorporated ("Permittee") for the reissuance of a National Pollutant Discharge Elimination System ("NPDES") permit to discharge groundwater infiltration and treated groundwater from Outfalls 002A, 002B, 004 to Speedway Brook and an unnamed brook to Coopers Pond in Attleboro, Massachusetts.

After a review of the comments received, EPA and MassDEP have made a final decision to issue this permit authorizing these discharges. The final permit is identical to the draft permit that was available for public comment, with the exception of three minor changes noted at the end of this document.

Copies of the final permit may be obtained by writing or calling EPA's NPDES Industrial Permits Branch (OEP 06-1), Office of Ecosystem Protection, 5 Post Office Square, Suite 100, Boston, MA 02109-3912; Telephone: (617) 918-1579.

Comments submitted by Mary A. Colligan, the Assistant Regional Administrator for Protected Resources of the Northeast Region of the National Marine Fisheries Service (NMFS):

Comment A1: While several species of listed whales and sea turtles occur seasonally in waters off the Massachusetts coast and populations of the federally endangered shortnose sturgeon occur in the Connecticut and Merrimack Rivers, no listed species are known to occur in the Speedway Brook, or the unnamed brook to Coopers Pond. As such, no further coordination with NMFS PRD is necessary.

Response to Comment A1: This comment is noted for the record and did not necessitate any changes to the final permit.

Comments submitted by Joe D. Bauer on behalf of Texas Instruments, Inc, the Permittee:

General Comment: Based on the lack of demonstration of impact from the current discharge from the outfalls, TI believes that the current permitted effluent limits should remain in place and would not have a negative impact.

Comment B1: Texas Instruments (TI) recognizes that EPA has recommended that the permit limits be changed based on best available technology (BAT). TI believes that the existing permit limits have been protective of the environment and there has not been a demonstration of impacts from the discharges from the outfalls based on the current effluent limits. Therefore TI is requesting that the existing limits be retained in the new permit.

Response to Comment B1: As explained in the Fact Sheet accompanying the permit, revised limits were established for the outfall from the groundwater treatment system, Outfall 002B, and for the untreated groundwater infiltration discharged from Outfall 002A.

For Outfall 002B, EPA based a more stringent limit for tricholorethylene (TCE) on technology-based standards. The basis for this technology-based effluent limit (TBEL) is similar to that outlined in a general permit authorizing discharges from ground water treatment systems, known as the NPDES Remediation General Permit (RGP). Although this discharge could be authorized under the RGP, it was determined that reissuing the individual permit was preferable since this site also includes other, non-remediation discharges. Effluent limits for this permit were derived by Best Professional Judgment (BPJ). In applying BPJ in this permit, EPA established effluent limits consistent with the RGP that was issued in 2005 and reissued effective September 10, 2010. The rationale discussed in Pages 23 -27 of the Attachment A to the fact sheet to the RGP is applicable to this permit.

For Outfall 002A, the effluent levels of cis-1,2-dichloroethylene and trichloroethylene have historically been above the technology-based standards discussed above for the RGP. In this draft permit, EPA established limits for cis-1,2-dichloroethylene and trichloroethylene, since the levels detected for these volatile organic compounds (VOCs) in the effluent have often above the technology-based limits that were established in the RGP. In addition, since there are other VOCs being discharged continually from this outfall without treatment, EPA determined that there was a reasonable potential for this discharge to violate water quality standards. The receiving stream has very low flow, so that there would be minimal dilution available to these contaminants. Considering the toxicity potential of just one of these VOCs, the water quality criteria for trichloroethylene are expressed as human health criteria (HHC), which have been developed to achieve certain risk-based concentrations based on long term exposures to a particular contaminant. For the consumption of water and organisms, the HHC for tricholoroethylene is 2.5 ug/l and for the consumption of organisms only, the HHC is 30 ug/l. See the 2002 National Recommended Water Quality Criteria (EPA-822-R-02-047) and the 2003 Revised Human Health Water Quality Criteria (EPA-822-F-03-012).

For the period of March of 2007 to April 2009, with the exception of one sample for which trichloroethylene was not detected, all other monthly samples ranged from 8.5 – 420 ug/l with an average concentration of 114 ug/l. These data can be found in Attachment A to the fact sheet. Although a long term mean flow is typically used to calculate the appropriate water quality based limit using HHC, the low flow of Speedway Brook would afford very little if any dilution to this discharge, so that the applicable limit would be close to the criteria values. Therefore, in consideration of the ongoing and long term discharges of trichloroethylene alone, there is a reasonable potential for the violation of WQS.

Regarding the permittee's contention that there has not been a demonstration of impacts from these discharges, Speedway Brook is in non-attainment of water quality standards for many parameters, as listed below in "other changes to the final permit". The current continuous discharge of treated (Outfall 002B) and untreated (Outfall 002A) VOCs into Speedway Brook represents an ongoing water quality impact, based on the toxicity of several VOCs and the

unknown synergistic effects of the combination of all VOCs being discharged. Therefore, permit limits are needed to ensure water quality and such limits are contained in the final permit.

Comment B2: A reduction in the effluent limits for Outfall 002A (Formerly Outfall 002) would result in a significant change in the current collection and treatment system onsite. Since Outfall 002A has continuous discharge of groundwater that would need to be treated under the proposed lower limits, there will be significant work to be conducted to ensure collection and treatment of the water prior to discharge. Currently there is not a system in place to redirect the flow from 002A and treat the water prior to discharge. In addition to cost, there would be a significant amount of time required to put flow controls and treatment of the water given the age and extent of the lines that discharge to 002A.

Response to Comment B2: As noted in the response to Comment B1, EPA established effluent limits for two VOCs for Outfall 002A. Since the permittee requires additional time to collect the water from this outfall in order to treat it and meet the new limits, it can work with EPA to develop an administrative order (AO) to outline the steps necessary to complete this project. If necessary, the AO will set forth a timeline with interim project deadlines and a final date by which a treatment mechanism must be in place to treat this groundwater and meet the effluent limits. This comment also identifies other "lines" that discharge to Outfall 002A suggesting that there may be flows other than contaminated groundwater discharging from this outfall. If necessary, an AO may allow time for the permittee to investigate the other flows to this outfall and assess the quality and quantity of such flows to better be able to consider capture and treatment options.

Other changes to the final permit:

Part I.C. of the final permit has been revised to include language which requires the permittee to begin using a web-based reporting system called "NetDMR" to electronically submit monitoring results within a specified time frame. This language also provides opt-out language if the permittee is unable to use NetDMR.

There has been a correction made to the MassDEP address on Page 10 (originally Page 8) of the permit. "Bureau of Resource Protection" has been changed to "Bureau of Waste Prevention".

It was also brought to EPA's attention the impairments listed for Speedway Brook on Page 5 of the factsheet cited the 2008 303(d) list, but in fact incorrectly listed the impairments from the 2006 303(d) list. The correct 2008 impairments for Speedway Brook should have been listed as follows: habitat assessment, dissolved oxygen, sedimentation/siltation, fecal coliform, aquatic macroinvertebrate bioassessments, and alteration of instream-side or littoral vegetative covers. Although the fact sheet cannot be changed after the public comment period, this correction is noted here for the record.

October 21, 2010